



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

September 23, 2022

Drew Balsick
Flying Horse Development
2138 Flying Horse Club Drive
Colorado Springs, Colorado 80921

**RE: Review Comment Responses / Flying Horse North
El Paso County, Colorado**

Dear Drew,

SM ROCHA LLC is pleased to provide comment response information for the proposed Flying Horse North sketch plan. This development is located along Old Stagecoach Road between State Highway 83 and Black Forest Road in El Paso County, Colorado.

The purpose of this letter is to respond to CDOT Staff review comments dated September 19, 2022 (1st Review). We have provided detailed responses to the review comments and made revisions to the Traffic Impact Study. We remain available to discuss further if needed.

The following is a summary of comment responses:

TIS Review Comment 1: The project generates 26,500 daily trips with approximately 70% of the trips accessing SH83 at Stagecoach. This location is planned for full movement access.

Comment Response: Comment acknowledged. Please note that only 55% of site-generated traffic are expected to travel through the intersection of State Highway 83 and Stagecoach Road, and vehicle volumes have been updated per additional review comments.

TIS Review Comment 2: Over the last five years the section of highway approaching Stagecoach and the intersection itself has seen an increase in traffic crashes including a fatality. The TIS indicates that signal warrants are met with the project traffic added. The PM peak would exceed capacity if signalized and require double lefts for the WB to SB direction. This in turn would require additional receiving lanes on SH83. Traffic signals are not always the most appropriate intersection control. The analysis indicates that in 2027, the roundabout functions much better with single receiving lanes and the existing approach lane configuration. Roundabouts have a much higher safety record than traffic signals resulting in about a 70% reduction in predicted crashes. Furthermore, the implementation of a roundabout at this location would help to control travel speed through this immediate area.

Comment Response: Analysis for roundabout control at State Highway 83 and Stagecoach Road will be included with the revised traffic study.

If signalization is pursued, analysis does not indicate the need for dual westbound left turn lanes, but rather one exclusive turn lane and analysis assumes shared left and through lane.

TIS Review Comment 3: As part of the access permit offer, CDOT will require the design and construction of a roundabout to facilitate site access at the intersection of SH83 & Stagecoach. The TIS should be modified to accommodate this requirement.

Comment Response: Comment acknowledged. Traffic study now considers roundabout-control as the preferred condition for total traffic conditions.

TIS Review Comment 4: Therefore, CDOT requests the TIS be amended and resubmitted.

Comment Response: Comment acknowledged.

Permits Review Comment 1: CDOT requires an Access Permit be obtained to document the change in land use and for any necessary highway improvements. The applicant may contact this office for additional information.

Comment Response: Comment acknowledged. CDOT Access Permit Applications will be provided where applicable once general support of Master TIS is provided. This is in an effort to avoid duplicating CDOT's efforts with review and coordination.



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**RE: Review Comment Responses / Flying Horse North
El Paso County, Colorado**

Dear Drew,

SM ROCHA LLC is pleased to provide comment response information for the proposed Flying Horse North sketch plan. This development is located along Old Stagecoach Road between State Highway 83 and Black Forest Road in El Paso County, Colorado.

The purpose of this letter is to respond to the Traffic Impact Study Reviews memorandum dated August 26, 2022 (2nd Review). We have provided detailed responses to the review comments and made revisions to the Traffic Impact Study. We remain available to discuss further if needed.

The following is a summary of comment responses:

General TIS Comment 1: The required TDM assessment, pedestrian / bicycle evaluations, and safety analysis missing from the initial submittal have not been added.

Comment Response: Per Section B.5.1 of the County's ECM, a TDM plan is only required if the project is seeking TDM-related trip reductions. Considering how this conceptual sketch plan is not seeking TDM-related trip reductions, but in an effort to provide consistency with Section B.2.4.A of the County's ECM, general discussions on TDM opportunities and safety will be included.

General TIS Comment 2: The traffic count data have been adjusted to account for pandemic impacts.

Comment Response: Comment acknowledged.

General TIS Comment 3: The HCM defaults in Appendix C have not been adjusted.

Comment Response: Peak hour factors and heavy vehicle percentages will be updated for Existing and Short-Term Background scenarios per the ECM, where appropriate. Considering how the details and diversity in vehicle types and PHF are unknown for Long-Term and Total conditions, Long-Term Background and all Total scenarios will continue to use HCM defaults.

General TIS Comment 4: The original TIS made various trip generation assumptions which have been clarified in this submittal and match the tables and legends in the Sketch Plan. However, see comments on the sketch plan below.

Comment Response: Comment acknowledged.

General TIS Comment 5: The internal capture methodologies have not been updated to reflect accepted practice.

Comment Response: Although the development's sketch plan is conceptual and not all land uses and densities have been determined, NCHRP's method for determining internal capture will be applied.

General TIS Comment 6: Project-specific mitigation measures have not been summarized in a table, as required by ECM.

Comment Response: A Recommended Improvements Summary Table will be included.

Technical Report Comment 7: Supplemental site access points have not been evaluated.

Comment Response: It is emphasized that the sketch plan being proposed is conceptual. As such, no exact land uses, densities, nor internal roadways are defined. What is being proposed with this development application is to gain approval of the sketch plan in order to define a basis from which actual site-specific land uses, densities, roadways, and intersections can be determined.

Moreover, Section B.2.3.A of the ECM indicates only collector and arterial roadways internal to the study area are to be analyzed within a Master TIS. Evaluation of all supplemental site access points and intersections are expected to be classified as minor collector or local roadways.

It is expected that internal intersections within the proposed site or associated with other subdivisions operate better than those along Old Stagecoach Road, which may need to be analyzed as part of future development applications once actual land uses, densities, roadways, and intersections are defined.

Technical Report Comment 8: A progression analysis has not been included.

Comment Response: Progression analysis not appropriate for sketch plan application. To clarify, the TIS does not rely on signal progression for mitigation nor have an impact on gaps and vehicle platooning. In coordination with County Staff, progression analysis to be evaluated with future development applications once land uses and access locations become defined.

Technical Report Comment 9: The application of existing versus optimized signal timing has not been clarified.

Comment Response: The TIS states that only intersection splits were optimized for Year 2042 background traffic conditions to better long-term intersection performance.

Technical Report Comment 10: The auxiliary turn lanes have been defined in the queue length table.

Comment Response: Comment acknowledged.

Technical Report Comment 11: The queue length analysis has been provided.

Comment Response: Comment acknowledged.

Update to "Master
Traffic Impact Study"

Unresolved

Updated

TRAFFIC IMPACT STUDY

For

**Flying Horse North
El Paso County, Colorado**

Provide certification
page per ECM B.8

March 2022

Revised:

July 2022

Certification page added.
SM Rocha plans to seek signatures upon
County acceptance/approval of Master TIS.

Prepared for:

Flying Horse Development
2138 Flying Horse Club Drive
Colorado Springs, Colorado 80921

Prepared by:



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

8703 Yates Drive, Suite 210
Westminster, Colorado 80031
(303) 458-9798

6 South Tejon Street, Suite 515
Colorado Springs, Colorado 80903
(719) 203-6639

Project Engineer/Manager:

Mike Rocha, Principal

Brandon Wilson, EIT

Engineer in Responsible Charge:

Fred Lantz, PE



Add "PCD
File NO.
SKP223"

21-101521

Unresolved

Added

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I. Introduction

Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled Flying Horse North.

This proposed mixed-use development consists of a variety of residential, commercial, recreational, and lodging land uses. The development is located along Old Stagecoach Road between State Highway 83 and Black Forest Road in El Paso County, Colorado.

Study Area Boundaries

The study area to be examined in this analysis encompasses the Hodgen Road intersections with State Highway 83 and Black Forest Road, the Old Stagecoach Road intersections with State Highway 83, Shortwall Drive, Allen Ranch Road, and Black Forest Road, the North Gate Boulevard intersection with State Highway 83, and the Shoup Road intersections with State Highway 83 and Black Forest Road.

Figure 1 illustrates location of the site and study intersections.

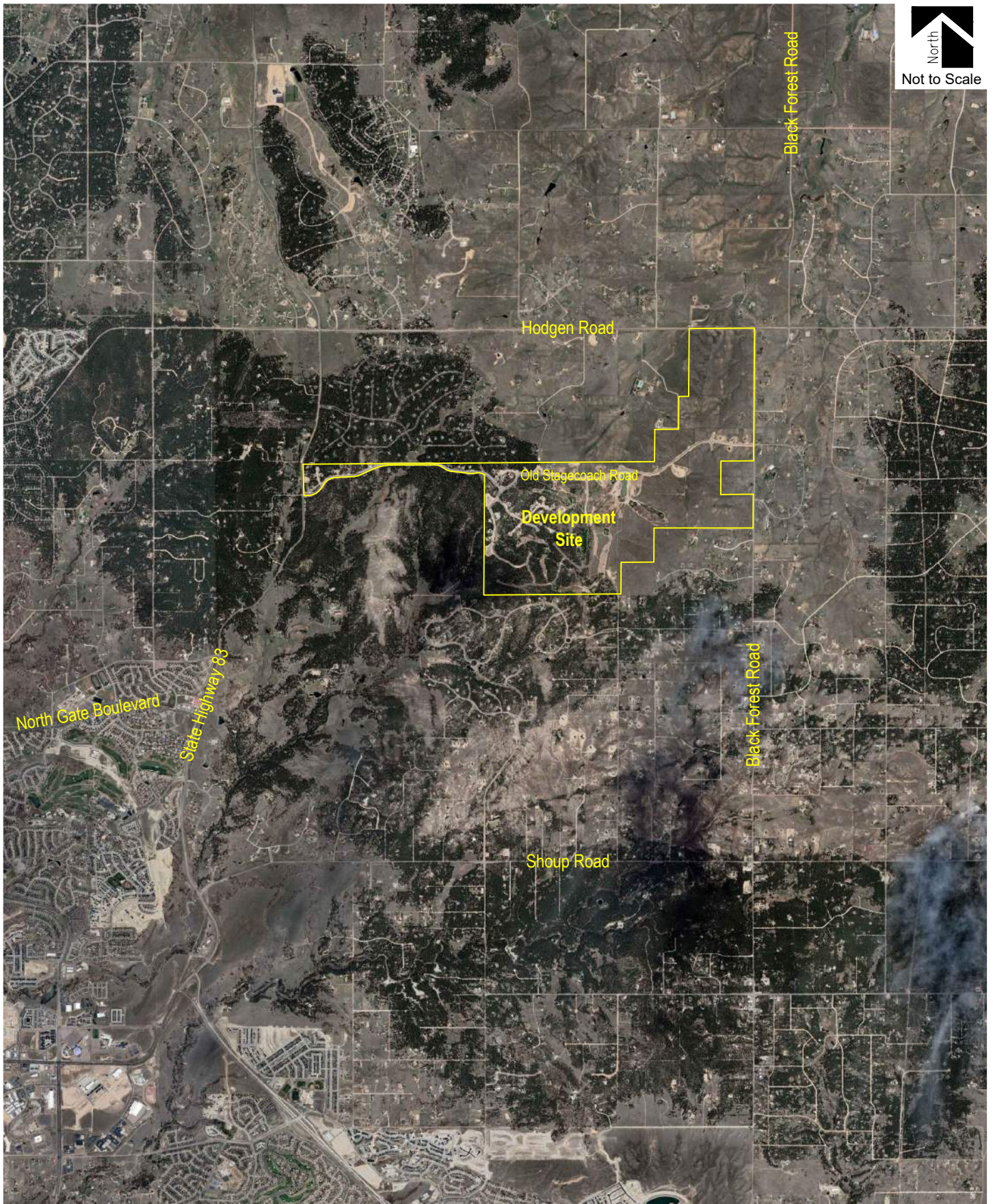
Site Description

Land for the development is partially vacant and surrounded by a mix of open space, recreational, and residential land uses. The occupied portion of land development is currently the Flying Horse North Golf Course, which is expected to an ancillary use to the proposed resort hotel.

The proposed development's sketch plan is conceptual and not all land uses have been determined. However, for purposes of this analysis, there is assumed to be construction for a maximum of 1,571 single-family housing dwelling units, a resort hotel supporting 225 rooms, an approximate 46,800 square foot fitness center, and approximately 185,100 square feet of commercial land use.

Considering the conceptual nature of the proposed development, future access will generally include multiple access drives along all exterior roadways bordering the proposed development and along Old Stagecoach Road. For purposes of this analysis, primary points of entry to the overall development area are provided at the following locations: one full-movement access serving as the east leg of the State Highway 83 and Stagecoach Road intersection, and one full-movement access serving as the west leg of the Black Forest Road and Old Stagecoach Road intersection.

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2027. A sketch plan, as prepared by HR Green, Inc., is shown on Figure 2. This plan is provided for illustrative purposes only.



FLYING HORSE NORTH
Traffic Impact Study

SM ROCHA, LLC
Traffic and Transportation Consultants

Figure 1
SITE LOCATION

July 2022
Page 2



Not to Scale

LEGEND

ESTATE LOTS (5 AC)

ESTATE LOTS (2.5 AC)

LOW DENSITY

MEDIUM DENSITY

BRANDED FLATS (HOTEL)

COMMERCIAL

GOLF CLUB, FITNESS CENTER, RESTAURANT/BAR (HOTEL)

HOTEL COMPLEX

CLUBHOUSE

ROADWAY

DETENTION

SITE BOUNDARY

HOTEL PARCELS

SCHOOL DISTRICT LINE

FHN TRAIL

PUBLIC COUNTY TRAIL

DRAINAGE WAY

PARK/POCKET PARK


FITNESS CENTER

POTENTIAL FIRE STATION

PROPOSED DETENTION

| LAND USE SUMMARY | | | | |
|---------------------------------|-----------|------------|-------|-------|
| LAND USE CATEGORY | ACREAGE | PERCENTAGE | DUIAC | UNITS |
| GROSS RESIDENTIAL ACREAGE (+/-) | | | | |
| ESTATE LOTS (5 ACRES) | 118.3 AC. | 13.0% | 0.2 | 27 |
| ESTATE LOTS (2.5 ACRES) | 152.7 AC. | 16.7% | 0.32 | 49 |
| LOW DENSITY RESIDENTIAL | 332.9 AC. | 36.5% | 1.9 | 633 |
| MEDIUM DENSITY RESIDENTIAL | 46.0 AC. | 5.0% | 3.0 | 138 |
| ESTIMATED OPEN SPACE | 204.0 AC. | 22.4% | N/A | |
| GROSS RESIDENTIAL SUB-TOTAL | 853.9 AC. | 71.2% | | 846 |
| HOTEL/COMMERCIAL ACREAGE (+/-) | | | | |
| HOTEL ROOMS/GOLF CASITAS | 26.6 AC. | 2.9% | N/A | 225 |
| BRANDED FLATS | 5.6 AC. | 0.6% | 9.0 | 50 |
| GOLF CLUB, RESTAURANT/BAR | 11.0 AC. | 1.2% | N/A | N/A |
| GOLF AMENITIES (HOTEL) | 2.4 AC. | 0.3% | N/A | N/A |
| ESTATE CLUBHOUSE (HOTEL) | 9.1 AC. | 1.0% | N/A | N/A |
| COMMERCIAL | 4.1 AC. | 0.4% | N/A | N/A |
| FITNESS CENTER | | | N/A | N/A |
| TOTAL | 912.7 AC | 100.0% | | 1121 |

*HOTEL, OPEN SPACE INCLUDES PARKS, POCKET PARKS, RECREATION, DRAINAGE, CORRIDORS, GENERAL UPGRADES AND LANDSCAPE IMPROVEMENTS



FLYING HORSE NORTH

Traffic Impact Study

SM ROCHA, LLC

Traffic and Transportation Consultants

Figure 2

SKETCH PLAN

July 2022

Page 3

Existing and Committed Surface Transportation Network

Within the study area, State Highway 83 is the primary roadway that will accommodate traffic to and from the proposed development. Secondary roadways include Hodgen Road, Black Forest Road, Shoup Road, Old Stagecoach Road, North Gate Boulevard, Ridge Run Drive, Shortwall Drive, and Allen Ranch Road. A brief description of each roadway, based on the County's 2016 Major Transportation Corridors Plan (MTCP)¹ and Engineering Criteria Manual (ECM)², as well as the City's Major Thoroughfare Plan³, is provided below:

State Highway 83 is a north-south, state-owned, principal arterial roadway having two to four through lanes (one to two lanes in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. The Colorado Department of Transportation (CDOT) categorizes the adjacent segment of State Highway 83 as a Regional Highway (R-A) north of Old North Gate Road and an Expressway, Major Bypass (E-X) south of Old North Gate Road. State Highway 83 provides posted speed limits of 55 to 60 MPH.

Hodgen Road is an east-west, El Paso County-owned roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. East and west of State Highway 83, the County's 2016 MTCP categorizes Hodgen Road as a minor arterial and major arterial roadway, respectively. Hodgen Road provides a posted speed limit of 55 MPH.

Black Forest Road is a north-south, El Paso County-owned, minor arterial roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersections within the study area. Black Forest Road provides posted speed limits of 40 to 45 MPH. Black Forest Road extends north of Hodgen Road as an unpaved, private roadway. Black Forest Road continues as a public roadway north of Hodgen Road, offset approximately one-quarter mile east, and classified as a collector roadway.

Ridge Run Drive is a north-south, El Paso County-owned, local roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. Ridge Run Drive does not provide a posted speed limit. However, per Section 2.3.2, Table 2-5 of the County's ECM, Ridge Run Drive is assumed to have a design speed limit of 30 MPH. Ridge Run Drive ends at Hodgen Road and continues north as Black Forest Road.

Shoup Road is an east-west, El Paso County-owned roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. The County's 2016 MTCP categorizes Shoup Road as a minor arterial roadway while the City's Major Thoroughfare Plan categorizes Shoup Road as a principal arterial roadway. Shoup Road provides posted speed limits of 30 to 45 MPH. Shoup Road ends at State Highway 83 creating a signalized, T-intersection.

¹ El Paso County 2016 Major Transportation Corridors Plan Update, Felsburg Holt & Ullevig, December 2016.

² El Paso County Engineering Criteria Manual, El Paso County, October 2020.

³ Major Thoroughfare Plan, City of Colorado Springs, August 2011.

Review the Flying horse north preliminary plan (SP17012), section of the road as major collector and minor collector.

Modify the statement.

North Gate Boulevard is an east-west, City of Colorado Springs-owned roadway having two through lanes (two lanes in each direction) with exclusive turn lanes at the intersection within the study area. The City's Major Thoroughfare Plan categorizes the adjacent segment of North Gate Boulevard as a principal arterial roadway and provides a posted speed limit of 40 MPH. The City's jurisdiction over North Gate Boulevard ends at State Highway 83 and continues east as a private roadway.

Updated per review of Flying Horse North preliminary plan.

Old Stagecoach Road is an east-west, El Paso County-owned roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. Old Stagecoach Road is unclassified in both the County's 2016 MTCP and the City's Major Thoroughfare Plan. However, per Sections 2.2.4 and 2.3.2 of the County's ECM, the roadway's estimated right-of-way (ROW) width, its connection from State Highway 83 to Black Forest Road, and its posted speed limit of 35 MPH, Old Stagecoach Road is assumed to be classified as a rural minor collector roadway. Old Stagecoach Road ends at Black Forest Road continuing east as Terra Ridge Circle and ends at Shortwall Drive continuing west as Stagecoach Road.

Shortwall Drive is a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Shortwall Drive provides a posted speed limit of 35 MPH and is unclassified in both the County's 2016 MTCP and the City's Major Thoroughfare Plan. However, per Section 2.3.2, Table 2-5 of the County's ECM and the roadway's posted speed limit, Shortwall Drive is assumed to be classified as a rural minor collector roadway.

Allen Ranch Road is a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Allen Ranch Road is unclassified in both the County's 2016 MTCP and the City's Major Thoroughfare Plan. However, per Section 2.2.4 of the County's ECM and the roadway's estimated ROW width, Allen Ranch Road is assumed to be classified as a rural local roadway with a design speed limit of 30 MPH.

Shoup? Updated

The study intersections of State Highway 83 with Hodgen Road, North Gate Boulevard, and Hodgen Road, as well as the intersection of Black Forest Road with Shoup Road, are signalized. The Old Stagecoach Road intersections with Shortwall Drive and Allen Ranch Road operate under roundabout conditions. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

Pursuant to the County's 2016 MTCP, State Highway 83 is envisioned to be widened from four to six through lanes from Shoup Road to Old North Gate Road and widened from two to four through lanes from Old North Gate Road to Hodgen Road. Additionally, the jogged alignment of Black Forest Road across Hodgen Road will be eliminated, allowing consistent alignment across the roadway. However, the County's 2016 MTCP does not mention when these improvements will occur. As such, these improvements are assumed to occur by Year 2042. This is understood to provide for a conservative analysis.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the following intersections:

- State Highway 83 / Hodgen Road
- State Highway 83 / Stagecoach Road
- State Highway 83 / North Gate Boulevard
- State Highway 83 / Shoup Road
- Ridge Run Drive / Hodgen Road
- Black Forest Road / Hodgen Road
- Black Forest Road / Old Stagecoach Road
- Black Forest Road / Shoup Road
- Stagecoach Road / Shortwall Drive
- Old Stagecoach Road / Allen Ranch Road

Average daily (24-hour) traffic volumes were collected along the following roadways:

- Black Forest Road
- Hodgen Road
- Stagecoach Road
- Old Stagecoach Road
- Shoup Road

Counts were collected on Tuesday, November 30, 2021, with AM peak hour counts being collected during the period of 7:00 AM to 9:00 AM, and PM peak hour counts being collected during the period of 4:00 PM to 6:00 PM.

Considering how traffic counts were collected one week after the Thanksgiving holiday, and due to the possible effects of the COVID-19 pandemic, collected traffic counts may not accurately represent daily and peak hour traffic volumes under normal 24-hour and peak traffic conditions. Therefore, a method was used in order to validate collected traffic data, or to more accurately represent existing traffic volumes under normal conditions. The methodology used included referencing historical traffic count data along Hodgen Road, Shoup Road, and Black Forest Road provided by CDOT's Traffic Count Database System (TCDS)⁴. These referenced average daily traffic (ADT) volumes were then grown to Year 2022 at a compounded annual growth rate of three percent.

The three percent compounded annual growth rate was determined using population growth estimates provided by the Pikes Peak Area Council of Governments' (PPACG) 2045 Long Range Transportation Plan⁵, as well as traffic data provided by CDOT's Online Transportation Information System (OTIS) for the adjacent segment of State Highway 83.

⁴ Transportation Data Management System, MS2, 2021.

⁵ Moving Forward 2045: Pikes Peak Area Regional Transportation Plan, Pikes Peak Area Council of Governments, January 2020.

Newly collected traffic counts were then compared to CDOT's calculated Year 2022 ADT volumes. It was determined that newly collected traffic counts represent higher traffic volumes. As such, no holiday nor COVID-19 adjustments were considered in this analysis.

Newly collected counts are shown on Figure 3. Existing intersection geometry is shown on Figure 4.

Existing signal timing parameters for the State Highway 83 intersections with Hodgen Road, North Gate Boulevard, and Shoup Road, as well as the intersection of Black Forest Road with Shoup Road, were obtained from County, City, and CDOT Staff. Existing signal timing parameters were used throughout this study to the best extent possible in order to remain consistent with existing signal coordination plans. County, City, and CDOT signal timing information received is included for reference in Appendix A.

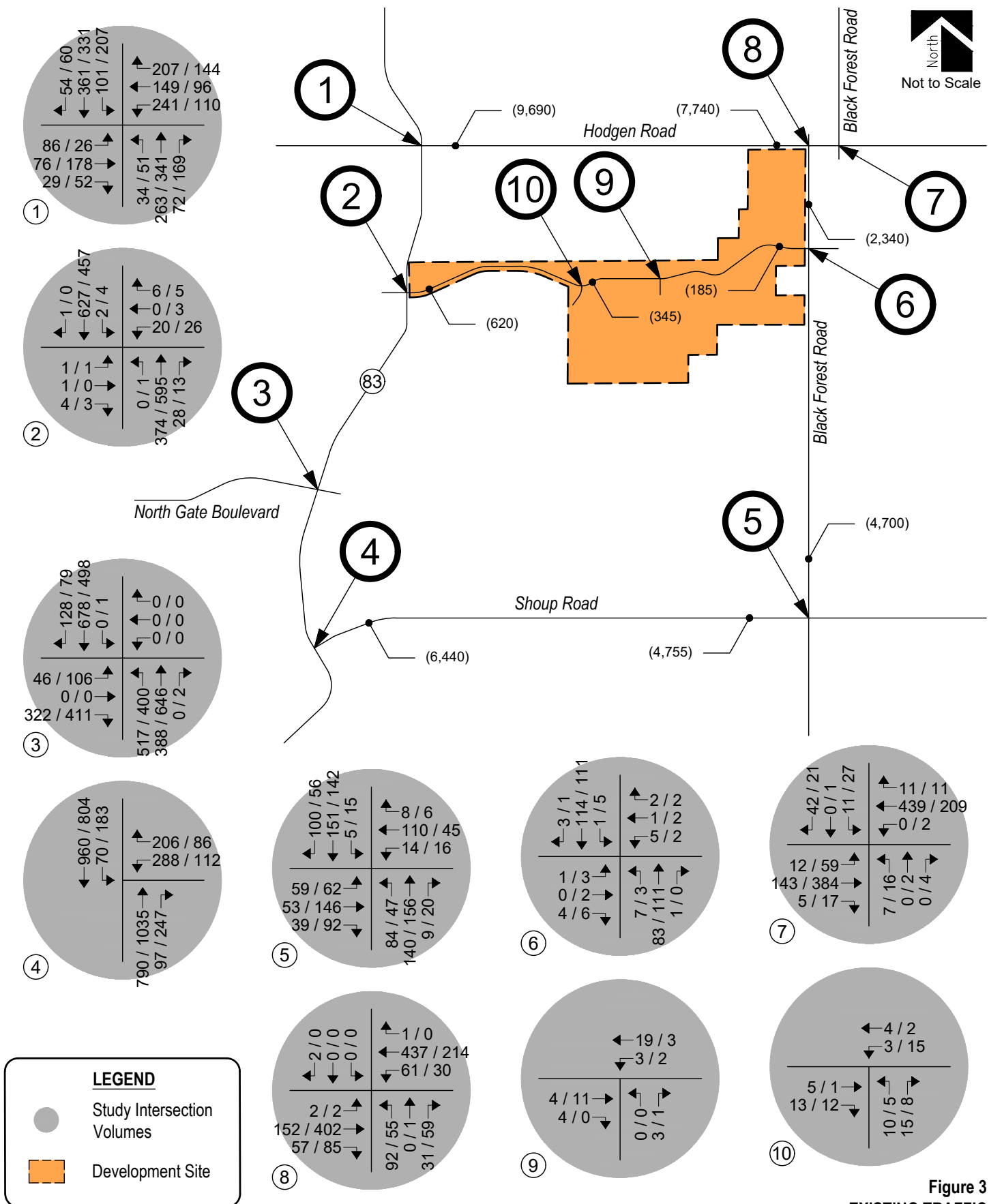


Figure 3
EXISTING TRAFFIC

Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

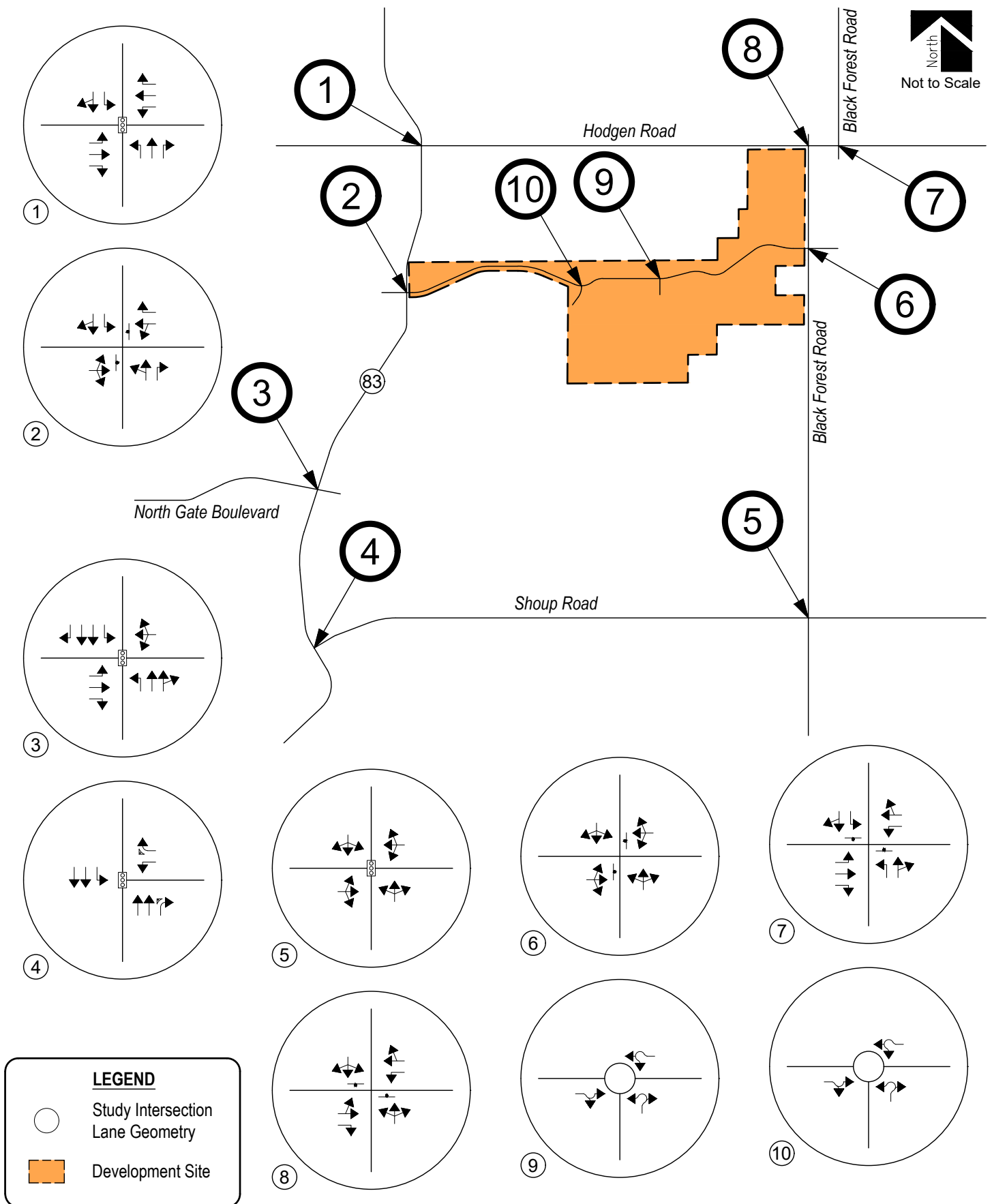


Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

| INTERSECTION LANE GROUPS | LEVEL OF SERVICE | |
|---|------------------|--------------|
| | AM PEAK HOUR | PM PEAK HOUR |
| State Highway 83 / Hodgen Road (Signalized) | C (23.1) | B (16.3) |
| State Highway 83 / North Gate Boulevard (Signalized) | B (13.9) | B (11.2) |
| State Highway 83 / Shoup Road (Signalized) | B (15.8) | B (11.8) |
| Black Forest Road / Shoup Road (Signalized) | B (15.9) | C (21.2) |
| State Highway 83 / Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | C | C |
| Westbound Left and Through | D | D |
| Westbound Right | B | B |
| Northbound Left and Through | A | A |
| Southbound Left | A | A |
| Black Forest Road / Old Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | A | A |
| Westbound Left, Through and Right | A | B |
| Northbound Left, Through and Right | A | A |
| Southbound Left, Through and Right | A | A |
| Hodgen Road / Black Forest Road / Ridge Run Drive (Stop-Controlled) | | |
| Eastbound Left | A | A |
| Westbound Left | A | A |
| Northbound Left | C | C |
| Northbound Through and Right | A | B |
| Southbound Left | C | C |
| Southbound Through and Right | B | B |
| Hodgen Road / Black Forest Road (Stop-Controlled) | | |
| Eastbound Left and Through | A | A |
| Westbound Left | A | A |
| Northbound Left, Through and Right | C | C |
| Southbound Left, Through and Right | B | A |
| Old Stagecoach Road / Allen Ranch Road (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |
| Old Stagecoach Road / Shortwall Drive (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Stop-Controlled Intersection: Level of Service

Roundabout Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the signalized intersection of State Highway 83 with Hodgen Road has overall operations at LOS C during the morning peak traffic hour and LOS B during the afternoon peak traffic hour.

The signalized intersection of State Highway 83 with North Gate Boulevard has overall operations at LOS B during both the morning and afternoon peak traffic hours.

The signalized intersection of State Highway 83 with Shoup Road has overall operations at LOS B during both the morning and afternoon peak traffic hours.

The signalized intersection of Black Forest Road with Shoup Road has overall operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour.

The stop-controlled intersection of State Highway 83 with Stagecoach Road has turning movement operations at or better than LOS D during both the morning and afternoon peak traffic hours.

The stop-controlled intersection of Black Forest Road with Old Stagecoach Road has turning movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour.

The stop-controlled intersection of Hodgen Road with Ridge Run Drive has turning movement operations at or better than LOS C during both the morning and afternoon peak traffic hours.

The stop-controlled intersection of Hodgen Road with Black Forrest Road has turning movement operations at or better than LOS C during both the morning and afternoon peak traffic hours.

The roundabout intersection of Old Stagecoach Road with Allen Ranch Road has turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

The roundabout intersection of Old Stagecoach Road with Shortwall Drive has turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2027 and 2042, a compounded annual growth rate was determined using population growth estimates provided by the PPACG's 2045 Long Range Transportation Plan, as well as traffic data provided by CDOT's OTIS for the adjacent segment of State Highway 83. PPACG's 2045 Long Range Transportation Plan anticipate a 20-year growth rate between one and two percent, while CDOT's OTIS anticipates a 20-year growth rate between two and three percent. Therefore, in order to provide for a conservative analysis, a growth rate of three percent was applied to existing traffic volumes. This annual growth rate is also considered to be consistent with long-term regional growth projections and the level of in-fill development expected within the area.

The County's Electronic Development Application Review Program (EDARP) provides traffic studies for future adjacent developments, providing additional trips that could impact the study area. However, these future development areas have traffic studies that are over three years old and no longer comply to the County's 2016 MTCP. These developments include but are not limited to: Mountain Dance, Shamrock Ranch, Paint Brush Hills, Setters View Subdivision, and Providence Point. As such, the conservative three percent annual growth mentioned above is expected to account for any future development within the overall study area.

Pursuant to the non-committed area roadway improvements discussed in Section I, Year 2027 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. Year 2042 background traffic conditions assume the widening of State Highway 83 and the alignment of Black Forest Road across Hodgen Road. Year 2042 also assumes existing signal timing parameters for the signalized intersections within the study area with optimized intersection splits in effort to better long-term intersection performance. These assumptions provide for a conservative analysis.

Projected background traffic volumes and intersection geometry for Year 2027 are shown on Figure 5 and Figure 6, respectively.

Projected background traffic volumes and intersection geometry for Year 2042 are shown on Figure 7 and Figure 8, respectively.

Not consistent with statement on page 6 about maintaining existing timing so progression is not disrupted.

Correct. As the highlighted sentence describes, optimizing splits for Year 2042 is an effort to better long-term intersection performance, as would likely occur in the long-term future once the surrounding area is built out.

Background Traffic Signal Warrants

A preliminary signal warrant analysis, using Year 2027 and 2042 background traffic volumes, was conducted for the State Highway 83 with Stagecoach Road intersection, as well as the Black Forest Road with Hodgen Road intersection, in order to review potential for traffic signal control. Warrant study worksheets are provided for reference in Appendix D.

From a traffic volume perspective, the State Highway 83 with Stagecoach Road intersection remained below the vehicle volume thresholds required to meet Warrant 1 (Eight-Hour Vehicular Volume), Warrant 2 (Four-Hour Vehicular Volume), and Warrant 3 (Peak Hour), from the MUTCD, for the installation of a traffic signal. As such, the intersection remained under stop-controlled conditions for Year 2027 and Year 2042.

Upon realignment of the Black Forest Road with Hodgen Road intersection assumed to occur by Year 2042, the study intersection was determined to be above the minimum vehicle volumes required to meet Warrants 1, 2, and 3 for the installation of a traffic signal. As such, the realigned intersection was analyzed under assumed traffic signal control by Year 2042.

Said intersections should be monitored further by CDOT or County Staff as area development occurs to determine when or if traffic signal installation is appropriate.

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2027 are listed in Table 2. Year 2042 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

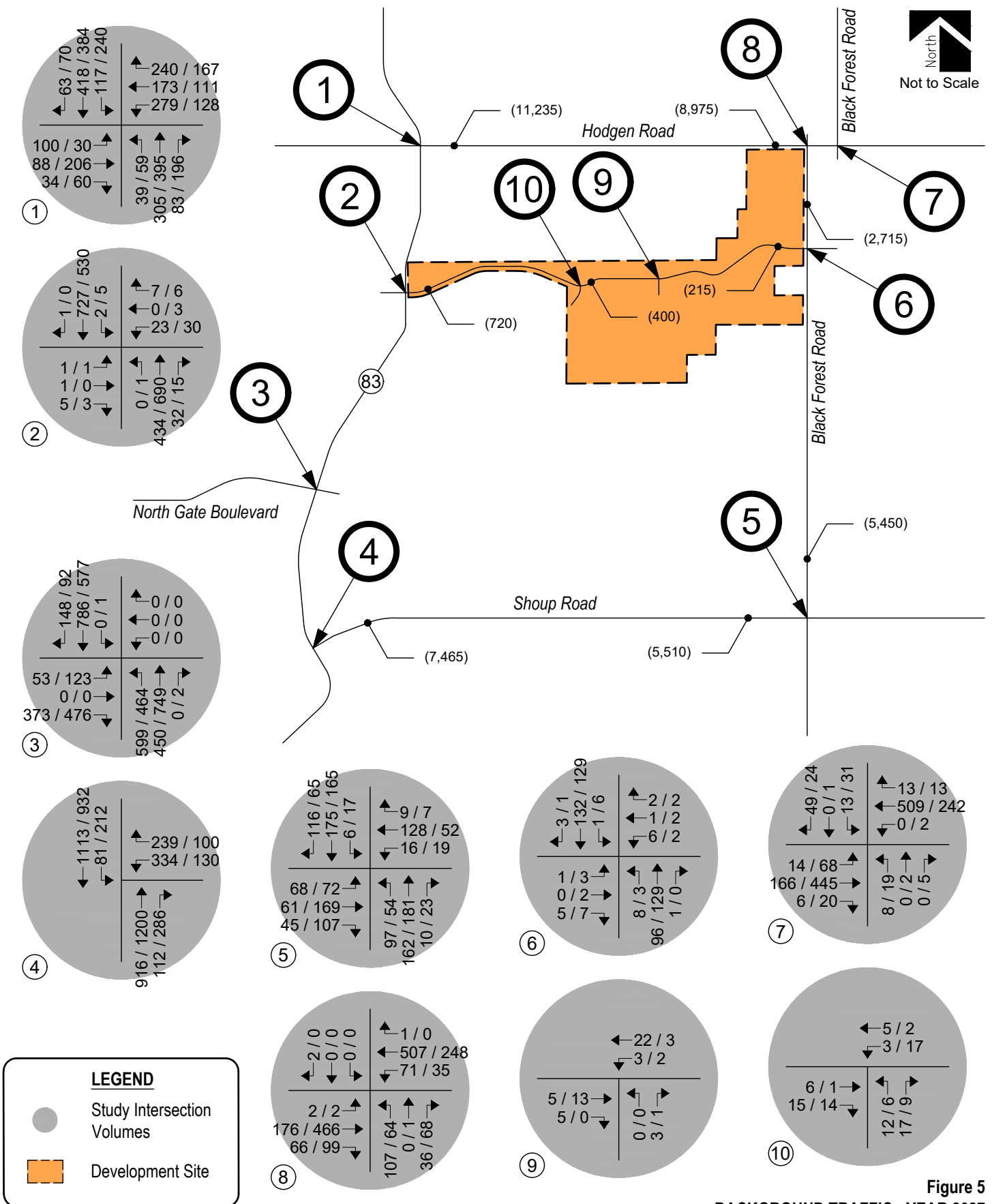
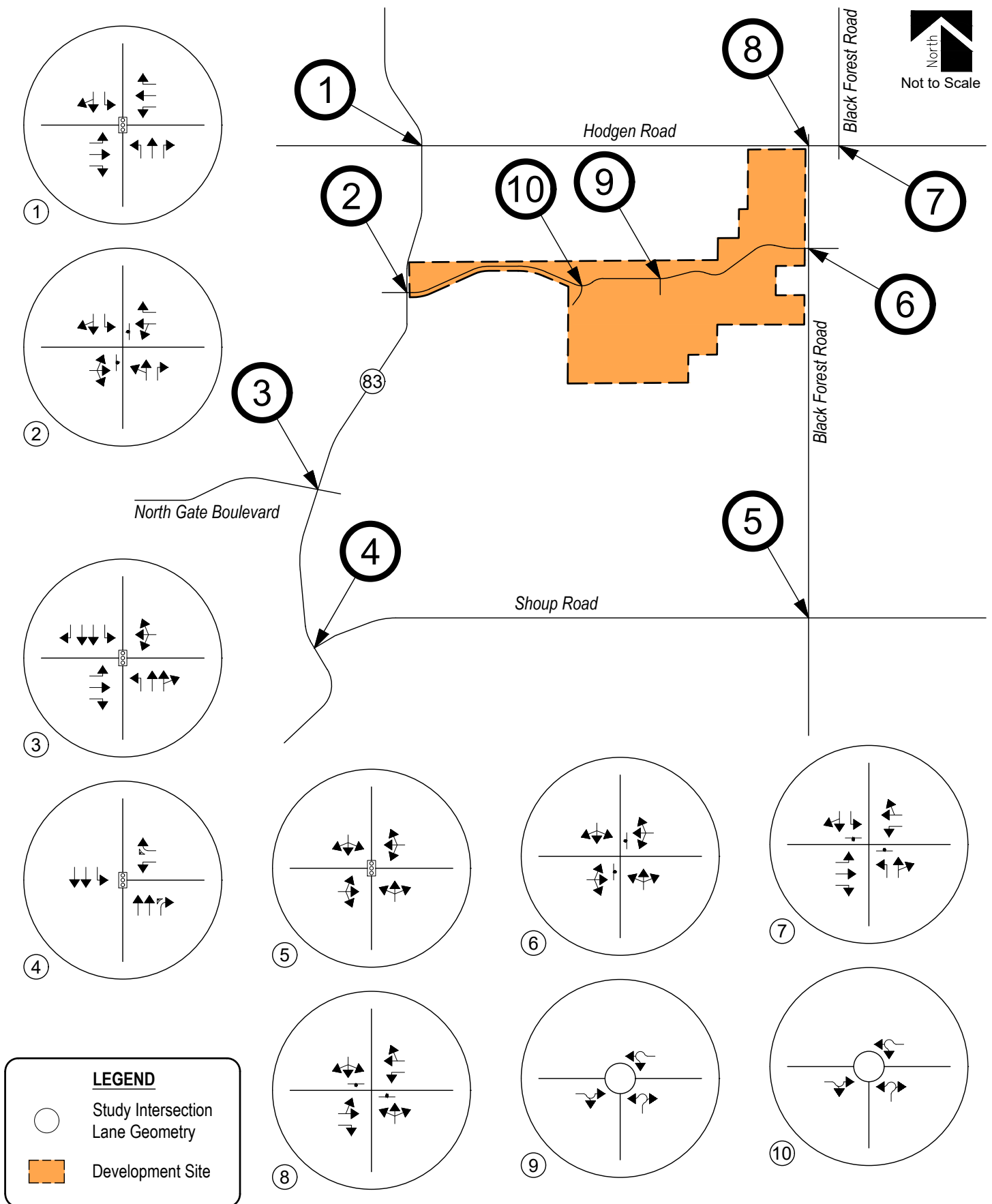


Figure 5
BACKGROUND TRAFFIC - YEAR 2027
 Volumes
 AM / PM Peak Hour
 (ADT) : Average Daily Traffic



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Figure 6
BACKGROUND TRAFFIC - YEAR 2027
Intersection Geometry

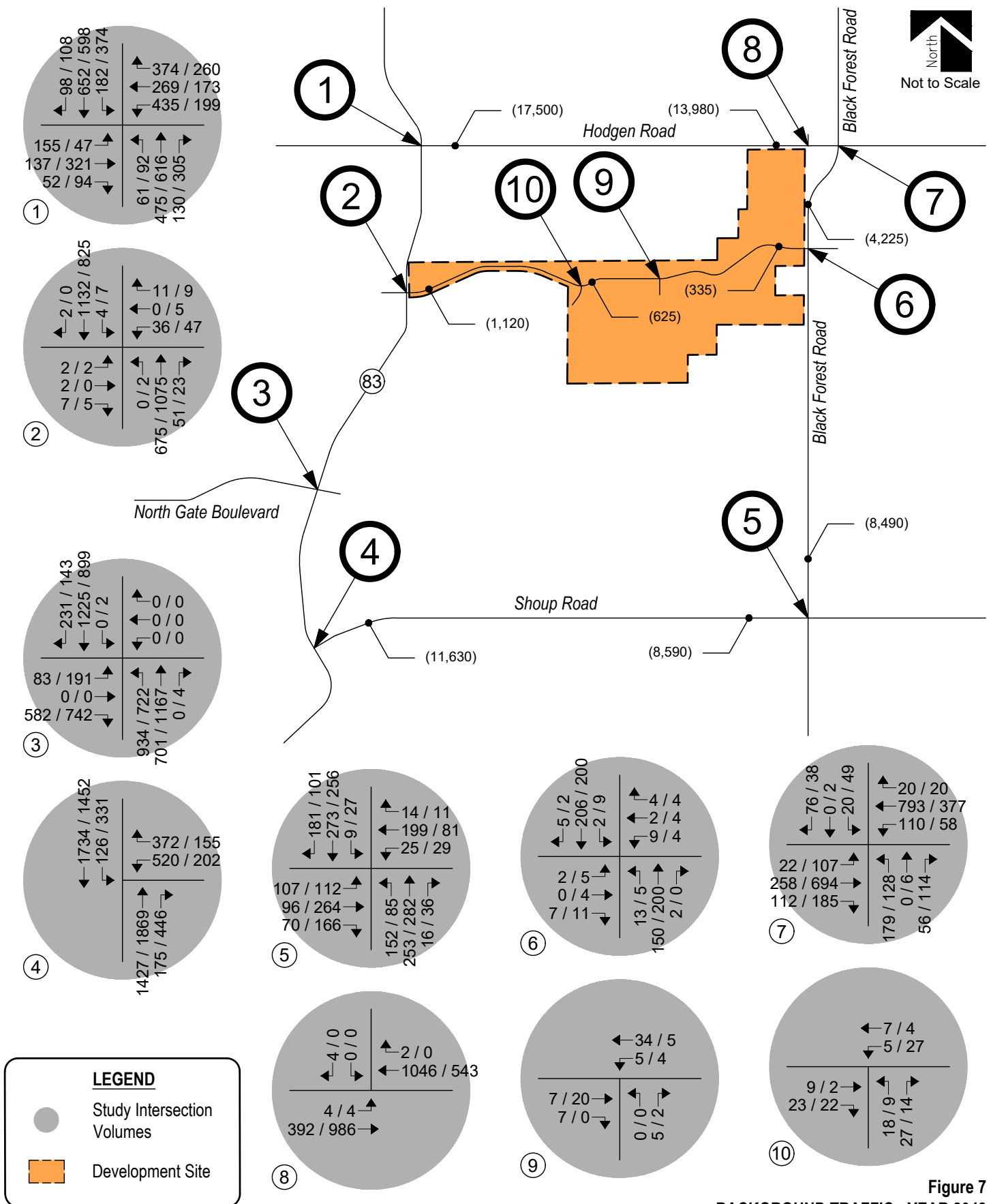


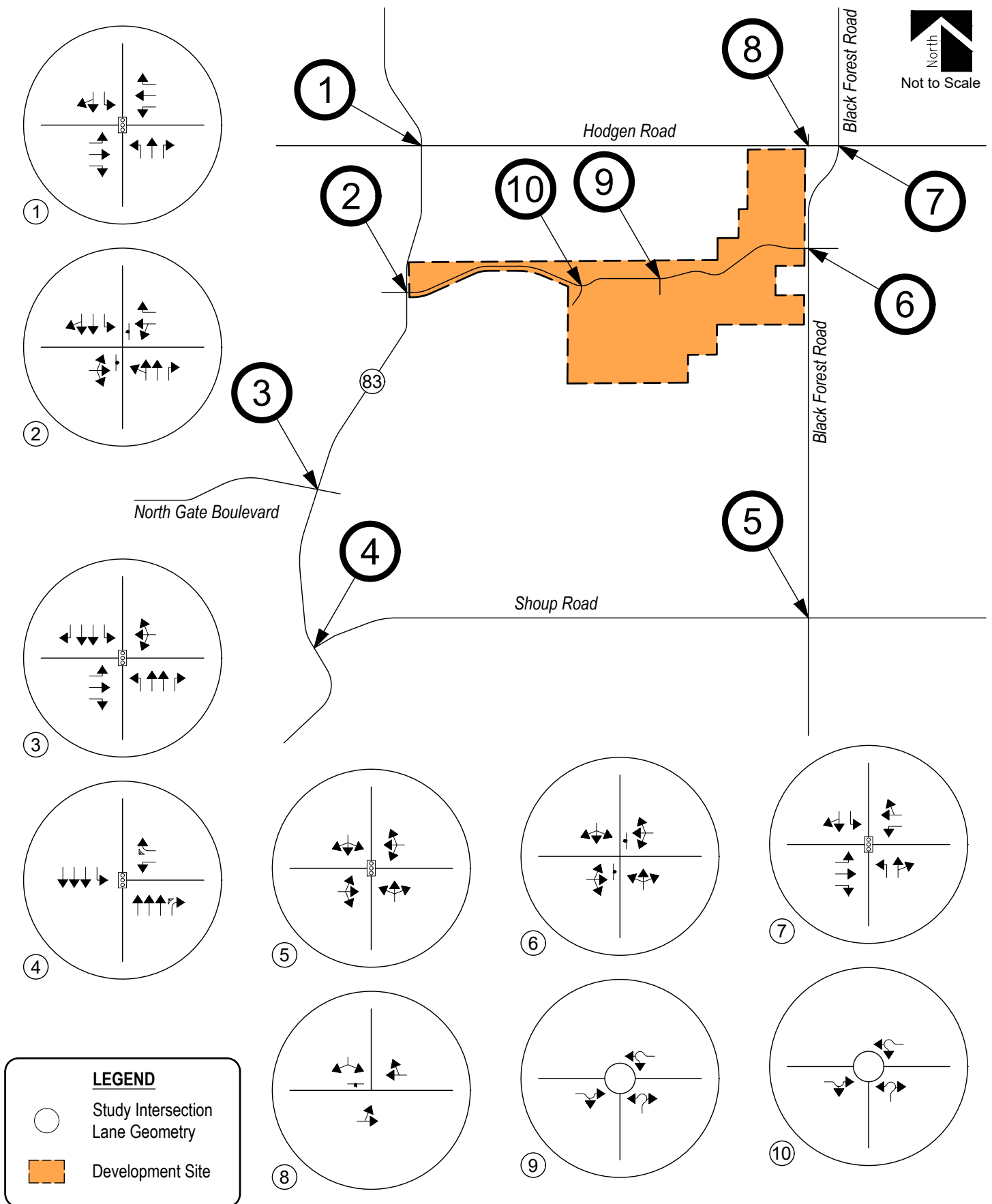
Figure 7
BACKGROUND TRAFFIC - YEAR 2042
 Volumes
 AM / PM Peak Hour
 (ADT) : Average Daily Traffic



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 Traffic Impact Study

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Figure 8
BACKGROUND TRAFFIC - YEAR 2042
Intersection Geometry

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2027

| INTERSECTION LANE GROUPS | LEVEL OF SERVICE | |
|--|------------------|--------------|
| | AM PEAK HOUR | PM PEAK HOUR |
| State Highway 83 / Hodgen Road (Signalized) | C (29.2) | B (17.9) |
| State Highway 83 / North Gate Boulevard (Signalized) | C (24.6) | B (14.1) |
| State Highway 83 / Shoup Road (Signalized) | B (17.7) | B (14.6) |
| Black Forest Road / Shoup Road (Signalized) | B (17.3) | C (23.3) |
| State Highway 83 / Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | C | C |
| Westbound Left and Through | E | E |
| Westbound Right | B | B |
| Northbound Left and Through | A | A |
| Southbound Left | A | A |
| Black Forest Road / Old Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | A | A |
| Westbound Left, Through and Right | B | B |
| Northbound Left, Through and Right | A | A |
| Southbound Left, Through and Right | A | A |
| Hodgen Road / Black Forest Road / Ridge Run Drive (Stop-Controlled) | | |
| Eastbound Left | A | A |
| Westbound Left | A | A |
| Northbound Left | C | C |
| Northbound Through and Right | A | B |
| Southbound Left | C | C |
| Southbound Through and Right | B | B |
| Hodgen Road / Black Forest Road / Black Forrest Road (Stop-Controlled) | | |
| Eastbound Left and Through | A | A |
| Westbound Left | A | A |
| Northbound Left, Through and Right | D | C |
| Southbound Left, Through and Right | B | A |
| Old Stagecoach Road / Allen Ranch Road (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |
| Old Stagecoach Road / Shortwall Drive (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
 Stop-Controlled Intersection: Level of Service
 Roundabout Intersection: Level of Service

Background Traffic Analysis Results – Year 2027

Year 2027 background traffic analysis indicates that all signalized intersections within the study area experience overall operations at or better than LOS C during both the morning and afternoon peak traffic hours.

All stop-controlled intersections within the study area have turning movement operations at or better than LOS D during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour. Exceptions would include the westbound left and through turning movement at State Highway 83 and Stagecoach Road, which operates at LOS E during either peak traffic hour. The LOS E operations are attributed to the through traffic volume along State Highway 83 and the stop-controlled nature of the intersection.

The roundabout intersections along Old Stagecoach Road are shown to have turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along State Highway 83 may create additional gaps in the traffic stream for turning movements at Stagecoach Road which could provide mitigation to the LOS E operations projected during both peak traffic hours.

Was progression re-evaluated
to verify this statement?

Reevaluation of progression not needed. Vehicle platooning and gaps in traffic flow will occur regardless of signal progression.

If needed, signal progression could be provided with future development submittals/applications.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2042

| INTERSECTION LANE GROUPS | LEVEL OF SERVICE | |
|---|------------------|--------------|
| | AM PEAK HOUR | PM PEAK HOUR |
| State Highway 83 / Hodgen Road (Signalized) | D (45.9) | D (53.5) |
| State Highway 83 / North Gate Boulevard (Signalized) | F (82.9) | D (50.3) |
| State Highway 83 / Shoup Road (Signalized) | C (25.7) | C (20.3) |
| Black Forest Road / Shoup Road (Signalized) | C (24.3) | C (27.8) |
| Hodgen Road / Black Forest Road (Signalized) | C (20.6) | B (16.1) |
| State Highway 83 / Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | D | C |
| Westbound Left and Through | F | F |
| Westbound Right | B | B |
| Northbound Left and Through | A | A |
| Southbound Left | A | B |
| Black Forest Road / Old Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | B | B |
| Westbound Left, Through and Right | B | B |
| Northbound Left, Through and Right | A | A |
| Southbound Left, Through and Right | A | A |
| Hodgen Road / Black Forrest Road (Stop-Controlled) | | |
| Eastbound Left and Through | A | A |
| Southbound Left and Right | C | A |
| Old Stagecoach Road / Allen Ranch Road (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |
| Old Stagecoach Road / Shortwall Drive (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Stop-Controlled Intersection: Level of Service

Roundabout Intersection: Level of Service

Background Traffic Analysis Results – Year 2042

By Year 2042 and without the proposed development, all signalized intersections within the study area are expected to have overall operations at or better than LOS D during both the morning and afternoon peak traffic hours. The exception includes the State Highway 83 and North Gate Boulevard intersection which shows overall LOS F operations during the morning peak traffic hour. The LOS F operation is attributed to the northbound left turning volumes and conflicting southbound through volumes. A possible mitigation to the anticipated LOS F operation could be the implementation of dual northbound left turn lanes that could allow for an overall LOS D operation.

All stop-controlled intersections within the study area project turning movement operations at or better than LOS D during both peak traffic hours. Exceptions still include the westbound left and through turning movement at State Highway 83 and Stagecoach Road, which operates at LOS F during either peak traffic hour. The LOS F operations are attributed to the through traffic volume along State Highway 83 and the stop-controlled nature of the intersection.

Although the study intersection of State Highway 83 and Stagecoach Road is not projected to meet MUTCD's vehicle volumes requirements for consideration of traffic signal control, signalization at the intersection could provide relief to the levels of service indicated under stop-control conditions.

It is emphasized that it is not uncommon for unsignalized movements to or from an arterial roadway, in urbanized areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as HCM analysis limitations may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along State Highway 83 may create additional gaps in the traffic stream for turning movements at Stagecoach Road which could provide mitigation to the LOS F operations projected during both peak traffic hours.

Both roundabout intersections along Old Stagecoach Road are shown to have projected turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

Was progression
re-evaluated to verify
this statement?

Reevaluation of progression not needed. Vehicle platooning and gaps in traffic flow will occur regardless of signal progression.

If needed, signal progression could be provided with future development submittals/applications.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use codes 210 (Single-Family Detached Housing) applied to estate lots and low density residential acreages, 215 (Single-Family Attached Housing) applied to medium density acreage, 330 (Resort Hotel) applied to hotel rooms / golf casitas and branded flats acreages, 492 (Health/Fitness Club) applied to fitness center acreage, and 821 (Shopping Plaza (40-150k)) applied to commercial acreage were used for estimating trip generation because of their best fit to the proposed land use descriptions.

It is important to note that ITE land use codes 330 (Resort Hotel) and 492 (Health/Fitness Club) do not provide a 24-hour trip generation rate. Therefore, in order to estimate 24-hour trip generation volumes from said land uses, Resort Hotel used 24-hour trip generation rates from ITE land use code 310 (Hotel), and Health/Fitness Club derived 24-hour trip generation volumes using standard relationships of ADT volumes versus peak hour volumes.

Additionally, as described by ITE's Trip Generation Manual, resort hotels cater to the tourist and vacation industry, often providing recreational facilities such as golf courses. Therefore, site-generated trips resulting from the golf course land use are already included within ITE land use code 330 (Resort Hotel). As such, considering how the golf course is already existing, the addition of site-generated trips shown below in Table 5 is understood to provide for a conservative analysis.

Due to the conceptual nature of the proposed development, no specific commercial land uses have been determined. As such, a floor-area-ratio (FAR) of 0.25, referenced from Section 5.3.2, Table 5-4 of the County's Land Development Code⁶, was applied to the commercial areas of the Flying Horse North sketch plan.

As actual land uses, densities or site plans within the Flying Horse North sketch plan become defined over time and through additional County land use approval procedures, it is expected that traffic generation characteristics considered within this study will need to be updated by more specific traffic analyses or studies to help assess if transportation improvements are needed to mitigate potential traffic impacts.

Trip generation rates used in this study are presented in Table 4.

⁶ Land Development Code of El Paso County, Colorado, El Paso County Development, December 2021.

Table 4 – Trip Generation Rates

| ITE CODE | LAND USE | UNIT | TRIP GENERATION RATES | | | | | | |
|-------------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|
| | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| 210 | Single-Family Detached Housing | DU | 9.43 | 0.18 | 0.52 | 0.70 | 0.59 | 0.35 | 0.94 |
| 215 | Single-Family Attached Housing | DU | 7.20 | 0.15 | 0.33 | 0.48 | 0.32 | 0.25 | 0.57 |
| 330 | Resort Hotel | RMS | 7.99 [†] | 0.23 | 0.09 | 0.32 | 0.18 | 0.23 | 0.41 |
| 492 | Health/Fitness Club | KSF | * | 0.67 | 0.64 | 1.31 | 1.97 | 1.48 | 3.45 |
| 821 | Shopping Plaza (40-150k) | KSF | 67.52 | 1.07 | 0.66 | 1.73 | 2.54 | 2.65 | 5.19 |

Key: DU = Dwelling Units. KSF = Thousand Square Feet Gross Floor Area. RMS = Rooms.

[†] = 24-hour trip generation rate from ITE land use code 310 (Hotel).

Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 5 – Trip Generation Summary

| ITE CODE | LAND USE | SIZE | DU | TOTAL TRIPS GENERATED | | | | | | |
|---------------|--------------------------------|------|-----|-----------------------|--------------|------------|------------|--------------|------------|--------------|
| | | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| 210 | Single-Family Detached Housing | 709 | DU | 6,686 | 129 | 367 | 496 | 420 | 247 | 666 |
| 215 | Single-Family Attached Housing | 138 | DU | 994 | 21 | 46 | 66 | 45 | 34 | 79 |
| 330 | Resort Hotel | 275 | RMS | 2,197 | 63 | 25 | 88 | 48 | 64 | 113 |
| 492 | Health/Fitness Club | 44.6 | KSF | 1,540 | 30 | 29 | 58 | 88 | 66 | 154 |
| 821 | Shopping Plaza (40-150k) | 99.1 | KSF | 6,691 | 106 | 65 | 171 | 252 | 262 | 514 |
| Total: | | | | 18,108 | 349 | 531 | 880 | 853 | 673 | 1,526 |

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out and without consideration of applicable vehicle trip reductions, Table 5 illustrates that the proposed development has the potential to generate approximately 18,108 daily trips with 880 of those occurring during the morning peak hour and 1,526 during the afternoon peak hour.

Adjustments to Trip Generation Rates

It is considered likely that a mixed-use development of this type will attract trips from within area land uses. However, due to the sketch plan's conceptual nature, an exact vehicle trip reduction cannot be determined at this time but could be as little as 10 percent. As such, an assumed 10 percent internal capture reduction was applied to trip generation estimates.

It appears that a simple 10% reduction was taken. However, attractions must equal productions. Show calculations to demonstrate that internal capture was calculated appropriately.

Table 6 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out with reduction applied due to assumed internal capture.

Table 6 – Trip Generation Summary with Reductions

| ITE CODE | LAND USE | SIZE | 24 HOUR | TOTAL TRIPS GENERATED | | | | | |
|------------------------|--------------------------------|----------|------------|-----------------------|------|-------|--------------|------|-------|
| | | | | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| 210 | Single-Family Detached Housing | 709 DU | 6,017 | 116 | 331 | 447 | 378 | 222 | 600 |
| 215 | Single-Family Attached Housing | 138 DU | 894 | 18 | 41 | 60 | 40 | 30 | 71 |
| 330 | Resort Hotel | 275 RMS | 1,978 | 57 | 22 | 79 | 44 | 58 | 101 |
| 492 | Health/Fitness Club | 44.6 KSF | 1,386 | 27 | 26 | 53 | 79 | 60 | 139 |
| 821 | Shopping Plaza (40-150k) | 99.1 KSF | 6,022 | 96 | 59 | 154 | 227 | 236 | 463 |
| <i>Trip Reduction:</i> | | | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| <i>Total:</i> | | | 16,297 | 314 | 478 | 792 | 768 | 606 | 1,374 |

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out and with consideration for internal capture trip reduction, Table 6 illustrates that the proposed development has the potential to generate approximately 16,297 daily trips with 792 of those occurring during the morning peak hour and 1,374 during the afternoon peak hour.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County, proposed and existing area land uses, allowed turning movements, available roadway network, and in reference to historical traffic count data provided by CDOT's TCDS.

Overall trip distribution patterns for the development are shown on Figure 9.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 9.

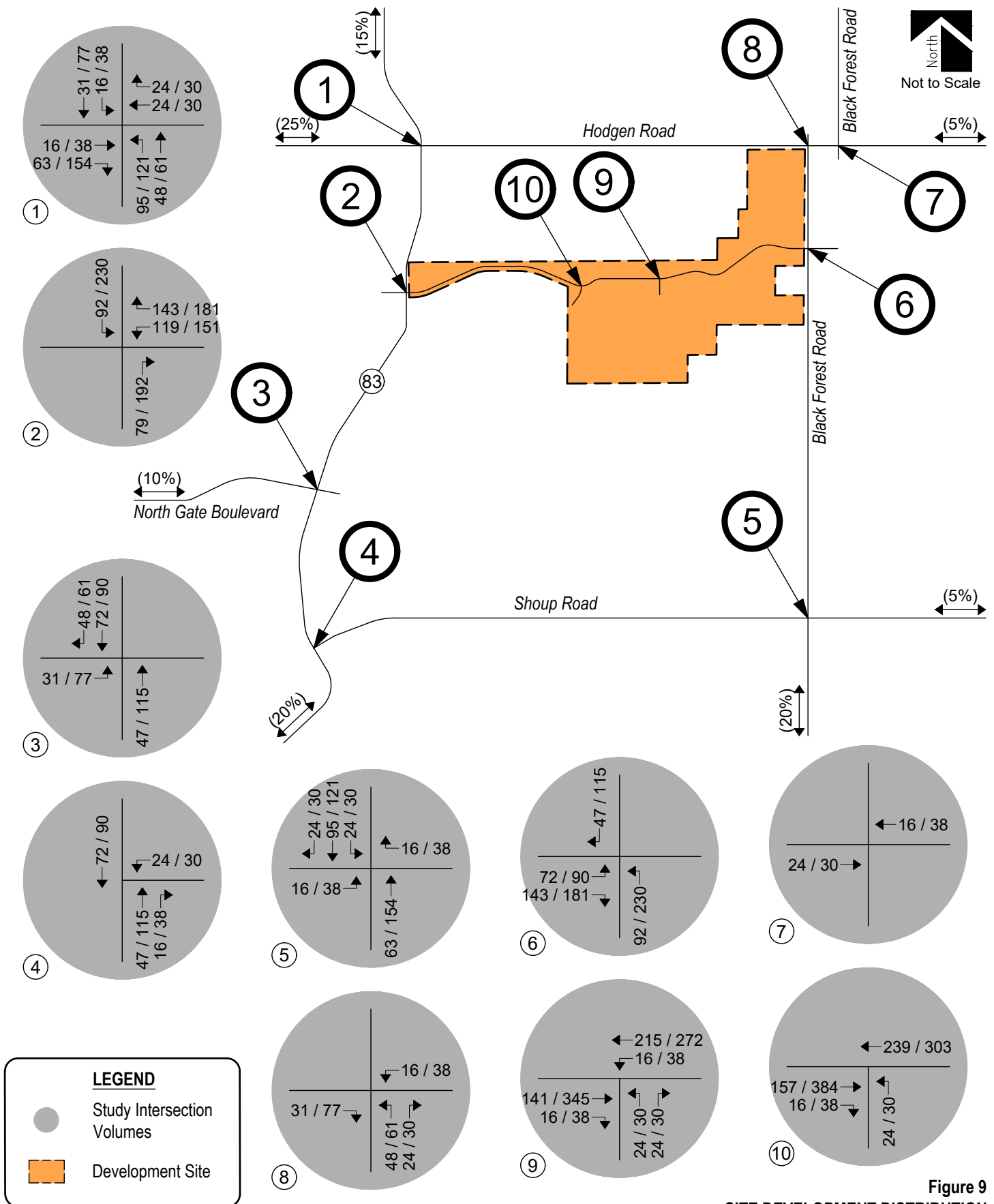


Figure 9
SITE DEVELOPMENT DISTRIBUTION
 (%) : Overall
SITE-GENERATED
 AM / PM Peak Hour

V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2027 and 2042 with consideration of site-generated traffic. For analysis purposes, it was assumed that overall development construction would be completed by end of Year 2027.

Pursuant to area roadway improvement discussions provided in Section III, Year 2027 and Year 2042 total traffic conditions assume no additional roadway improvements to accommodate regional transportation demands than that described for each background analysis year. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2027 total traffic volumes and intersection geometry are shown in Figure 10 and Figure 11, respectively.

Figure 12 and Figure 13 shows projected total traffic volumes and intersection geometry for Year 2042, respectively.

Total Traffic Signal Warrants

A preliminary signal warrant analysis, using total traffic volumes, was conducted for the State Highway 83 with Stagecoach Road intersection, as well as the Black Forest Road with Old Stagecoach Road intersection, to review the potential for traffic signal control. Year 2027 analysis results conclude that both intersections exceed minimum vehicle volume thresholds to meet MUTCD's Warrant 1 – Eight-Hour Vehicular Volume, Warrant 2 – Four-Hour Vehicular Volume, and Warrant 3 – Peak Hour for the installation of a traffic signal.

The study intersections should be monitored further by CDOT or County Staff as actual area development occurs to determine when or if signalization installation is appropriate.

Warrant study worksheets are provided for reference in Appendix D.

Total Traffic Auxiliary Lane Analysis

Auxiliary lanes for site development accesses were based on the County's ECM and CDOT's State Highway Access Code (SHAC)⁷.

⁷ State Highway Access Code, The Transportation Commission of Colorado, March 2002.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7 of the County's ECM, reveals that a southbound right turn deceleration lane along Black Forest Road at Old Stagecoach Road is required since the southbound right turn ingress volume exceeds the 25 vehicles per hour threshold. Section 2.3.7 of the County's ECM also reveals that an exclusive northbound left turn deceleration lane is required along Black Forest Road at Old Stagecoach Road since the northbound left turn ingress volume exceeds the County's threshold of 10 vehicles per hour.

An evaluation of auxiliary lane requirements, pursuant to Sections 3.8(5) and 4.8(2) of CDOT's SHAC, reveals that the existing northbound right and southbound left turn lanes along State Highway 83 may need to be lengthened to accommodate projects vehicle volumes in the long-term future.

Due to the conservative analysis performed throughout this study and the conceptual nature of the Flying Horse North sketch plan, it is expected that auxiliary lane requirements evaluated within this study will need to be updated by more specific traffic analyses or studies as actual area development occurs, to help assess if transportation improvements are needed to meet the County's and CDOT's vehicle volume thresholds.

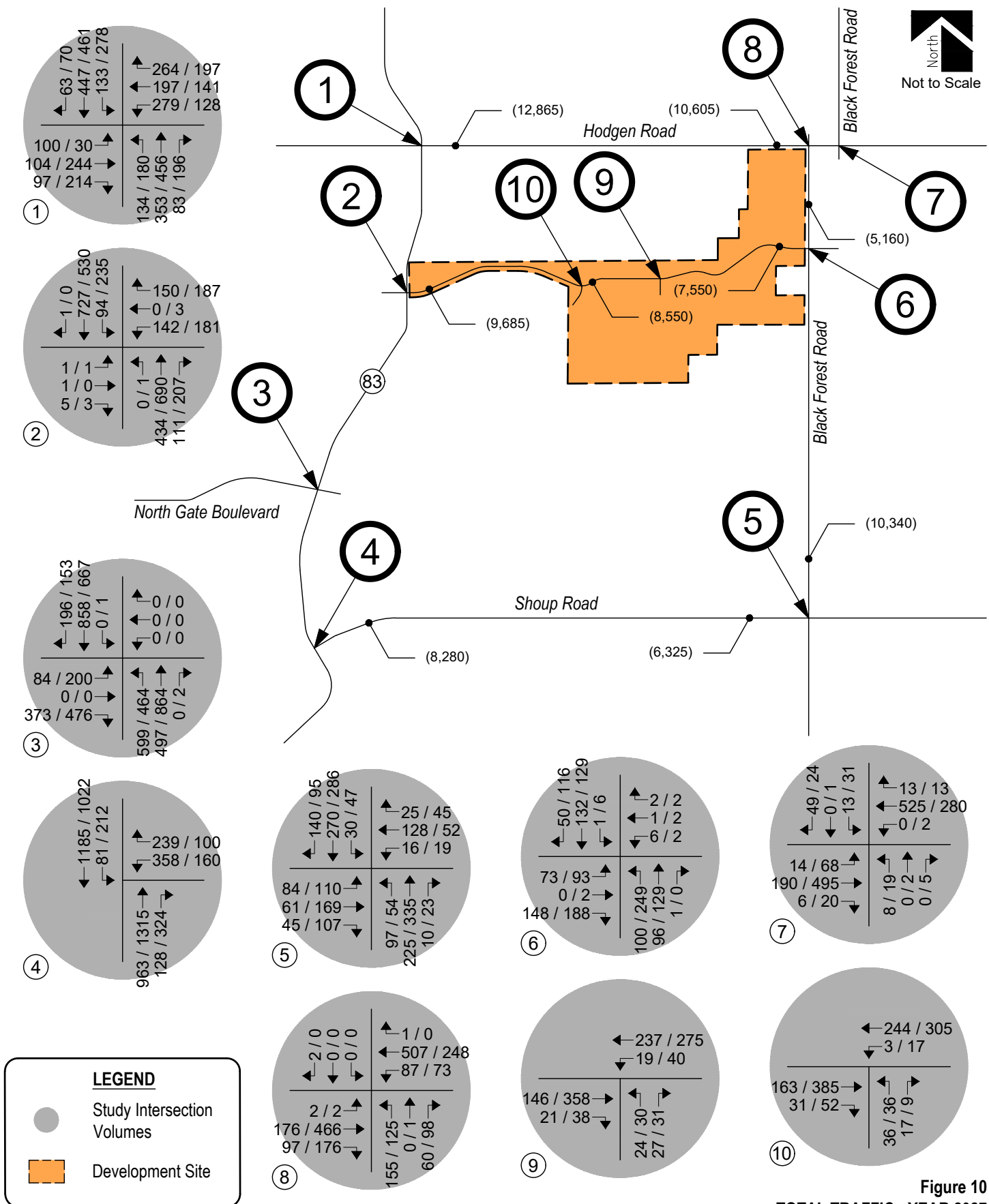


Figure 10
TOTAL TRAFFIC - YEAR 2027
 Volumes
 AM / PM Peak Hour
 (ADT) : Average Daily Traffic

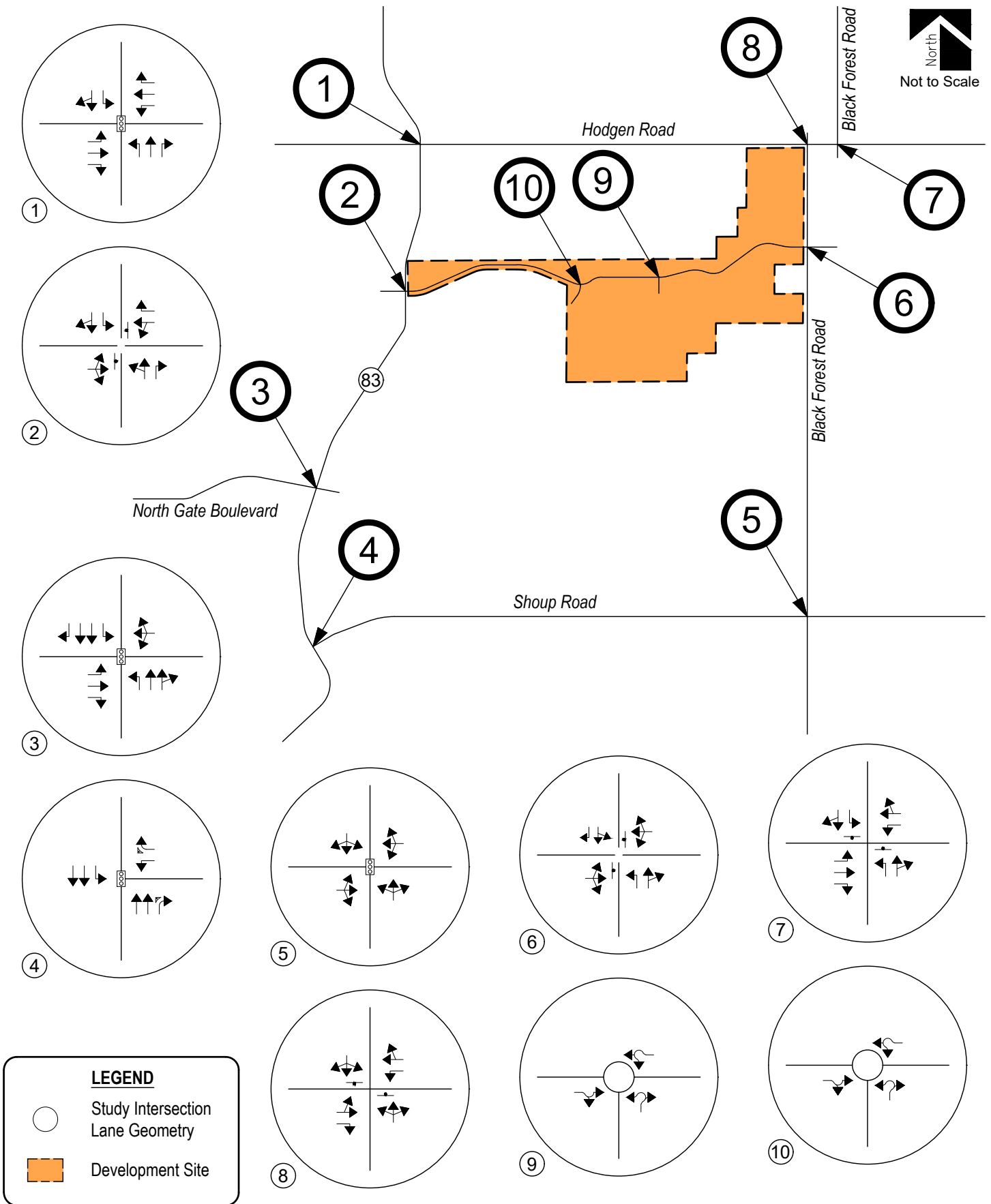
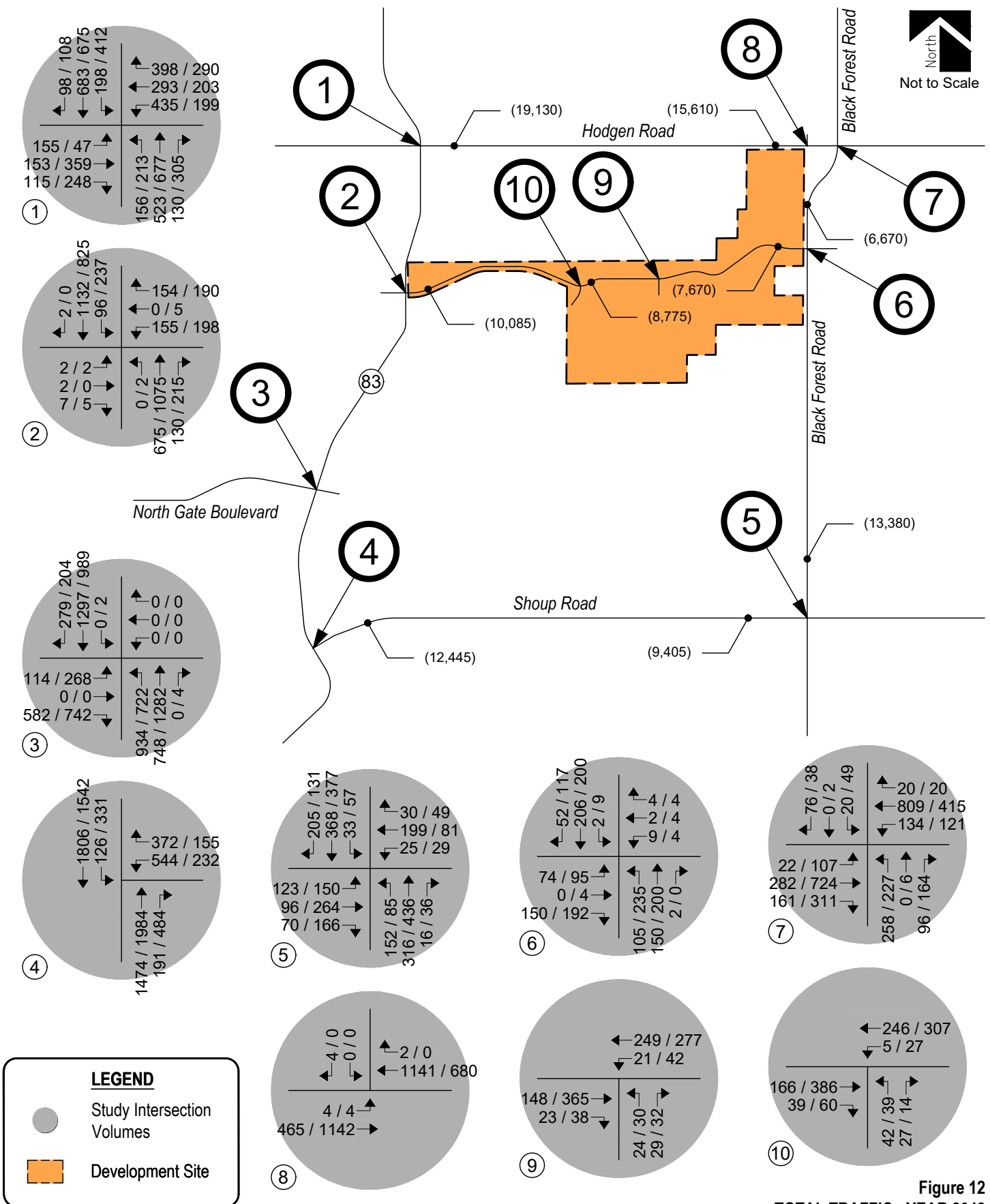


Figure 11
TOTAL TRAFFIC - YEAR 2027
 Intersection Geometry



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 Traffic Impact Study

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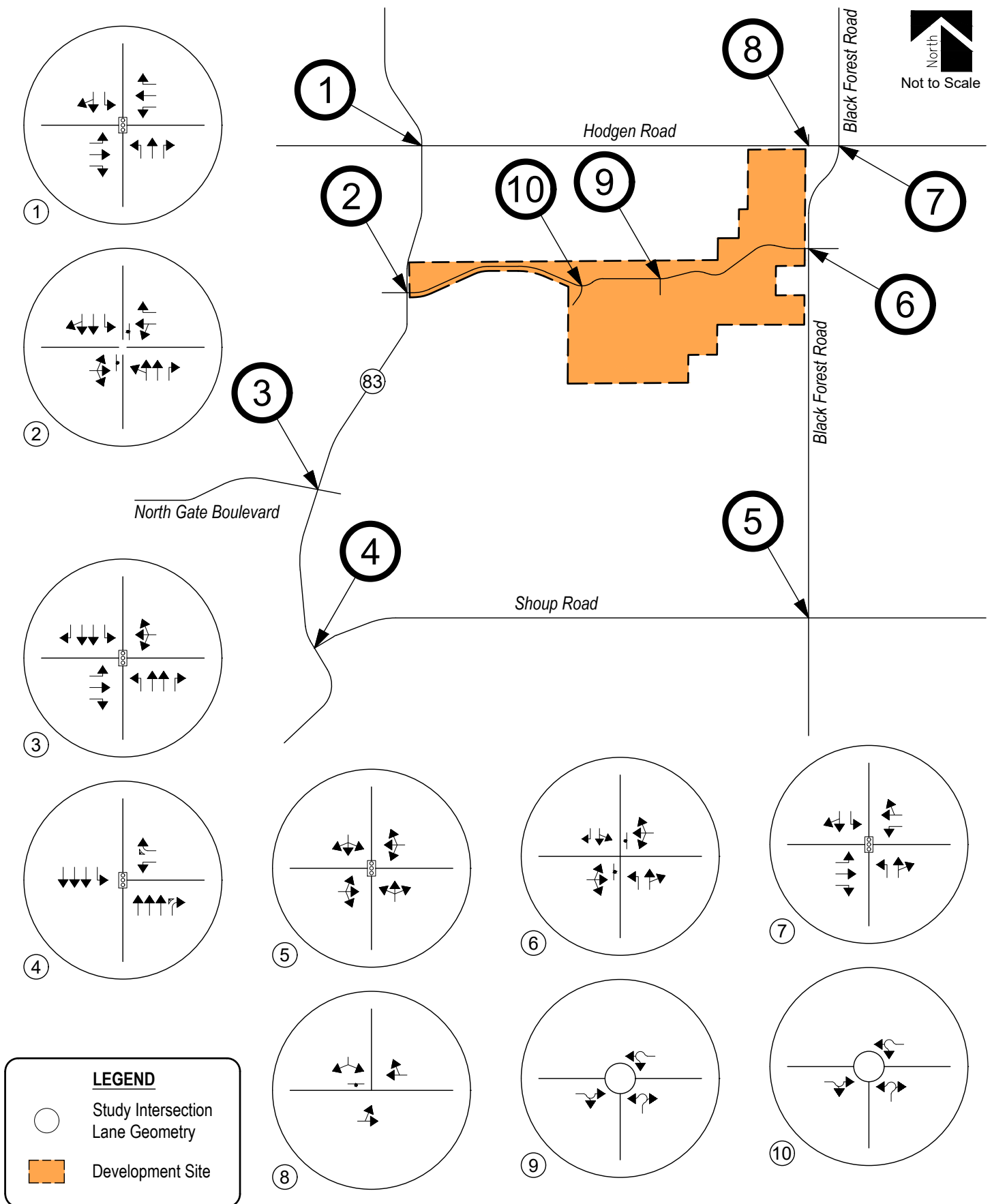


Figure 13
TOTAL TRAFFIC - YEAR 2042
 Intersection Geometry

VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the Highway Capacity Manual (HCM) and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2027 and 2042 are summarized in Table 7 and Table 8, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2027

| INTERSECTION LANE GROUPS | LEVEL OF SERVICE | |
|--|------------------|--------------|
| | AM PEAK HOUR | PM PEAK HOUR |
| State Highway 83 / Hodgen Road (Signalized) | C (28.2) | B (19.8) |
| State Highway 83 / North Gate Boulevard (Signalized) | C (31.7) | B (18.1) |
| State Highway 83 / Shoup Road (Signalized) | B (18.9) | B (17.4) |
| Black Forest Road / Shoup Road (Signalized) | B (17.6) | C (24.2) |
| State Highway 83 / Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | D | F |
| Westbound Left and Through | F | F |
| Westbound Right | B | C |
| Northbound Left and Through | A | A |
| Southbound Left | A | B |
| State Highway 83 / Stagecoach Road (Signalized) | B (15.3) | C (24.5) |
| Black Forest Road / Old Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | B | D |
| Westbound Left, Through and Right | B | C |
| Northbound Left | A | A |
| Southbound Left and Through | A | A |
| Black Forest Road / Old Stagecoach Road (Signalized) | B (10.8) | B (12.1) |
| Hodgen Road / Black Forest Road / Ridge Run Drive (Stop-Controlled) | | |
| Eastbound Left | A | A |
| Westbound Left | A | A |
| Northbound Left | C | D |
| Northbound Through and Right | A | B |
| Southbound Left | C | D |
| Southbound Through and Right | B | B |
| Hodgen Road / Black Forest Road / Black Forrest Road (Stop-Controlled) | | |
| Eastbound Left and Through | A | A |
| Westbound Left | A | A |
| Northbound Left, Through and Right | F | E |
| Southbound Left, Through and Right | B | A |
| Old Stagecoach Road / Allen Ranch Road (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |
| Old Stagecoach Road / Shortwall Drive (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
 Stop-Controlled Intersection: Level of Service
 Roundabout Intersection: Level of Service

Table 8 – Intersection Capacity Analysis Summary – Total Traffic – Year 2042

| INTERSECTION LANE GROUPS | LEVEL OF SERVICE | |
|---|------------------|--------------|
| | AM PEAK HOUR | PM PEAK HOUR |
| State Highway 83 / Hodgen Road (Signalized) | E (59.6) | F (83.6) |
| State Highway 83 / North Gate Boulevard (Signalized) | F (92.0) | E (61.2) |
| State Highway 83 / Shoup Road (Signalized) | C (27.0) | C (22.5) |
| Black Forest Road / Shoup Road (Signalized) | C (29.0) | D (44.9) |
| Hodgen Road / Black Forest Road (Signalized) | C (24.9) | C (20.4) |
| State Highway 83 / Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | F | F |
| Westbound Left and Through | F | F |
| Westbound Right | B | C |
| Northbound Left and Through | A | A |
| Southbound Left | B | C |
| State Highway 83 / Stagecoach Road (Signalized) | B (13.3) | C (24.0) |
| Black Forest Road / Old Stagecoach Road (Stop-Controlled) | | |
| Eastbound Left, Through and Right | C | E |
| Westbound Left, Through and Right | C | D |
| Northbound Left | A | A |
| Southbound Left and Through | A | A |
| Black Forest Road / Old Stagecoach Road (Signalized) | B (10.8) | B (12.8) |
| Hodgen Road / Black Forrest Road (Stop-Controlled) | | |
| Eastbound Left and Through | A | A |
| Southbound Left and Right | C | A |
| Old Stagecoach Road / Allen Ranch Road (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |
| Old Stagecoach Road / Shortwall Drive (Roundabout) | | |
| Eastbound Through and Right | A | A |
| Westbound Left and Through | A | A |
| Northbound Left and Right | A | A |

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
 Stop-Controlled Intersection: Level of Service
 Roundabout Intersection: Level of Service

General for this section - 2042 improvements rely on signal timing optimization, but text on page 12 says that future signal timings have not been optimized. Clarify.

Total Traffic Analysis Results Upon Development Build-Out

Table 8 illustrates how, by Year 2042 and intersection of State Highway 83 with Hodgen Road, the morning peak traffic hour and LOS F due to the anticipated LOS E and LOS F operation of the intersection with additional turn lanes, and an additional southbound lane, overall intersection delay and better accommodation of future traffic conditions.

To clarify, discussion in Section II (Existing Traffic Conditions) describes how existing signal timing parameters were obtained and used throughout the study to remain consistent with existing coordination plans. Section III (Future Traffic Conditions Without Proposed Development) then describes how long-term scenarios (Year 2042) assumes those existing signal plans with optimized splits.

The signalized intersection of State Highway 83 with North Gate Boulevard anticipates overall operations at LOS F during the morning peak traffic hour and LOS E during the afternoon peak traffic hour. The LOS E and F operations are attributed to the northbound left turning volumes and conflicting southbound through volumes. To mitigate the anticipated level of service operations, implementing dual northbound left turn lanes and optimized signal timing could provide for overall LOS D operations.

The signalized intersection of State Highway 83 with Shoup Road projects overall operations at LOS C during both the morning and afternoon peak traffic hours.

The signalized intersection of Black Forest Road with Shoup Road has projected overall operations at LOS C during the morning peak traffic hour and LOS D during the afternoon peak traffic hour.

The signalized intersection of Hodgen Road with Black Forest Road anticipates overall operations at LOS C during both the morning and afternoon peak traffic hours.

Specific movement or entire approach?

The stop-controlled intersection of State Highway 83 with Stagecoach Road is projected to have turning movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour. Exceptions would include the eastbound turning movement and the westbound left and through shared movement, which operate at LOS E during either peak traffic hour. The LOS E operations are attributed to the through traffic volume along State Highway 83 and the stop-controlled nature of the intersection. Traffic signal control of the intersection, as analyzed in Section V and shown in Table 8, has the potential to provide acceptable overall intersection operations.

Specific movement as stated and shown in Table 8 on previous page

Specific movement or entire approach?

The stop-controlled intersection of Black Forest Road with Old Stagecoach Road is projected to have turning movement operations at or better than LOS D during both the morning and afternoon peak traffic hours. Exceptions include the eastbound turning movement which expects LOS E operations during the afternoon peak traffic hour. The LOS E operation is attributed to the northbound and southbound through volumes along Black Forest Road and the stop-controlled nature of the intersection. Traffic signal control of the intersection, as analyzed in Section V and shown in Table 8, has the potential to provide acceptable overall intersection operations.

Specific movement as stated and shown in Table 8 on previous page

The stop-controlled intersection of Hodgen Road with Black Forrest Road shows turning movement operations at or better than LOS C during both the morning and afternoon peak traffic hours.

It is again emphasized that it is not uncommon for unsignalized movements to or from an arterial roadway, in urbanized areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis limitations may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along State Highway 83 and Black Forest Road may create additional gaps in the traffic stream for turning movements at Old Stagecoach Road which could provide mitigation to the LOS F operations projected during both peak traffic hours.

See previous comments regarding progression

The roundabout intersections of Old Stagecoach Road with Allen Road and Allen Road with Black Forest Road anticipate turning movement operations at LOS A during both peak traffic hours.

Reevaluation of progression not needed. Vehicle platooning and gaps in traffic flow will occur regardless of signal progression.

If needed, signal progression could be provided with future development submittals/applications.

Queue Length Analysis

Queue lengths for the study intersections were analyzed using Year 2042 total traffic conditions. The analysis yields estimate of 95th percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. An average vehicle length of 25 feet was assumed. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C and D.

Table 9 summarizes the 95th percentile queue results in comparison to the projected storage requirements for turn movements within study area for Year 2042.

As Table 9 shows, all turn lane lengths at study intersections have sufficient storage to accommodate future traffic volumes. However, at the State Highway 83 intersections with Hodgen Road and North Gate Boulevard, as well as the Black Forest Road intersection with Hodgen Road, various turning movements are projected to have 95th percentile queuing that exceeds existing turn lane lengths.

It is emphasized that this analysis reflects the sketch plan proposed for the overall development. As such, queuing results reflect conceptual land uses and densities being considered. As actual land uses, densities, or site plans within the Flying Horse North Sketch Plan become defined over time, it is expected that evaluation of vehicle queuing will need to be updated by more specific traffic analyses or studies to help assess if transportation improvements are needed to mitigate potential 95th percentile vehicle queues.

Table 9 – Turn Lane Queues and Storage Requirements – Total Traffic – Year 2042

| Intersection | Turn Movement | Existing Turn Lane Length (feet) | AM Peak Hour | PM Peak Hour | Recommended Turn Lane Length (feet) | |
|---|---------------|----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------|
| | | | 95th Percentile Queue Length (feet) | 95th Percentile Queue Length (feet) | | |
| Signalized Intersections | | | | | | |
| State Highway 83 / Hodgen Road | EB | L | 420' | 179' | 61' | 420' |
| | | T | - | 141' | 372' | - |
| | | R | 420' | 39' | 80' | 420' |
| | WB | L | 350' | 616' | 363' | 310' x2 |
| | | T | - | 269' | 204' | - |
| | | R | 350' | 198' | 64' | 350' |
| | NB | L | 120' | 244' | 365' | 365' |
| | | T | - | 528' | 896' | - |
| | | R | 650' | 40' | 179' | 650' |
| | SB | L | 525' | 166' | 579' | 580' |
| T,R | | - | 1000' | 914' | - | |
| State Highway 83 / North Gate Boulevard | EB | L | 225' | 179' | 317' | 320' |
| | | T | - | 0' | 0' | - |
| | | R | 285' | 216' | 373' | 375' |
| | WB | L,T,R | - | 0' | 0' | - |
| | | L | 900' | 889' | 658' | 900' |
| | | T | - | 72' | 262' | - |
| | NB | R | - | 0' | 0' | - |
| | | L | 750' | 0' | 6' | 750' |
| | | T | - | 610' | 480' | - |
| | | R | 730' | 86' | 51' | 730' |
| State Highway 83 / Shoup Road | WB | L | - | 506' | 284' | - |
| | | R | 500' | 222' | 55' | 500' |
| | NB | T | - | 380' | 526' | - |
| | | R | 710' | 44' | 55' | 710' |
| | SB | L | 980' | 126' | 314' | 980' |
| | | T | - | 419' | 171' | - |
| Black Forest Road / Shoup Road | EB | L,T,R | - | 297' | 521' | - |
| | WB | L,T,R | - | 197' | 89' | - |
| | NB | L,T,R | - | 446' | 578' | - |
| | SB | L,T,R | - | 373' | 539' | - |
| Black Forest Road / Hodgen Road | EB | L | 400' | 12' | 35' | 400' |
| | | T | - | 144' | 466' | - |
| | | R | 335' | 29' | 35' | 355' |
| | WB | L | 280' | 49' | 41' | 280' |
| | | T,R | - | 716' | 216' | - |
| | NB | L | 125' | 324' | 298' | 325' |
| | | T,R | - | 0' | 59' | - |
| | SB | L | 65' | 30' | 61' | 65' |
| | | T,R | - | 0' | 29' | - |

Note: Turn Lane Length does not include taper length.

Key: x2 = Dual Turn Lanes.

Table 9 (Continued) – Turn Lane Queues and Storage Requirements – Total Traffic – Year 2042

| Intersection | Turn Movement | | Existing Turn Lane Length (feet) | AM Peak Hour | PM Peak Hour | Recommended Turn Lane Length (feet) |
|---|---------------|-------|----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | | 95th Percentile Queue Length (feet) | 95th Percentile Queue Length (feet) | |
| Potential Signalized Intersections | | | | | | |
| State Highway 83 / Stagecoach Road | EB | L,T,R | - | 16' | 0' | - |
| | WB | L,T | - | 190' | 263' | - |
| | | R | 135' | 52' | 57' | 135' |
| | NB | L,T | - | 180' | 337' | - |
| | | R | 320' | 30' | 38' | 320' |
| | SB | L | 415' | 27' | 135' | 415' |
| T,R | | - | 163' | 105' | - | |
| Black Forest Road / Old Stagecoach Road | EB | L,T,R | - | 76' | 108' | - |
| | WB | L,T,R | - | 16' | 12' | - |
| | | L | - | 38' | 88' | 195' |
| | NB | T,R | - | 51' | 75' | - |
| | | L,T | - | 114' | 127' | - |
| | SB | R | - | 0' | 25' | 195' |
| Stop-Controlled Intersections | | | | | | |
| State Highway 83 / Stagecoach Road | EB | L,T,R | - | 13' | 25' | - |
| | WB | L,T | - | 420' | 713' | - |
| | | R | 135' | 28' | 58' | 135' |
| | NB | L,T | - | 0' | 0' | - |
| | | R | 320' | 0' | 0' | 320' |
| | SB | L | 415' | 13' | 78' | 415' |
| T,R | | - | 0' | 0' | - | |
| Black Forest Road / Old Stagecoach Road | EB | L,T,R | - | 53' | 185' | - |
| | WB | L,T,R | - | 5' | 5' | - |
| | | L | - | 8' | 20' | 195' |
| | NB | T,R | - | 0' | 0' | - |
| | | L,T | - | 0' | 0' | - |
| | SB | R | - | 0' | 0' | 195' |
| Black Forrest Road / Hodgen Road | EB | L,T | - | 0' | 0' | - |
| | WB | T,R | - | 0' | 0' | - |
| | SB | L,R | - | 3' | 0' | - |
| Roundabout Intersections | | | | | | |
| Old Stagecoach Road / Allen Ranch Road | EB | T,R | - | 0' | 50' | |
| | WB | L,T | - | 25' | 25' | |
| | NB | L,R | - | 0' | 0' | |
| Old Stagecoach Road / Shortwall Drive | EB | T,R | - | 25' | 50' | |
| | WB | L,T | - | 25' | 25' | |
| | NB | L,R | - | 0' | 0' | |

Note: Turn Lane Length does not include taper length.

VII. Conclusion

This traffic impact study is provided as a planning document and addressed the capacity, geometric, and control requirements associated with the development entitled Flying Horse North. This proposed mixed-use development consists of a variety of residential, commercial, recreational, and lodging land uses. The development is located along Old Stagecoach Road between State Highway 83 and Black Forest Road in El Paso County, Colorado.

The study area examined in this analysis encompassed the Hodgen Road intersections with State Highway 83 and Black Forest Road, the Old Stagecoach Road intersections with State Highway 83, Shortwall Drive, Allen Ranch Road, and Black Forest Road, the North Gate Boulevard intersection with State Highway 83, and the Shoup Road intersections with State Highway 83 and Black Forest Road.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2027 and Year 2042 background traffic conditions, and Year 2027 and Year 2042 total traffic conditions.

Analysis of existing traffic conditions indicates that all signalized intersections within the study area have operations at LOS C or better during morning and afternoon peak traffic hours. The stop-controlled intersections within the study area have turning movement operations at or better than LOS D during either peak traffic hour. The roundabout intersections along Old Stagecoach Road experience LOS A turning movement operations during both the morning and afternoon peak traffic hour.

Without the proposed development, Year 2027 background operational analysis shows that all signalized intersections within the study area experience overall operations at or better than LOS C during both the morning and afternoon peak traffic hours. All stop-controlled intersections within the study area have turning movement operations at or better than LOS D during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour. Exceptions would include the westbound left and through turning movement at State Highway 83 and Stagecoach Road, which operates at LOS E during either peak traffic hour. The LOS E operation is attributed to the through traffic volume along State Highway 83 and the stop-controlled nature of the intersection. The roundabout intersections along Old Stagecoach Road are shown to have turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

By Year 2042 and without the proposed development, all signalized intersections within the study area are expected to have overall operations at or better than LOS D during both the morning and afternoon peak traffic hours. The exception includes the State Highway 83 and North Gate Boulevard intersection which shows overall LOS F operation during the morning peak traffic hour. The LOS F operation is attributed to the northbound left turning volumes and conflicting southbound through volumes. A possible mitigation to the anticipated LOS F operation could be the implementation of dual northbound left turn lanes that could allow for an overall LOS D operation. All stop-controlled intersections within the study area project turning movement operations at or better than LOS D during both peak traffic hours. Exceptions still include the westbound left and through turning movement at State Highway 83 and Stagecoach Road, which operates at LOS F during either peak traffic hour. The LOS F operations are attributed to the through traffic volume along State Highway 83 and the stop-controlled nature of

the intersection. Although the study intersection of State Highway 83 and Stagecoach Road does not meet MUTCD's vehicle volumes requirements for consideration of traffic signal control, signalization at the intersection could provide relief to the levels of service indicated under stop control conditions. Both roundabout intersections along Old Stagecoach Road are shown to have turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

It has been emphasized throughout this study that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis limitations may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along State Highway 83 may create additional gaps in the traffic stream for turning movements at Stagecoach Road which could provide mitigation to the LOS F operations projected during both peak traffic hours.

See previous comments regarding progression

Analysis of future traffic conditions indicates that the addition of site create minimal negative impact to traffic operations for the existing and upon roadway and intersection control improvements assumed conservative assumptions defined in this analysis, the study intersection future levels of service comparable to Year 2042 background traffic accesses have long-term operations at LOS D or better during peak traffic development build-out.

Reevaluation of progression not needed. Vehicle platooning and gaps in traffic flow will occur regardless of signal progression.

If needed, signal progression could be provided with future development submittals/applications.

Recommended and required improvements already discussed within Conclusion section will be expanded.

- Summary of LOS results shown in Table 8, and Conclusion section, describe potential improvements to mitigate poor levels of service.
- Summary of LOS results shown in Table 8, and Conclusion section, describe potential improvements to mitigate poor levels of service.
- Black Forest and Shoup show acceptable levels of service.
- Discussion and analyses updated to provide consistency with signal warrants.

This summary is incomplete.

- SH 83 / Hodgen goes to LOS E/F with site traffic and requires improvements per text on page 34.
- SH 83 / North Gate goes to LOS E (PM) with site traffic and requires improvements per text on page 35.
- Black Forest at Shoup goes to LOS F (PM) with site traffic and requires improvements per text on page 35.
- Signal warrants are met by site traffic at Old Stagecoach / SH 83 and Old Stagecoach / Black Forest (page 26), and the text on page 35 states that signalization is required to provide adequate LOS.

State whether or not any improvements affected by the project are reimbursable under the current MTCP.

State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.

State that the Transportation Impact Fee applies to the properties in the sketch plan and what option (full fee, inclusion into a public improvement district) the developer is planning for payment as development progress.

Add a reference section for all other traffic studies the consultant referenced in preparation of the TIS and state whether the current study is consistent with those studies and explain any discrepancies.

Discussion of reimbursements for improvements affected by the project under the current MTCP will be added.

Future roadway and intersection improvements for the immediate area, per the MTCP, already stated in Section II on Page 5. Additional discussion will be added, per referenced corridor and access management plans, if applicable. Responsibility of improvements will be provided in Recommended Improvements Summary table.

Transportation Impact Fee discussion added to revised study. An option for payment will be selected at the final land use approval stage.

There are no additional studies referenced, beyond that already included within the Master TIS.

APPENDIX A

Traffic Count Data Signal Timing Information



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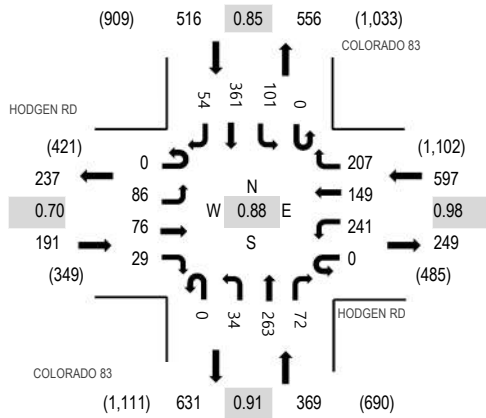
Location: 5 COLORADO 83 & HODGEN RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:15 AM - 08:15 AM

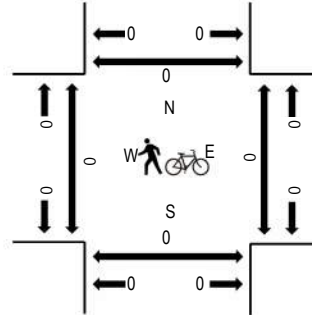
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | HODGEN RD Eastbound | | | | HODGEN RD Westbound | | | | COLORADO 83 Northbound | | | | COLORADO 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|---------------------------|------|------|-------|---------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 9 | 11 | 10 | 0 | 64 | 26 | 65 | 0 | 5 | 41 | 10 | 0 | 21 | 56 | 2 | 320 | 1,626 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 27 | 17 | 4 | 0 | 70 | 45 | 46 | 0 | 8 | 67 | 14 | 0 | 19 | 79 | 6 | 402 | 1,673 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 39 | 19 | 10 | 0 | 74 | 33 | 55 | 0 | 5 | 73 | 15 | 0 | 36 | 98 | 17 | 474 | 1,590 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 12 | 27 | 6 | 0 | 57 | 47 | 55 | 0 | 10 | 56 | 20 | 0 | 22 | 89 | 29 | 430 | 1,494 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 8 | 13 | 9 | 0 | 40 | 24 | 51 | 0 | 11 | 67 | 23 | 0 | 24 | 95 | 2 | 367 | 1,424 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 12 | 19 | 4 | 0 | 33 | 27 | 36 | 0 | 13 | 52 | 19 | 0 | 25 | 75 | 4 | 319 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 20 | 21 | 7 | 0 | 44 | 37 | 53 | 0 | 9 | 66 | 19 | 0 | 32 | 67 | 3 | 378 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 14 | 20 | 11 | 0 | 42 | 31 | 47 | 0 | 10 | 62 | 15 | 0 | 24 | 67 | 17 | 360 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 141 | 147 | 61 | 0 | 424 | 270 | 408 | 0 | 71 | 484 | 135 | 0 | 203 | 626 | 80 | 3,050 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 86 | 76 | 29 | 0 | 241 | 149 | 207 | 0 | 34 | 263 | 72 | 0 | 101 | 361 | 54 | 1,673 | | 0 | 0 | 0 | 0 |



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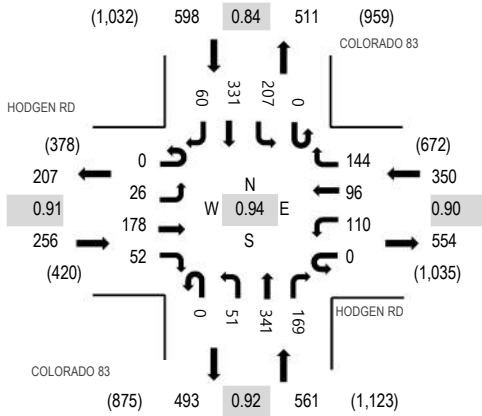
Location: 5 COLORADO 83 & HODGEN RD PM

Date: Tuesday, November 30, 2021

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

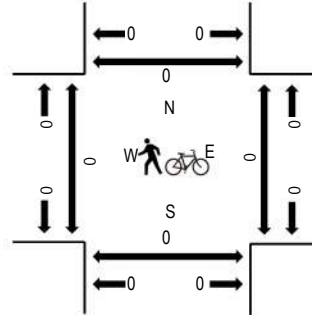
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | HODGEN RD Eastbound | | | | HODGEN RD Westbound | | | | COLORADO 83 Northbound | | | | COLORADO 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|---------------------------|------|------|-------|---------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 9 | 32 | 21 | 0 | 23 | 22 | 28 | 0 | 18 | 73 | 35 | 0 | 59 | 89 | 31 | 440 | 1,765 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 3 | 52 | 15 | 0 | 33 | 20 | 46 | 0 | 10 | 101 | 51 | 0 | 53 | 75 | 9 | 468 | 1,741 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 7 | 46 | 7 | 0 | 33 | 23 | 29 | 0 | 6 | 73 | 48 | 0 | 52 | 78 | 13 | 415 | 1,660 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 7 | 48 | 9 | 0 | 21 | 31 | 41 | 0 | 17 | 94 | 35 | 0 | 43 | 89 | 7 | 442 | 1,613 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 2 | 42 | 12 | 0 | 33 | 22 | 32 | 0 | 12 | 100 | 48 | 0 | 55 | 51 | 7 | 416 | 1,482 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 3 | 28 | 3 | 0 | 38 | 35 | 29 | 0 | 15 | 70 | 35 | 0 | 55 | 71 | 5 | 387 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 6 | 33 | 6 | 0 | 30 | 17 | 30 | 0 | 13 | 84 | 47 | 0 | 27 | 69 | 6 | 368 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 3 | 21 | 5 | 0 | 18 | 22 | 16 | 0 | 12 | 73 | 53 | 0 | 37 | 46 | 5 | 311 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 40 | 302 | 78 | 0 | 229 | 192 | 251 | 0 | 103 | 668 | 352 | 0 | 381 | 568 | 83 | 3,247 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 26 | 178 | 52 | 0 | 110 | 96 | 144 | 0 | 51 | 341 | 169 | 0 | 207 | 331 | 60 | 1,765 | | 0 | 0 | 0 | 0 |



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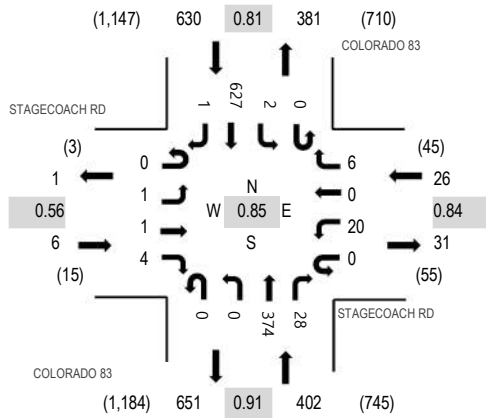
Location: 8 COLORADO 83 & STAGECOACH RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:15 AM - 08:15 AM

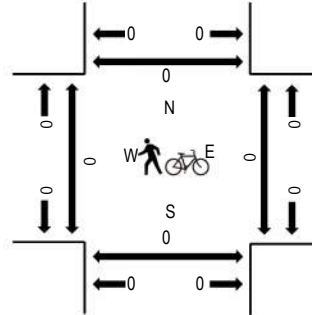
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | STAGECOACH RD Eastbound | | | | STAGECOACH RD Westbound | | | | COLORADO 83 Northbound | | | | COLORADO 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|----------------------------|------|------|-------|----------------------------|------|------|-------|---------------------------|------|------|-------|---------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 1 | 0 | 3 | 0 | 5 | 0 | 3 | 0 | 0 | 49 | 6 | 0 | 1 | 132 | 0 | 200 | 1,040 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 1 | 1 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 92 | 2 | 0 | 0 | 155 | 0 | 256 | 1,064 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 93 | 9 | 0 | 1 | 202 | 1 | 314 | 1,033 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 2 | 0 | 0 | 85 | 8 | 0 | 1 | 167 | 0 | 270 | 944 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 1 | 0 | 0 | 104 | 9 | 0 | 0 | 103 | 0 | 224 | 912 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 98 | 7 | 0 | 0 | 114 | 0 | 225 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 85 | 2 | 0 | 2 | 130 | 0 | 225 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 90 | 5 | 0 | 1 | 137 | 0 | 238 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 2 | 1 | 12 | 0 | 32 | 1 | 12 | 0 | 1 | 696 | 48 | 0 | 6 | 1,140 | 1 | 1,952 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 1 | 1 | 4 | 0 | 20 | 0 | 6 | 0 | 0 | 374 | 28 | 0 | 2 | 627 | 1 | 1,064 | | 0 | 0 | 0 | 0 |



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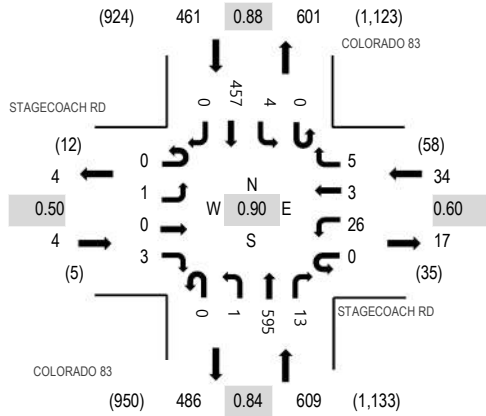
Location: 8 COLORADO 83 & STAGECOACH RD PM

Date: Tuesday, November 30, 2021

Peak Hour: 04:30 PM - 05:30 PM

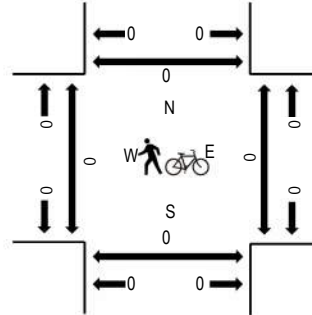
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | STAGECOACH RD Eastbound | | | | STAGECOACH RD Westbound | | | | COLORADO 83 Northbound | | | | COLORADO 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|----------------------------|------|------|-------|----------------------------|------|------|-------|---------------------------|------|-------|-------|---------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 1 | 112 | 3 | 0 | 3 | 123 | 0 | 251 | 1,066 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 3 | 0 | 1 | 143 | 3 | 0 | 2 | 133 | 0 | 290 | 1,089 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 140 | 3 | 0 | 0 | 98 | 0 | 251 | 1,108 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 3 | 0 | 0 | 153 | 2 | 0 | 1 | 111 | 0 | 274 | 1,096 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 11 | 2 | 2 | 0 | 1 | 126 | 2 | 0 | 0 | 130 | 0 | 274 | 1,054 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 176 | 6 | 0 | 3 | 118 | 0 | 309 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 2 | 127 | 3 | 0 | 0 | 102 | 1 | 239 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 126 | 2 | 0 | 2 | 97 | 0 | 232 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 2 | 0 | 3 | 0 | 35 | 5 | 18 | 0 | 6 | 1,103 | 24 | 0 | 11 | 912 | 1 | 2,120 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 1 | 0 | 3 | 0 | 26 | 3 | 5 | 0 | 1 | 595 | 13 | 0 | 4 | 457 | 0 | 1,108 | | 0 | 0 | 0 | 0 |



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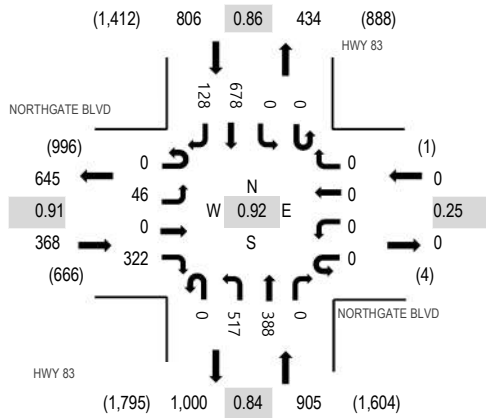
Location: 9 HWY 83 & NORTHGATE BLVD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:00 AM - 08:00 AM

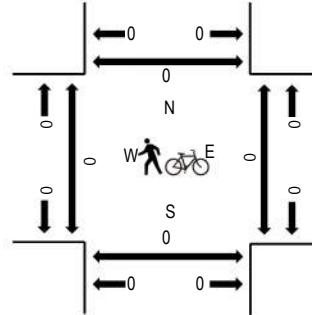
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | NORTHGATE BLVD Eastbound | | | | NORTHGATE BLVD Westbound | | | | HWY 83 Northbound | | | | HWY 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|----------------------|------|------|-------|----------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 6 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 111 | 76 | 0 | 0 | 0 | 147 | 23 | 437 | 2,079 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 9 | 0 | 78 | 0 | 0 | 0 | 0 | 0 | 160 | 112 | 0 | 0 | 0 | 159 | 41 | 559 | 2,056 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 15 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 132 | 92 | 0 | 0 | 0 | 203 | 32 | 563 | 1,910 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 16 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 114 | 108 | 0 | 0 | 0 | 169 | 32 | 520 | 1,743 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 12 | 0 | 79 | 0 | 0 | 0 | 0 | 0 | 85 | 106 | 1 | 0 | 1 | 115 | 15 | 414 | 1,604 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 16 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 68 | 108 | 0 | 0 | 0 | 138 | 16 | 413 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 12 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 68 | 97 | 0 | 0 | 0 | 151 | 14 | 396 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 10 | 1 | 47 | 0 | 0 | 0 | 1 | 0 | 73 | 92 | 1 | 0 | 0 | 144 | 12 | 381 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 96 | 1 | 569 | 0 | 0 | 0 | 1 | 0 | 811 | 791 | 2 | 0 | 1 | 1,226 | 185 | 3,683 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 46 | 0 | 322 | 0 | 0 | 0 | 0 | 0 | 517 | 388 | 0 | 0 | 0 | 678 | 128 | 2,079 | | 0 | 0 | 0 | 0 |



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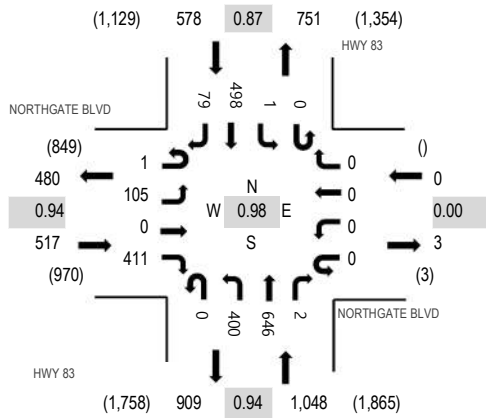
Location: 9 HWY 83 & NORTHGATE BLVD PM

Date: Tuesday, November 30, 2021

Peak Hour: 04:30 PM - 05:30 PM

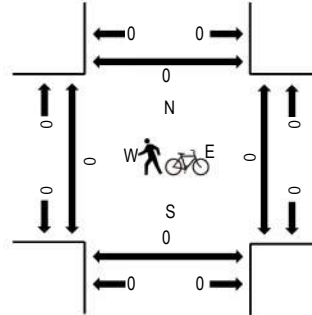
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | NORTHGATE BLVD Eastbound | | | | NORTHGATE BLVD Westbound | | | | HWY 83 Northbound | | | | HWY 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|----------------------|------|-------|-------|----------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 26 | 0 | 118 | 0 | 0 | 0 | 0 | 0 | 78 | 130 | 0 | 0 | 0 | 129 | 18 | 499 | 2,041 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 23 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 80 | 135 | 0 | 0 | 0 | 121 | 23 | 487 | 2,087 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 25 | 0 | 112 | 0 | 0 | 0 | 0 | 0 | 100 | 162 | 0 | 0 | 0 | 117 | 18 | 534 | 2,143 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 29 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 101 | 160 | 2 | 0 | 1 | 107 | 19 | 521 | 2,045 | 0 | 0 | 0 | 0 |
| 5:00 PM | 1 | 21 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 103 | 142 | 0 | 0 | 0 | 147 | 21 | 545 | 1,923 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 30 | 0 | 87 | 0 | 0 | 0 | 0 | 0 | 96 | 182 | 0 | 0 | 0 | 127 | 21 | 543 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 19 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 83 | 129 | 0 | 0 | 0 | 133 | 7 | 436 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 24 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 65 | 117 | 0 | 0 | 0 | 105 | 15 | 399 | | 0 | 0 | 0 | 0 |
| Count Total | 1 | 197 | 0 | 772 | 0 | 0 | 0 | 0 | 0 | 706 | 1,157 | 2 | 0 | 1 | 986 | 142 | 3,964 | | 0 | 0 | 0 | 0 |
| Peak Hour | 1 | 105 | 0 | 411 | 0 | 0 | 0 | 0 | 0 | 400 | 646 | 2 | 0 | 1 | 498 | 79 | 2,143 | | 0 | 0 | 0 | 0 |



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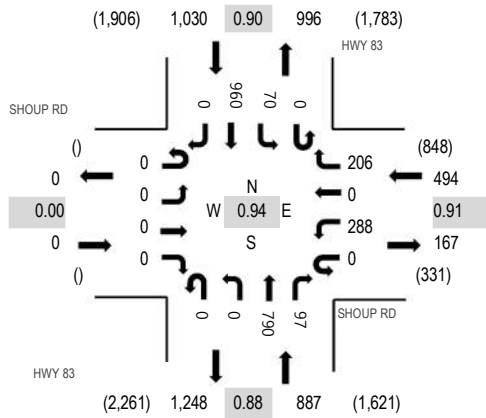
Location: 10 HWY 83 & SHOUP RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:15 AM - 08:15 AM

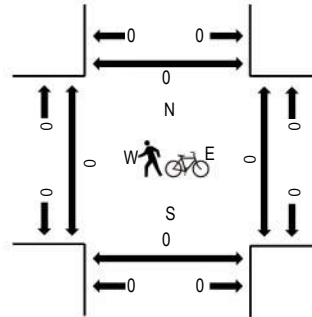
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SHOUP RD Eastbound | | | | SHOUP RD Westbound | | | | HWY 83 Northbound | | | | HWY 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|----------------------|------|-------|-------|----------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| | | | | | | | | | | | | | | | | | | | | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 51 | 0 | 0 | 156 | 8 | 0 | 6 | 224 | 0 | 500 | 2,399 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 67 | 0 | 0 | 232 | 20 | 0 | 11 | 245 | 0 | 641 | 2,411 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 53 | 0 | 0 | 176 | 20 | 0 | 22 | 270 | 0 | 626 | 2,260 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 49 | 0 | 0 | 203 | 28 | 0 | 20 | 253 | 0 | 632 | 2,127 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 37 | 0 | 0 | 179 | 29 | 0 | 17 | 192 | 0 | 512 | 1,976 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 23 | 0 | 0 | 171 | 22 | 0 | 28 | 195 | 0 | 490 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 23 | 0 | 0 | 171 | 23 | 0 | 20 | 202 | 0 | 493 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 40 | 0 | 0 | 152 | 31 | 0 | 26 | 175 | 0 | 481 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 505 | 0 | 343 | 0 | 0 | 1,440 | 181 | 0 | 150 | 1,756 | 0 | 4,375 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 288 | 0 | 206 | 0 | 0 | 790 | 97 | 0 | 70 | 960 | 0 | 2,411 | | 0 | 0 | 0 | 0 |



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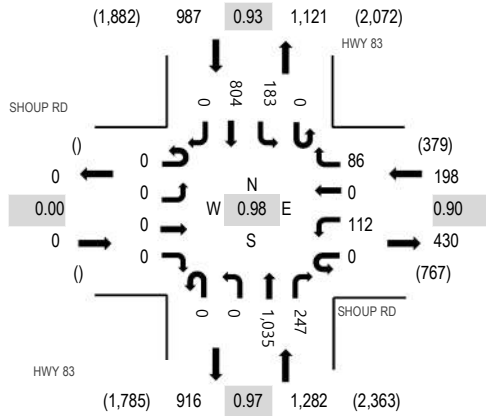
Location: 10 HWY 83 & SHOUP RD PM

Date: Tuesday, November 30, 2021

Peak Hour: 04:30 PM - 05:30 PM

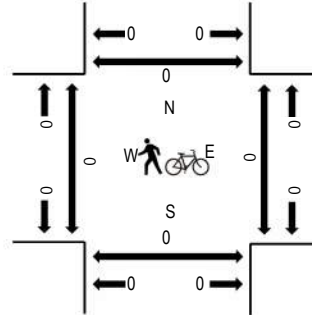
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SHOUP RD Eastbound | | | | SHOUP RD Westbound | | | | HWY 83 Northbound | | | | HWY 83 Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|----------------------|------|-------|-------|----------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 26 | 0 | 0 | 237 | 55 | 0 | 33 | 198 | 0 | 575 | 2,408 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 18 | 0 | 0 | 223 | 54 | 0 | 43 | 233 | 0 | 607 | 2,462 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 24 | 0 | 0 | 271 | 61 | 0 | 38 | 203 | 0 | 630 | 2,467 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 19 | 0 | 0 | 245 | 65 | 0 | 52 | 191 | 0 | 596 | 2,336 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 24 | 0 | 0 | 242 | 73 | 0 | 52 | 216 | 0 | 629 | 2,216 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 19 | 0 | 0 | 277 | 48 | 0 | 41 | 194 | 0 | 612 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 20 | 0 | 0 | 220 | 46 | 0 | 26 | 166 | 0 | 499 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 12 | 0 | 0 | 195 | 51 | 0 | 29 | 167 | 0 | 476 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 217 | 0 | 162 | 0 | 0 | 1,910 | 453 | 0 | 314 | 1,568 | 0 | 4,624 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 112 | 0 | 86 | 0 | 0 | 1,035 | 247 | 0 | 183 | 804 | 0 | 2,467 | | 0 | 0 | 0 | 0 |



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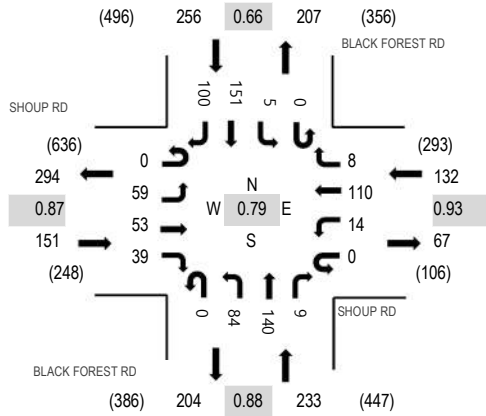
Location: 4 BLACK FOREST RD & SHOUP RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:45 AM - 08:45 AM

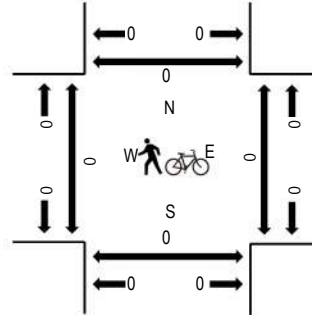
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SHOUP RD Eastbound | | | | SHOUP RD Westbound | | | | BLACK FOREST RD Northbound | | | | BLACK FOREST RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|-------------------------------|------|------|-------|-------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 2 | 3 | 1 | 0 | 0 | 39 | 1 | 0 | 21 | 19 | 1 | 0 | 3 | 28 | 28 | 146 | 718 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 6 | 7 | 8 | 0 | 3 | 43 | 0 | 0 | 28 | 24 | 0 | 0 | 1 | 28 | 24 | 172 | 729 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 12 | 6 | 11 | 0 | 4 | 42 | 4 | 0 | 29 | 33 | 1 | 0 | 1 | 33 | 27 | 203 | 731 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 10 | 10 | 12 | 0 | 3 | 45 | 2 | 0 | 32 | 28 | 0 | 0 | 1 | 30 | 24 | 197 | 772 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 10 | 10 | 9 | 0 | 5 | 28 | 1 | 0 | 20 | 27 | 1 | 0 | 0 | 23 | 23 | 157 | 766 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 15 | 19 | 12 | 0 | 3 | 12 | 1 | 0 | 13 | 42 | 4 | 0 | 1 | 33 | 19 | 174 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 24 | 14 | 6 | 0 | 3 | 25 | 4 | 0 | 19 | 43 | 4 | 0 | 3 | 65 | 34 | 244 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 15 | 9 | 17 | 0 | 6 | 18 | 1 | 0 | 22 | 32 | 4 | 0 | 3 | 43 | 21 | 191 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 94 | 78 | 76 | 0 | 27 | 252 | 14 | 0 | 184 | 248 | 15 | 0 | 13 | 283 | 200 | 1,484 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 59 | 53 | 39 | 0 | 14 | 110 | 8 | 0 | 84 | 140 | 9 | 0 | 5 | 151 | 100 | 772 | | 0 | 0 | 0 | 0 |



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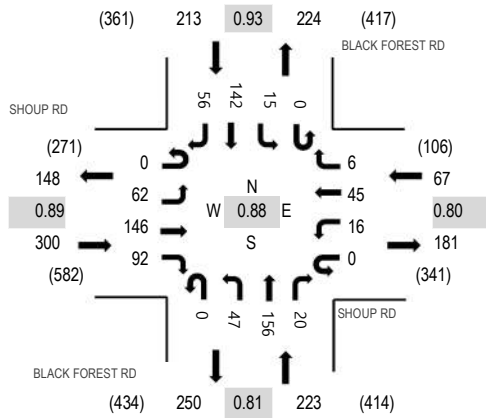
Location: 4 BLACK FOREST RD & SHOUP RD PM

Date: Tuesday, November 30, 2021

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

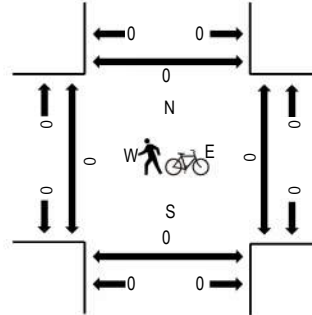
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SHOUP RD Eastbound | | | | SHOUP RD Westbound | | | | BLACK FOREST RD Northbound | | | | BLACK FOREST RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|-------------------------------|------|------|-------|-------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 19 | 41 | 24 | 0 | 4 | 10 | 4 | 0 | 9 | 49 | 11 | 0 | 3 | 38 | 16 | 228 | 803 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 17 | 37 | 24 | 0 | 7 | 13 | 1 | 0 | 16 | 44 | 4 | 0 | 6 | 34 | 8 | 211 | 744 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 10 | 30 | 21 | 0 | 3 | 14 | 1 | 0 | 9 | 32 | 2 | 0 | 5 | 35 | 15 | 177 | 712 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 16 | 38 | 23 | 0 | 2 | 8 | 0 | 0 | 13 | 31 | 3 | 0 | 1 | 35 | 17 | 187 | 703 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 16 | 40 | 16 | 0 | 2 | 5 | 1 | 0 | 15 | 32 | 5 | 0 | 3 | 21 | 13 | 169 | 660 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 15 | 35 | 18 | 0 | 1 | 8 | 0 | 0 | 22 | 32 | 3 | 0 | 1 | 34 | 10 | 179 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 19 | 33 | 21 | 0 | 2 | 6 | 1 | 0 | 7 | 34 | 5 | 0 | 1 | 25 | 14 | 168 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 22 | 25 | 22 | 0 | 2 | 11 | 0 | 0 | 8 | 21 | 7 | 0 | 2 | 20 | 4 | 144 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 134 | 279 | 169 | 0 | 23 | 75 | 8 | 0 | 99 | 275 | 40 | 0 | 22 | 242 | 97 | 1,463 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 62 | 146 | 92 | 0 | 16 | 45 | 6 | 0 | 47 | 156 | 20 | 0 | 15 | 142 | 56 | 803 | | 0 | 0 | 0 | 0 |



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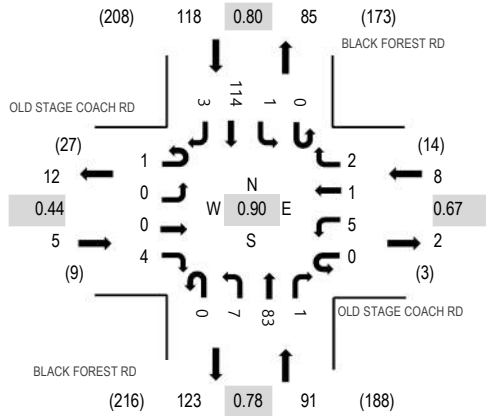
Location: 3 BLACK FOREST RD & OLD STAGE COACH RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 08:00 AM - 09:00 AM

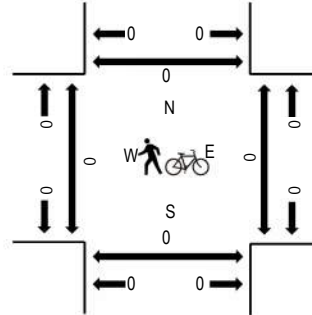
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD Eastbound | | | | OLD STAGE COACH RD Westbound | | | | BLACK FOREST RD Northbound | | | | BLACK FOREST RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|-------------------------------|------|------|-------|-------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 15 | 0 | 0 | 0 | 18 | 0 | 36 | 197 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 3 | 28 | 0 | 0 | 0 | 20 | 0 | 56 | 199 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 26 | 0 | 0 | 0 | 29 | 0 | 59 | 203 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 17 | 0 | 0 | 0 | 22 | 1 | 46 | 206 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 1 | 18 | 0 | 38 | 222 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 5 | 20 | 1 | 0 | 0 | 30 | 1 | 60 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 1 | 0 | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 1 | 23 | 0 | 0 | 0 | 31 | 0 | 62 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 24 | 0 | 0 | 0 | 35 | 2 | 62 | | 0 | 0 | 0 | 0 |
| Count Total | 1 | 0 | 1 | 7 | 0 | 6 | 4 | 4 | 0 | 18 | 169 | 1 | 0 | 1 | 203 | 4 | 419 | | 0 | 0 | 0 | 0 |
| Peak Hour | 1 | 0 | 0 | 4 | 0 | 5 | 1 | 2 | 0 | 7 | 83 | 1 | 0 | 1 | 114 | 3 | 222 | | 0 | 0 | 0 | 0 |



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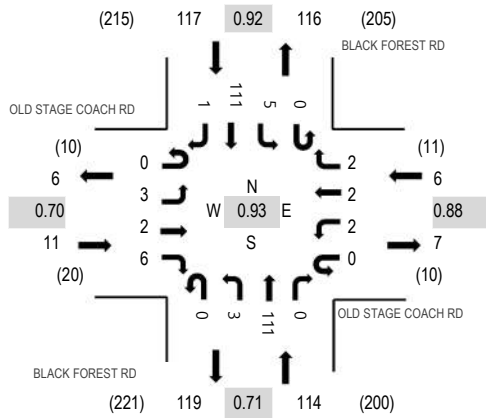
Location: 3 BLACK FOREST RD & OLD STAGE COACH RD PM

Date: Tuesday, November 30, 2021

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

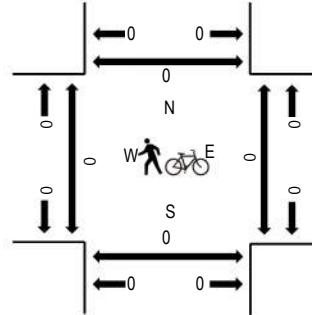
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD Eastbound | | | | OLD STAGE COACH RD Westbound | | | | BLACK FOREST RD Northbound | | | | BLACK FOREST RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|-------------------------------|------|------|-------|-------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 40 | 0 | 0 | 2 | 21 | 0 | 67 | 248 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 26 | 1 | 55 | 242 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 29 | 0 | 0 | 1 | 33 | 0 | 66 | 242 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 19 | 0 | 0 | 2 | 31 | 0 | 60 | 217 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 26 | 0 | 0 | 1 | 29 | 1 | 61 | 198 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 1 | 20 | 1 | 0 | 0 | 26 | 1 | 55 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 16 | 1 | 0 | 0 | 20 | 0 | 41 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 20 | 0 | 41 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 7 | 2 | 11 | 0 | 4 | 3 | 4 | 0 | 4 | 194 | 2 | 0 | 6 | 206 | 3 | 446 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 3 | 2 | 6 | 0 | 2 | 2 | 2 | 0 | 3 | 111 | 0 | 0 | 5 | 111 | 1 | 248 | | 0 | 0 | 0 | 0 |



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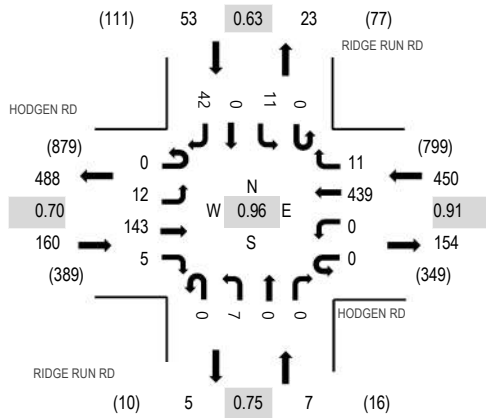
Location: 1 RIDGE RUN RD & HODGEN RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:00 AM - 08:00 AM

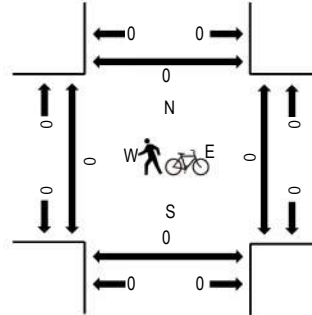
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | HODGEN RD Eastbound | | | | HODGEN RD Westbound | | | | RIDGE RUN RD Northbound | | | | RIDGE RUN RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|----------------------------|------|------|-------|----------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| | | | | | | | | | | | | | | | | | | | | | | |
| 7:00 AM | 0 | 2 | 34 | 1 | 0 | 0 | 103 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 8 | 153 | 670 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 3 | 24 | 2 | 0 | 0 | 122 | 2 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 15 | 174 | 666 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 5 | 41 | 1 | 0 | 0 | 113 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 174 | 621 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 2 | 44 | 1 | 0 | 0 | 101 | 6 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 9 | 169 | 639 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 6 | 32 | 2 | 0 | 0 | 94 | 3 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 9 | 149 | 645 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 4 | 30 | 2 | 0 | 0 | 74 | 7 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 10 | 129 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 8 | 62 | 1 | 0 | 0 | 95 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 15 | 192 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 16 | 66 | 0 | 0 | 0 | 66 | 2 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 20 | 175 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 46 | 333 | 10 | 0 | 0 | 768 | 31 | 0 | 15 | 0 | 1 | 0 | 15 | 0 | 96 | 1,315 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 12 | 143 | 5 | 0 | 0 | 439 | 11 | 0 | 7 | 0 | 0 | 0 | 11 | 0 | 42 | 670 | | 0 | 0 | 0 | 0 |



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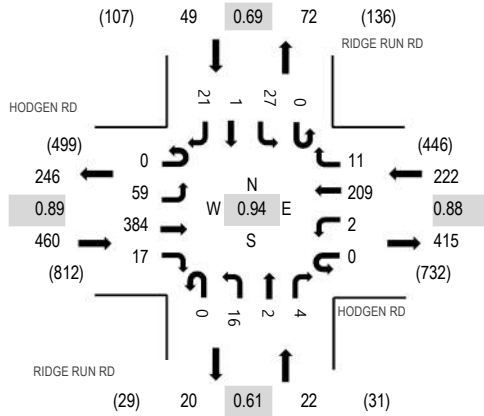
Location: 1 RIDGE RUN RD & HODGEN RD PM

Date: Tuesday, November 30, 2021

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

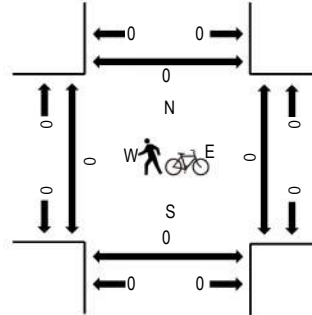
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | HODGEN RD Eastbound | | | | HODGEN RD Westbound | | | | RIDGE RUN RD Northbound | | | | RIDGE RUN RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|----------------------------|------|------|-------|----------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 18 | 87 | 10 | 0 | 1 | 45 | 6 | 0 | 4 | 0 | 0 | 0 | 13 | 0 | 5 | 189 | 753 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 16 | 92 | 2 | 0 | 1 | 56 | 1 | 0 | 2 | 1 | 2 | 0 | 6 | 0 | 7 | 186 | 746 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 14 | 111 | 4 | 0 | 0 | 56 | 2 | 0 | 2 | 0 | 2 | 0 | 5 | 0 | 5 | 201 | 745 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 11 | 94 | 1 | 0 | 0 | 52 | 2 | 0 | 8 | 1 | 0 | 0 | 3 | 1 | 4 | 177 | 692 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 11 | 81 | 4 | 0 | 0 | 62 | 7 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 14 | 182 | 643 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 12 | 84 | 2 | 0 | 0 | 57 | 3 | 0 | 6 | 0 | 0 | 0 | 10 | 0 | 11 | 185 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 10 | 67 | 0 | 0 | 0 | 52 | 7 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 9 | 148 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 11 | 68 | 2 | 0 | 0 | 33 | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 7 | 128 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 103 | 684 | 25 | 0 | 2 | 413 | 31 | 0 | 24 | 2 | 5 | 0 | 43 | 2 | 62 | 1,396 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 59 | 384 | 17 | 0 | 2 | 209 | 11 | 0 | 16 | 2 | 4 | 0 | 27 | 1 | 21 | 753 | | 0 | 0 | 0 | 0 |



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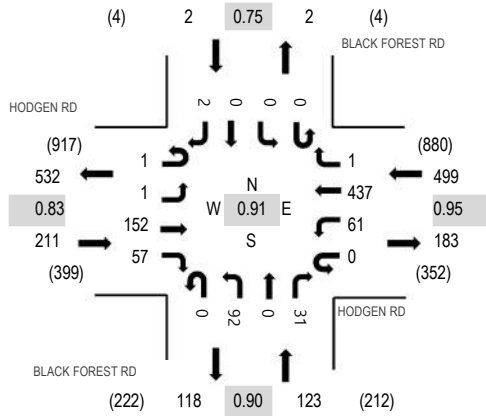
Location: 2 BLACK FOREST RD & HODGEN RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:15 AM - 08:15 AM

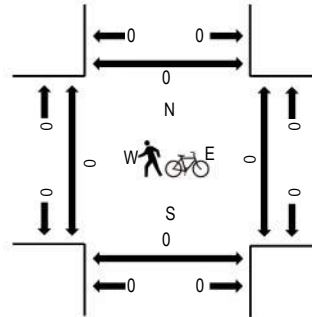
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | HODGEN RD Eastbound | | | | HODGEN RD Westbound | | | | BLACK FOREST RD Northbound | | | | BLACK FOREST RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|-------------------------------|------|------|-------|-------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 18 | 8 | 0 | 11 | 111 | 0 | 0 | 11 | 0 | 6 | 0 | 0 | 0 | 0 | 165 | 799 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 1 | 35 | 12 | 0 | 20 | 102 | 0 | 0 | 22 | 0 | 12 | 0 | 0 | 0 | 0 | 204 | 835 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 37 | 14 | 0 | 14 | 104 | 0 | 0 | 25 | 0 | 5 | 0 | 0 | 0 | 1 | 200 | 814 | 0 | 0 | 0 | 0 |
| 7:45 AM | 1 | 0 | 49 | 17 | 0 | 14 | 118 | 0 | 0 | 26 | 0 | 5 | 0 | 0 | 0 | 0 | 230 | 763 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 31 | 14 | 0 | 13 | 113 | 1 | 0 | 19 | 0 | 9 | 0 | 0 | 0 | 1 | 201 | 696 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 45 | 14 | 0 | 16 | 85 | 0 | 0 | 17 | 0 | 5 | 0 | 1 | 0 | 0 | 183 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 36 | 10 | 0 | 15 | 63 | 0 | 0 | 19 | 0 | 6 | 0 | 0 | 0 | 0 | 149 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 43 | 14 | 0 | 16 | 63 | 1 | 0 | 16 | 0 | 9 | 1 | 0 | 0 | 0 | 163 | | 0 | 0 | 0 | 3 |
| Count Total | 1 | 1 | 294 | 103 | 0 | 119 | 759 | 2 | 0 | 155 | 0 | 57 | 1 | 1 | 0 | 2 | 1,495 | | 0 | 0 | 0 | 3 |
| Peak Hour | 1 | 1 | 152 | 57 | 0 | 61 | 437 | 1 | 0 | 92 | 0 | 31 | 0 | 0 | 0 | 2 | 835 | | 0 | 0 | 0 | 0 |



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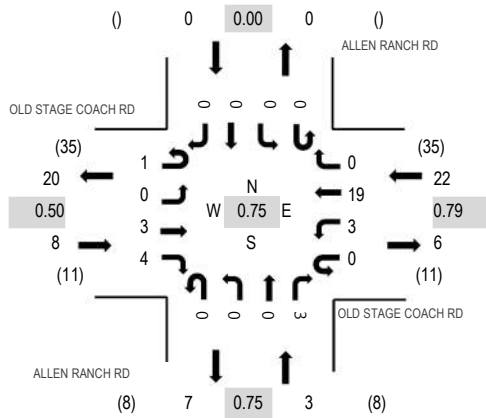
Location: 6 ALLEN RANCH RD & OLD STAGE COACH RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:15 AM - 08:15 AM

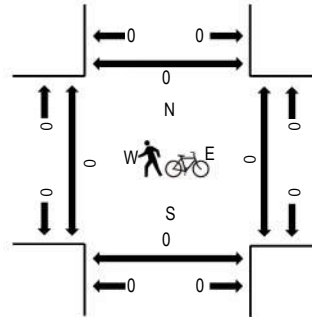
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD Eastbound | | | | OLD STAGE COACH RD Westbound | | | | ALLEN RANCH RD Northbound | | | | ALLEN RANCH RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|------------------------------|------|------|-------|------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 30 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 33 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | 31 | 0 | 0 | 0 | 0 |
| 7:45 AM | 1 | 0 | 1 | 2 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 31 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 24 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | | 0 | 0 | 0 | 0 |
| Count Total | 1 | 0 | 5 | 5 | 0 | 3 | 32 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 0 | 0 | 54 | | 0 | 0 | 0 | 0 |
| Peak Hour | 1 | 0 | 3 | 4 | 0 | 3 | 19 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 33 | | 0 | 0 | 0 | 0 |



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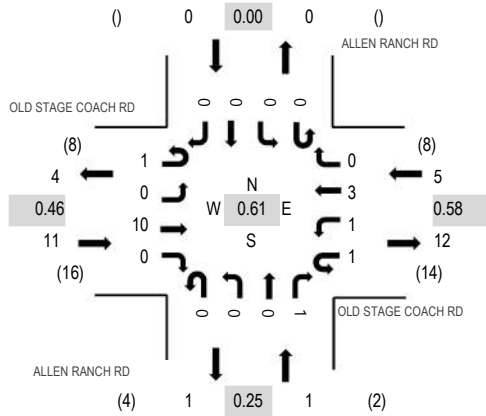
Location: 6 ALLEN RANCH RD & OLD STAGE COACH RD PM

Date: Tuesday, November 30, 2021

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

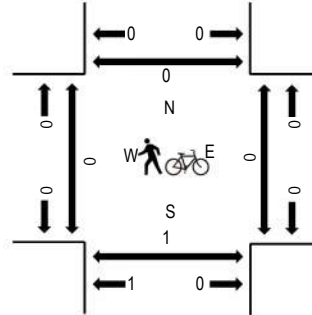
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD Eastbound | | | | OLD STAGE COACH RD Westbound | | | | ALLEN RANCH RD Northbound | | | | ALLEN RANCH RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|------------------------------|------|------|-------|------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 17 | 0 | 0 | 1 | 0 |
| 4:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 15 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 3 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 15 | 0 | 0 | 0 | 0 |
| 4:45 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 0 | 0 | 0 |
| 5:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |
| Count Total | 2 | 0 | 12 | 2 | 1 | 2 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 26 | | 0 | 0 | 1 | 0 |
| Peak Hour | 1 | 0 | 10 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 17 | | 0 | 0 | 1 | 0 |



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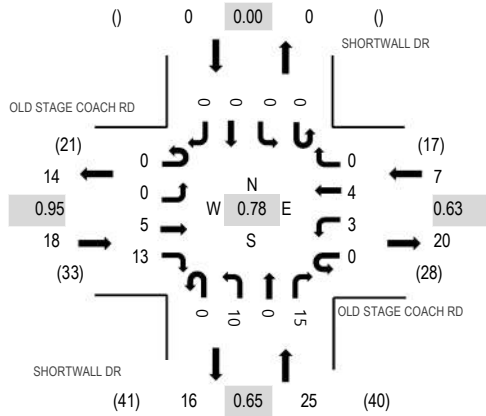
Location: 7 SHORTWALL DR & OLD STAGE COACH RD AM

Date: Tuesday, November 30, 2021

Peak Hour: 07:30 AM - 08:30 AM

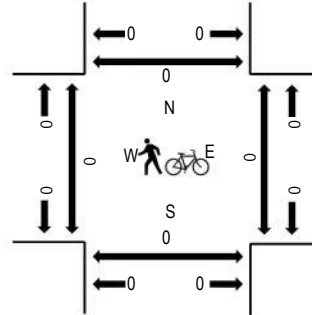
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD Eastbound | | | | OLD STAGE COACH RD Westbound | | | | SHORTWALL DR Northbound | | | | SHORTWALL DR Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|----------------------------|------|------|-------|----------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 1 | 4 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 13 | 49 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 47 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 50 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 16 | 50 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 2 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 11 | 41 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 1 | 3 | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 13 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 10 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 7 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 6 | 27 | 0 | 13 | 4 | 0 | 1 | 17 | 0 | 22 | 0 | 0 | 0 | 0 | 90 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 5 | 13 | 0 | 3 | 4 | 0 | 0 | 10 | 0 | 15 | 0 | 0 | 0 | 0 | 50 | | 0 | 0 | 0 | 0 |



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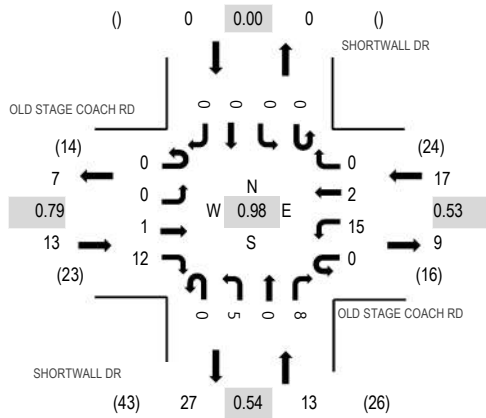
Location: 7 SHORTWALL DR & OLD STAGE COACH RD PM

Date: Tuesday, November 30, 2021

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

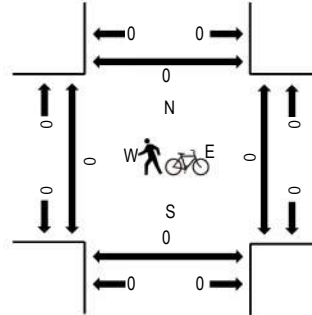
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | OLD STAGE COACH RD | | | | OLD STAGE COACH RD | | | | SHORTWALL DR | | | | SHORTWALL DR | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|--------------------|------|------|-------|--------------------|------|------|-------|--------------|------|------|-------|--------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | | West | East | South | North |
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 43 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 10 | 41 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 11 | 39 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 1 | 5 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 36 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 | 30 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 8 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 8 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 1 | 22 | 0 | 21 | 3 | 0 | 0 | 11 | 0 | 15 | 0 | 0 | 0 | 0 | 73 | | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 1 | 12 | 0 | 15 | 2 | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 43 | | 0 | 0 | 0 | 0 |

Site Code: 11
Station ID: 11
BLACK FOREST RD S.O. HODGEN RD

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | NB | SB | Total |
|-------------|------------------|-----------|-------|------------|
| 12:00 AM | | 0 | 2 | 2 |
| 01:00 | | 0 | 1 | 1 |
| 02:00 | | 0 | 2 | 2 |
| 03:00 | | 2 | 0 | 2 |
| 04:00 | | 9 | 1 | 10 |
| 05:00 | | 25 | 13 | 38 |
| 06:00 | | 55 | 53 | 108 |
| 07:00 | | 92 | 87 | 179 |
| 08:00 | | 83 | 125 | 208 |
| 09:00 | | 71 | 86 | 157 |
| 10:00 | | 77 | 79 | 156 |
| 11:00 | | 58 | 64 | 122 |
| 12:00 PM | | 68 | 61 | 129 |
| 01:00 | | 78 | 75 | 153 |
| 02:00 | | 84 | 89 | 173 |
| 03:00 | | 138 | 126 | 264 |
| 04:00 | | 111 | 116 | 227 |
| 05:00 | | 83 | 94 | 177 |
| 06:00 | | 42 | 44 | 86 |
| 07:00 | | 24 | 34 | 58 |
| 08:00 | | 20 | 16 | 36 |
| 09:00 | | 10 | 16 | 26 |
| 10:00 | | 8 | 5 | 13 |
| 11:00 | | 5 | 8 | 13 |
| Total | | 1143 | 1197 | 2340 |
| Percent | | 48.8% | 51.2% | |
| AM Peak | - | 07:00 | 08:00 | - |
| Vol. | - | 92 | 125 | - |
| PM Peak | - | 15:00 | 15:00 | - |
| Vol. | - | 138 | 126 | - |
| Grand Total | | 1143 | 1197 | 2340 |
| Percent | | 48.8% | 51.2% | |
| ADT | | ADT 2,340 | | AADT 2,340 |

Site Code: 12
Station ID: 12
HODGEN RD W.O. BLACK FOREST RD

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|-----------|------------|-------|
| 12:00 AM | | 12 | 4 | 16 |
| 01:00 | | 7 | 3 | 10 |
| 02:00 | | 4 | 9 | 13 |
| 03:00 | | 7 | 22 | 29 |
| 04:00 | | 7 | 56 | 63 |
| 05:00 | | 16 | 155 | 171 |
| 06:00 | | 102 | 340 | 442 |
| 07:00 | | 187 | 522 | 709 |
| 08:00 | | 208 | 377 | 585 |
| 09:00 | | 164 | 252 | 416 |
| 10:00 | | 185 | 243 | 428 |
| 11:00 | | 185 | 223 | 408 |
| 12:00 PM | | 214 | 197 | 411 |
| 01:00 | | 223 | 225 | 448 |
| 02:00 | | 276 | 237 | 513 |
| 03:00 | | 425 | 267 | 692 |
| 04:00 | | 495 | 276 | 771 |
| 05:00 | | 383 | 266 | 649 |
| 06:00 | | 262 | 112 | 374 |
| 07:00 | | 171 | 56 | 227 |
| 08:00 | | 115 | 37 | 152 |
| 09:00 | | 99 | 28 | 127 |
| 10:00 | | 44 | 10 | 54 |
| 11:00 | | 27 | 7 | 34 |
| Total | | 3818 | 3924 | 7742 |
| Percent | | 49.3% | 50.7% | |
| AM Peak | - | 08:00 | 07:00 | - |
| Vol. | - | 208 | 522 | - |
| PM Peak | - | 16:00 | 16:00 | - |
| Vol. | - | 495 | 276 | - |
| Grand Total | | 3818 | 3924 | 7742 |
| Percent | | 49.3% | 50.7% | |
| ADT | | ADT 7,742 | AADT 7,742 | |

Site Code: 14
Station ID: 14
BLACK FOREST RD N.O. SHOUP RD

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | NB | SB | Total |
|-------------|------------------|-----------|-------|------------|
| 12:00 AM | | 4 | 5 | 9 |
| 01:00 | | 3 | 1 | 4 |
| 02:00 | | 1 | 2 | 3 |
| 03:00 | | 1 | 5 | 6 |
| 04:00 | | 7 | 14 | 21 |
| 05:00 | | 15 | 37 | 52 |
| 06:00 | | 58 | 135 | 193 |
| 07:00 | | 146 | 231 | 377 |
| 08:00 | | 211 | 271 | 482 |
| 09:00 | | 111 | 188 | 299 |
| 10:00 | | 123 | 158 | 281 |
| 11:00 | | 119 | 121 | 240 |
| 12:00 PM | | 158 | 133 | 291 |
| 01:00 | | 156 | 117 | 273 |
| 02:00 | | 153 | 156 | 309 |
| 03:00 | | 304 | 244 | 548 |
| 04:00 | | 213 | 208 | 421 |
| 05:00 | | 195 | 146 | 341 |
| 06:00 | | 136 | 83 | 219 |
| 07:00 | | 74 | 35 | 109 |
| 08:00 | | 62 | 42 | 104 |
| 09:00 | | 44 | 18 | 62 |
| 10:00 | | 23 | 11 | 34 |
| 11:00 | | 17 | 5 | 22 |
| Total | | 2334 | 2366 | 4700 |
| Percent | | 49.7% | 50.3% | |
| AM Peak | - | 08:00 | 08:00 | - |
| Vol. | - | 211 | 271 | - |
| PM Peak | - | 15:00 | 15:00 | - |
| Vol. | - | 304 | 244 | - |
| Grand Total | | 2334 | 2366 | 4700 |
| Percent | | 49.7% | 50.3% | |
| ADT | | ADT 4,700 | | AADT 4,700 |

Site Code: 15
Station ID: 15
SHOUP RD W.O. BLACK FOREST RD

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|-----------|------------|-------|
| 12:00 AM | | 4 | 4 | 8 |
| 01:00 | | 3 | 1 | 4 |
| 02:00 | | 1 | 4 | 5 |
| 03:00 | | 2 | 4 | 6 |
| 04:00 | | 1 | 8 | 9 |
| 05:00 | | 6 | 44 | 50 |
| 06:00 | | 27 | 181 | 208 |
| 07:00 | | 92 | 390 | 482 |
| 08:00 | | 151 | 261 | 412 |
| 09:00 | | 85 | 161 | 246 |
| 10:00 | | 105 | 132 | 237 |
| 11:00 | | 100 | 110 | 210 |
| 12:00 PM | | 121 | 122 | 243 |
| 01:00 | | 149 | 114 | 263 |
| 02:00 | | 146 | 137 | 283 |
| 03:00 | | 341 | 221 | 562 |
| 04:00 | | 305 | 158 | 463 |
| 05:00 | | 271 | 122 | 393 |
| 06:00 | | 157 | 96 | 253 |
| 07:00 | | 110 | 27 | 137 |
| 08:00 | | 85 | 57 | 142 |
| 09:00 | | 54 | 18 | 72 |
| 10:00 | | 32 | 13 | 45 |
| 11:00 | | 15 | 5 | 20 |
| Total | | 2363 | 2390 | 4753 |
| Percent | | 49.7% | 50.3% | |
| AM Peak | - | 08:00 | 07:00 | - |
| Vol. | - | 151 | 390 | - |
| PM Peak | - | 15:00 | 15:00 | - |
| Vol. | - | 341 | 221 | - |
| Grand Total | | 2363 | 2390 | 4753 |
| Percent | | 49.7% | 50.3% | |
| ADT | | ADT 4,753 | AADT 4,753 | |

Site Code: 17
Station ID: 17
HODGEN RD E.O. HWY 83
Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|-----------|-------|------------|
| 12:00 AM | | 17 | 5 | 22 |
| 01:00 | | 8 | 3 | 11 |
| 02:00 | | 5 | 10 | 15 |
| 03:00 | | 7 | 24 | 31 |
| 04:00 | | 9 | 60 | 69 |
| 05:00 | | 20 | 178 | 198 |
| 06:00 | | 117 | 403 | 520 |
| 07:00 | | 230 | 635 | 865 |
| 08:00 | | 245 | 463 | 708 |
| 09:00 | | 225 | 332 | 557 |
| 10:00 | | 231 | 313 | 544 |
| 11:00 | | 255 | 303 | 558 |
| 12:00 PM | | 274 | 288 | 562 |
| 01:00 | | 303 | 290 | 593 |
| 02:00 | | 339 | 301 | 640 |
| 03:00 | | 526 | 297 | 823 |
| 04:00 | | 582 | 351 | 933 |
| 05:00 | | 479 | 327 | 806 |
| 06:00 | | 343 | 151 | 494 |
| 07:00 | | 215 | 71 | 286 |
| 08:00 | | 146 | 48 | 194 |
| 09:00 | | 127 | 30 | 157 |
| 10:00 | | 50 | 12 | 62 |
| 11:00 | | 34 | 8 | 42 |
| Total | | 4787 | 4903 | 9690 |
| Percent | | 49.4% | 50.6% | |
| AM Peak | - | 11:00 | 07:00 | - |
| Vol. | - | 255 | 635 | - |
| PM Peak | - | 16:00 | 16:00 | - |
| Vol. | - | 582 | 351 | - |
| Grand Total | | 4787 | 4903 | 9690 |
| Percent | | 49.4% | 50.6% | |
| ADT | | ADT 9,690 | | AADT 9,690 |

Site Code: 19
Station ID: 19
SHOUP RD E.O. HWY 83

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|-----------|-------|------------|
| 12:00 AM | | 7 | 5 | 12 |
| 01:00 | | 4 | 0 | 4 |
| 02:00 | | 2 | 4 | 6 |
| 03:00 | | 1 | 6 | 7 |
| 04:00 | | 3 | 20 | 23 |
| 05:00 | | 11 | 59 | 70 |
| 06:00 | | 38 | 210 | 248 |
| 07:00 | | 139 | 508 | 647 |
| 08:00 | | 196 | 332 | 528 |
| 09:00 | | 130 | 232 | 362 |
| 10:00 | | 153 | 195 | 348 |
| 11:00 | | 169 | 183 | 352 |
| 12:00 PM | | 170 | 190 | 360 |
| 01:00 | | 197 | 156 | 353 |
| 02:00 | | 232 | 190 | 422 |
| 03:00 | | 386 | 277 | 663 |
| 04:00 | | 380 | 210 | 590 |
| 05:00 | | 382 | 192 | 574 |
| 06:00 | | 211 | 116 | 327 |
| 07:00 | | 150 | 51 | 201 |
| 08:00 | | 105 | 49 | 154 |
| 09:00 | | 79 | 25 | 104 |
| 10:00 | | 42 | 17 | 59 |
| 11:00 | | 21 | 7 | 28 |
| Total | | 3208 | 3234 | 6442 |
| Percent | | 49.8% | 50.2% | |
| AM Peak | - | 08:00 | 07:00 | - |
| Vol. | - | 196 | 508 | - |
| PM Peak | - | 15:00 | 15:00 | - |
| Vol. | - | 386 | 277 | - |
| Grand Total | | 3208 | 3234 | 6442 |
| Percent | | 49.8% | 50.2% | |
| ADT | | ADT 6,442 | | AADT 6,442 |

Site Code: 13
Station ID: 13
OLD STAGE COACH RD W.O. BLACK FOREST RD

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|---------|-------|----------|
| 12:00 AM | | 1 | 0 | 1 |
| 01:00 | | 0 | 0 | 0 |
| 02:00 | | 0 | 0 | 0 |
| 03:00 | | 0 | 0 | 0 |
| 04:00 | | 0 | 0 | 0 |
| 05:00 | | 0 | 0 | 0 |
| 06:00 | | 1 | 4 | 5 |
| 07:00 | | 4 | 14 | 18 |
| 08:00 | | 5 | 15 | 20 |
| 09:00 | | 7 | 8 | 15 |
| 10:00 | | 7 | 4 | 11 |
| 11:00 | | 5 | 3 | 8 |
| 12:00 PM | | 5 | 7 | 12 |
| 01:00 | | 5 | 9 | 14 |
| 02:00 | | 7 | 6 | 13 |
| 03:00 | | 18 | 5 | 23 |
| 04:00 | | 12 | 7 | 19 |
| 05:00 | | 8 | 4 | 12 |
| 06:00 | | 3 | 1 | 4 |
| 07:00 | | 4 | 0 | 4 |
| 08:00 | | 1 | 1 | 2 |
| 09:00 | | 1 | 0 | 1 |
| 10:00 | | 0 | 0 | 0 |
| 11:00 | | 1 | 0 | 1 |
| Total | | 95 | 88 | 183 |
| Percent | | 51.9% | 48.1% | |
| AM Peak | - | 09:00 | 08:00 | - |
| Vol. | - | 7 | 15 | - |
| PM Peak | - | 15:00 | 13:00 | - |
| Vol. | - | 18 | 9 | - |
| Grand Total | | 95 | 88 | 183 |
| Percent | | 51.9% | 48.1% | |
| ADT | | ADT 183 | | AADT 183 |

Site Code: 16
Station ID: 16
OLD STAGE COACH RD E.O. SHORT WALL DR

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|---------|----------|-------|
| 12:00 AM | | 0 | 0 | 0 |
| 01:00 | | 0 | 0 | 0 |
| 02:00 | | 0 | 0 | 0 |
| 03:00 | | 0 | 0 | 0 |
| 04:00 | | 1 | 1 | 2 |
| 05:00 | | 2 | 0 | 2 |
| 06:00 | | 8 | 5 | 13 |
| 07:00 | | 12 | 23 | 35 |
| 08:00 | | 9 | 19 | 28 |
| 09:00 | | 16 | 14 | 30 |
| 10:00 | | 13 | 9 | 22 |
| 11:00 | | 7 | 11 | 18 |
| 12:00 PM | | 14 | 19 | 33 |
| 01:00 | | 12 | 22 | 34 |
| 02:00 | | 6 | 10 | 16 |
| 03:00 | | 22 | 14 | 36 |
| 04:00 | | 15 | 11 | 26 |
| 05:00 | | 9 | 13 | 22 |
| 06:00 | | 5 | 5 | 10 |
| 07:00 | | 5 | 1 | 6 |
| 08:00 | | 1 | 2 | 3 |
| 09:00 | | 4 | 2 | 6 |
| 10:00 | | 2 | 0 | 2 |
| 11:00 | | 1 | 1 | 2 |
| Total | | 164 | 182 | 346 |
| Percent | | 47.4% | 52.6% | |
| AM Peak | - | 09:00 | 07:00 | - |
| Vol. | - | 16 | 23 | - |
| PM Peak | - | 15:00 | 13:00 | - |
| Vol. | - | 22 | 22 | - |
| Grand Total | | 164 | 182 | 346 |
| Percent | | 47.4% | 52.6% | |
| ADT | | ADT 346 | AADT 346 | |

Site Code: 18
Station ID: 18
STAGECOACH RD E.O. HWY 83

Latitude: 0' 0.0000 Undefined

| Start Time | 30-Nov-21 Tue | EB | WB | Total |
|-------------|------------------|---------|-------|----------|
| 12:00 AM | | 0 | 0 | 0 |
| 01:00 | | 0 | 0 | 0 |
| 02:00 | | 1 | 1 | 2 |
| 03:00 | | 0 | 0 | 0 |
| 04:00 | | 0 | 3 | 3 |
| 05:00 | | 3 | 4 | 7 |
| 06:00 | | 12 | 10 | 22 |
| 07:00 | | 25 | 30 | 55 |
| 08:00 | | 31 | 22 | 53 |
| 09:00 | | 27 | 31 | 58 |
| 10:00 | | 17 | 22 | 39 |
| 11:00 | | 18 | 23 | 41 |
| 12:00 PM | | 26 | 25 | 51 |
| 01:00 | | 24 | 25 | 49 |
| 02:00 | | 11 | 18 | 29 |
| 03:00 | | 38 | 30 | 68 |
| 04:00 | | 25 | 27 | 52 |
| 05:00 | | 15 | 20 | 35 |
| 06:00 | | 12 | 13 | 25 |
| 07:00 | | 10 | 4 | 14 |
| 08:00 | | 3 | 2 | 5 |
| 09:00 | | 3 | 1 | 4 |
| 10:00 | | 3 | 1 | 4 |
| 11:00 | | 1 | 1 | 2 |
| Total | | 305 | 313 | 618 |
| Percent | | 49.4% | 50.6% | |
| AM Peak | - | 08:00 | 09:00 | - |
| Vol. | - | 31 | 31 | - |
| PM Peak | - | 15:00 | 15:00 | - |
| Vol. | - | 38 | 30 | - |
| Grand Total | | 305 | 313 | 618 |
| Percent | | 49.4% | 50.6% | |
| ADT | | ADT 618 | | AADT 618 |

| 0 + Key | | | Phase + Key | | | NB | | EB | | SB | | WB |
|-------------------|-----|-----------------|-----------------|-----|------|------|------|------|------|------|------|------|
| FUNCTION | KEY | 1 2 3 4 5 6 7 8 | FUNCTION | KEY | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Ph 7 | Ph 8 |
| Vehicle Recall | 0 | 2 6 | Max I | 0 | 0 | 55 | 0 | 35 | 0 | 55 | 0 | 35 |
| Ped Recall | 1 | | Max II/HFDW | 1 | 0 | 55 | 0 | 35 | 0 | 55 | 0 | 35 |
| Red Lock | 2 | | Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yellow Lock | 3 | | Flashing DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Permits | 4 | 2 4 6 8 | Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped Phases | 5 | | Min Green | 5 | 0 | 12 | 0 | 8 | 0 | 12 | 0 | 8 |
| Lead Phases | 6 | 1 3 5 7 | TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Double Entry | 7 | 4 8 | TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sequential Timing | 8 | | Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Startup Green | 9 | | Passage | 9 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.2 |
| Overlap A | A | | Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Overlap B | B | | Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Overlap C | C | | Yellow | C | 0.0 | 4.0 | 0.0 | 4.0 | 0.0 | 4.0 | 0.0 | 4.0 |
| Overlap D | D | | Red Clear | D | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 |
| Exclusive | E | | Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Simultaneous Gap | F | 2 4 6 8 | Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 9 + Key | | | C + F + Key | | |
|------------------|-----|-------|-------------------|-----|----------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Short Power Down | 0 | 4 | Page ID | 0 | 0 |
| Long Power Down | 1 | 14 | Reserved | 1 | 0 |
| EVA Delay Type | 2 | 0 | Reserved | 2 | 0 |
| EVb Delay Type | 3 | 0 | Reserved | 3 | 0 |
| EVC Delay Type | 4 | 0 | OLA Red | 4 | 0.0 |
| EVD Delay Type | 5 | 0 | OLB Red | 5 | 0.0 |
| RR Delay Type | 6 | 0 | OLC Red | 6 | 0.0 |
| Ped Inhibit | 7 | 0 | OLD Red | 7 | 0.0 |
| OLA Green | 8 | 0.0 | | | 12345678 |
| OLA Yellow | 9 | 0.0 | Overlap E | 8 | |
| OLB Green | A | 0.0 | Overlap F | 9 | |
| OLB Yellow | B | 0.0 | Red Rest | A | |
| OLC Green | C | 0.0 | Max Recall | B | |
| OLC Yellow | D | 0.0 | Flash Green | C | |
| OLD Green | E | 0.0 | Flash Walk | D | |
| OLD Yellow | F | 0.0 | Advance Walk | E | |
| | | | Restrictive Phase | F | |

| D + C + 9 + Key | | | D + C + B + Key | | |
|------------------|-----|-------|-------------------|-----|----------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Short Power Down | 0 | 0 | Page ID | 0 | 1 |
| Long Power Down | 1 | 0 | Reserved | 1 | 0 |
| EVA Delay Type | 2 | 0 | Reserved | 2 | 0 |
| EVb Delay Type | 3 | 0 | Reserved | 3 | 0 |
| EVC Delay Type | 4 | 0 | OLA Red | 4 | 0.0 |
| EVD Delay Type | 5 | 0 | OLB Red | 5 | 0.0 |
| RR Delay Type | 6 | 0 | OLC Red | 6 | 0.0 |
| Ped Inhibit | 7 | 0 | OLD Red | 7 | 0.0 |
| OLA Green | 8 | 0.0 | | | 12345678 |
| OLA Yellow | 9 | 0.0 | Overlap E | 8 | |
| OLB Green | A | 0.0 | Overlap F | 9 | |
| OLB Yellow | B | 0.0 | Red Rest | A | |
| OLC Green | C | 0.0 | Max Recall | B | |
| OLC Yellow | D | 0.0 | Flash Green | C | |
| OLD Green | E | 0.0 | Flash Walk | D | |
| OLD Yellow | F | 0.0 | Advance Walk | E | |
| | | | Restrictive Phase | F | |

| D + D + 9 + Key | | | D + D + B + Key | | |
|------------------|-----|-------|-------------------|-----|----------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Short Power Down | 0 | 0 | Page ID | 0 | 2 |
| Long Power Down | 1 | 0 | Reserved | 1 | 0 |
| EVA Delay Type | 2 | 0 | Reserved | 2 | 0 |
| EVb Delay Type | 3 | 0 | Reserved | 3 | 0 |
| EVC Delay Type | 4 | 0 | OLA Red | 4 | 0.0 |
| EVD Delay Type | 5 | 0 | OLB Red | 5 | 0.0 |
| RR Delay Type | 6 | 0 | OLC Red | 6 | 0.0 |
| Ped Inhibit | 7 | 0 | OLD Red | 7 | 0.0 |
| OLA Green | 8 | 0.0 | | | 12345678 |
| OLA Yellow | 9 | 0.0 | Overlap E | 8 | |
| OLB Green | A | 0.0 | Overlap F | 9 | |
| OLB Yellow | B | 0.0 | Red Rest | A | |
| OLC Green | C | 0.0 | Max Recall | B | |
| OLC Yellow | D | 0.0 | Flash Green | C | |
| OLD Green | E | 0.0 | Flash Walk | D | |
| OLD Yellow | F | 0.0 | Advance Walk | E | |
| | | | Restrictive Phase | F | |

| C + Key | | | E + Key | | |
|----------------------|-----|----------|------------------|-----|----------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Year | 0 | 17 | EVA Delay | 0 | 0 |
| Month | 1 | 12 | EVA Minimum | 1 | 0 |
| Day of Month | 2 | 26 | EVb Delay | 2 | 0 |
| | | 1234567 | EVb Minimum | 3 | 0 |
| Day of Week | 3 | 3 | EVC Delay | 4 | 0 |
| | | VALUE | EVC Minimum | 5 | 0 |
| Hour | 4 | 9 | EVD Delay | 6 | 0 |
| Minute | 5 | 44 | EVD Minimum | 7 | 0 |
| Second | 6 | 50 | OL Red Revert | 8 | 0.0 |
| Reserved | 7 | 0 | RR Delay | 9 | 0 |
| Triggers On In Flash | 8 | 0 | RR Clear | A | 0 |
| | | 12345678 | | | 12345678 |
| Startup Yellow | 9 | | RR Clear Phases | B | |
| EVA Phases | A | | RR Permit | C | |
| EVb Phases | B | | RR OL Permit | D | |
| EVC Phases | C | | NEMA Hold Phases | E | |
| EVD Phases | D | | Reserved | F | 1 2 4 |
| Handicap Ped | E | | | | |
| Reserved | F | | | | |

Note: * = Set Type 3 Detector

| B + 0 + Key | | | D + Key | | |
|-------------------|-----|----------|---------------------|-----|-------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Present Plan | 0 | 0 | Floating Ped | 2E | 0 |
| TOD/DOW Plan | 1 | 0 | ID Number | 2F | 104 |
| Hardwire Plan | 2 | 0 | No Coord Ped Recall | 3E | 0 |
| Modem Plan | 3 | 0 | Rest In Walk | 3F | 0 |
| Mode (0-4) | 4 | 0 | Adv Warning EOG | 4E | 0 |
| Master (0 = Off) | 5 | 0 | Adv Warning SOG | 4F | 0 |
| Master Clock | 6 | 0 | RR Red Clear | 5E | 0 |
| Local Clock | 7 | 0 | RR Clear Color | 5F | 0 |
| Dwell Clock | 8 | 0 | Bus Delay | 6D | 0.0 |
| Reserved | 9 | 0 | Bus Free T1 | 6E | 0 |
| Reserved | A | 0 | Bus Free T3 | 6F | 0 |
| Reserved | B | 0 | EV Min After Clear | 7E | 0 |
| | | 12345678 | EV Indicators | 7F | 0 |
| Reserved | C | | NEMA Inputs | 66 | 0 |
| NEMA CNA Phase | D | | Reserved | | 0 |
| Adv Warning Phase | E | | Reserved | | 0 |
| MRI Phase | F | 4 8 | | | |

| B + A + Key | | | B + B + Key | | | B + C + Key | | |
|----------------|-----|----------|------------------|-----|----------|-----------------|-----|----------|
| FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Bus P1 T1 | 0 | 0 | Bus P4 T1 | 0 | 0 | Bus P7 T1 | 0 | 0 |
| Bus P1 T2 | 1 | 0 | Bus P4 T2 | 1 | 0 | Bus P7 T2 | 1 | 0 |
| Bus P1 T3 | 2 | 0 | Bus P4 T3 | 2 | 0 | Bus P7 T3 | 2 | 0 |
| Bus P2 T1 | 3 | 0 | Bus P5 T1 | 3 | 0 | Bus P8 T1 | 3 | 0 |
| Bus P2 T2 | 4 | 0 | Bus P5 T2 | 4 | 0 | Bus P8 T2 | 4 | 0 |
| Bus P2 T3 | 5 | 0 | Bus P5 T3 | 5 | 0 | Bus P8 T3 | 5 | 0 |
| Bus P3 T1 | 6 | 0 | Bus P6 T1 | 6 | 0 | Bus P9 T1 | 6 | 0 |
| Bus P3 T2 | 7 | 0 | Bus P6 T2 | 7 | 0 | Bus P9 T2 | 7 | 0 |
| Bus P3 T3 | 8 | 0 | Bus P6 T3 | 8 | 0 | Bus P9 T3 | 8 | 0 |
| Perm 2 P1 | 9 | 0 | Perm 2 P4 | 9 | 0 | Perm 2 P7 | 9 | 0 |
| Perm 2 P2 | A | 0 | Perm 2 P5 | A | 0 | Perm 2 P8 | A | 0 |
| Perm 2 P3 | B | 0 | Perm 2 P6 | B | 0 | Perm 2 P9 | B | 0 |
| | | 12345678 | | | 12345678 | | | 12345678 |
| Flash Yellow | C | 2 6 | OL Flash Yellow | C | | Coordinated Max | C | |
| Flash Circuit | D | 2 4 6 8 | OL Flash Circuit | D | | TOD Red Rest | D | |
| TOD/DOW Max | E | | TOD/DOW Ped | E | | OLA Switchpack | E | |
| OLB Switchpack | F | | OLC Switchpack | F | | OLD Switchpack | F | |

| A + 4 + Key | | | A + 5 + Key | | | A + 6 + Key | | |
|------------------|-----|-------|-----------------|-----|-------|-------------------|-----|-------|
| C1 PIN (CODE) | KEY | VALUE | C1 PIN (CODE) | KEY | VALUE | C1 PIN (CODE) | KEY | VALUE |
| PH2 E&C #39(11) | 0 | 21 | PH5 E&C #55(31) | 0 | 0 | PH2 PPB #67(51) | 0 | 0 |
| PH6 E&C #40(12) | 1 | 11 | PH1 E&C #56(32) | 1 | 0 | PH6 PPB #68(52) | 1 | 0 |
| PH4 E&C #41(13) | 2 | 23 | PH7 E&C #57(33) | 2 | 0 | PH4 PPB #69(53) | 2 | 0 |
| PH8 E&C #42(14) | 3 | 13 | PH3 E&C #58(34) | 3 | 0 | PH8 PPB #70(54) | 3 | 0 |
| PH2 E&C #43(15) | 4 | 22 | PH5 E&C #59(35) | 4 | 0 | EVA #71(55) | 4 | 0 |
| PH6 E&C #44(16) | 5 | 0 | PH1 E&C #60(36) | 5 | 0 | EVB #72(56) | 5 | 0 |
| PH4 E&C #45(17) | 6 | 24 | PH7 E&C #61(37) | 6 | 0 | EVC #73(57) | 6 | 0 |
| PH8 E&C #46(18) | 7 | 0 | PH3 E&C #62(38) | 7 | 0 | EVD #74(58) | 7 | 0 |
| PH2 C #47(21) | 8 | 12 | N/U | 8 | 0 | (-) #75 (61) | 8 | 0 |
| PH6 C #48(22) | 9 | 15 | N/U | 9 | 0 | PH2 E. #76(62) | 9 | 0 |
| PH4 C #49(23) | A | 14 | N/U | A | 0 | PH6 E. #77(63) | A | 0 |
| PH8 C #50(24) | B | 17 | N/U | B | 0 | PH4 E. #78(64) | B | 0 |
| PED INH. #51(25) | C | 0 | PH2 E&C #63(45) | C | 0 | PH8 E. #79(65) | C | 0 |
| RR #52(26) | D | 0 | PH6 E&C #64(46) | D | 0 | ADV. #80(66) | D | 0 |
| ADV. EN #53(27) | E | 0 | PH4 E&C #65(47) | E | 0 | FL SENCE #81(67) | E | 0 |
| (-) #54(28) | F | 0 | PH8 E&C #66(48) | F | 0 | STOP TIME #82(68) | F | 0 |

| A + 0 + Key | | | A + 1 + Key | | | A + 2 + Key | | | A + 3 + Key | | |
|----------------|-----|-------|----------------|-----|-------|-------------------|-----|-------|-----------------|-----|-------|
| FUNCTION(CODE) | KEY | VALUE | FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| 04 D/W (11) | 0 | 23 | 08 D/W (31) | 0 | 0 | 02 Ped Yellow(51) | 0 | 34 | 01 D/W (71) | 0 | 0 |
| 04 Walk (12) | 1 | 25 | 08 Walk (32) | 1 | 0 | 06 Ped Yellow(52) | 1 | 0 | 01 Walk (72) | 1 | 0 |
| 04 Red (13) | 2 | 0 | 08 Red (33) | 2 | 21 | 04 Ped Yellow(53) | 2 | 24 | OLB Red (73) | 2 | 0 |
| 04 Yellow (14) | 3 | 0 | 08 Yellow (34) | 3 | 51 | 08 Ped Yellow(54) | 3 | 0 | OLB Yellow (74) | 3 | 0 |
| 04 Green (15) | 4 | 0 | 08 Green (35) | 4 | 22 | 03 Ped Yellow(55) | 4 | 0 | OLB Green (75) | 4 | 0 |
| 03 Red (16) | 5 | 43 | 07 Red (36) | 5 | 0 | 01 Ped Yellow(56) | 5 | 0 | OLA Red (76) | 5 | 0 |
| 03 Yellow (17) | 6 | 44 | 07 Yellow (37) | 6 | 0 | Flash (57) | 6 | 0 | OLA Yellow (77) | 6 | 0 |
| 03 Green (18) | 7 | 45 | 07 Green (38) | 7 | 0 | Watchdog (58) | 7 | 0 | OLA Green (78) | 7 | 0 |
| 02 D/W (21) | 8 | 33 | 06 D/W (41) | 8 | 0 | 03 D/W (61) | 8 | 0 | Reserved | 8 | 0 |
| 02 Walk (22) | 9 | 35 | 06 Walk (42) | 9 | 0 | 03 Walk (62) | 9 | 0 | S.D. | 9 | 0 |
| 02 Red (23) | A | 11 | 06 Red (43) | A | 16 | OLD Red (63) | A | 0 | LTT | A | 0 |
| 02 Yellow (24) | B | 53 | 06 Yellow (44) | B | 17 | OLD Yellow (64) | B | 0 | ID (MSB) | B | 0 |
| 02 Green (25) | C | 12 | 06 Green (45) | C | 18 | OLD Green (65) | C | 0 | Group 1 | C | 0 |
| 01 Red (26) | D | 0 | 05 Red (46) | D | 0 | OLC Red (66) | D | 0 | Group 2 | D | 0 |
| 01 Yellow (27) | E | 0 | 05 Yellow (47) | E | 0 | OLC Yellow (67) | E | 0 | Group 3 | E | 0 |
| 01 Green (28) | F | 0 | 05 Green (48) | F | 0 | OLC Green (68) | F | 0 | Group 4 | F | 0 |

| D + 9 + 0 + Key | | | D + 9 + 3 + Key | | | E + F + Key | | |
|-------------------|-----|----------|-----------------|-----|-------|------------------|-----|-------|
| FUNCTION | KEY | 12345678 | FUNCTION | KEY | VALUE | FUNCTION | KEY | VALUE |
| Overlap H | 0 | | OLH Green | 0 | 0.0 | RR Max II | 0 | 0 |
| Overlap J | 1 | | OLH Yellow | 1 | 0.0 | Ped Perm Plan 1 | 1 | 0 |
| Overlap K | 2 | | OLH Red | 2 | 0.0 | Ped Perm Plan 2 | 2 | 0 |
| Overlap L | 3 | | OLJ Green | 3 | 0.0 | Ped Perm Plan 3 | 3 | 0 |
| OLH Switchpack | 4 | | OLJ Yellow | 4 | 0.0 | Ped Perm Plan 4 | 4 | 0 |
| OLJ Switchpack | 5 | | OLJ Red | 5 | 0.0 | Ped Perm Plan 5 | 5 | 0 |
| OLK Switchpack | 6 | | OLK Green | 6 | 0.0 | Ped Perm Plan 6 | 6 | 0 |
| OLL Switchpack | 7 | | OLK Yellow | 7 | 0.0 | Ped Perm Plan 7 | 7 | 0 |
| Reserved | 8 | | OLK Red | 8 | 0.0 | Ped Perm Plan 8 | 8 | 0 |
| TimeKeeper (hc11) | 9 | | OLL Green | 9 | 0.0 | Ped Perm Plan 9 | 9 | 0 |
| All Red B4 EV | A | | OLL Yellow | A | 0.0 | Long Power Outs | A | 0 |
| Reserved | B | | OLL Red | B | 0.0 | Short Power Outs | B | 0 |
| Reserved | C | | Spring DST | C | 50 | Failed Detectors | C | 0 |
| Reserved | D | | Reserved | D | | Max II On | D | 0 |
| Reserved | E | | TR-3 GPS(6800) | E | 0 | Fall DST | E | 177 |
| Reserved | F | | RTC Clock | F | 0 | Revision Level | F | 21 |

CDOT

MaxTime Timing Shee

Initial Install

Administration**Unit Information**

| | |
|---------------|------------|
| Controller ID | 0 |
| Main St. | Hwy. 83 |
| Side St. | Hodgen Rd. |

 Cross Black_White.jpg

| Adapter | IP Address | Subnet Mask | Default Gateway | ARP | DHCP |
|---------|---------------|---------------|-----------------|---------|------|
| 1 | 192.168.13.10 | 255.255.255.0 | 192.168.13.31 | Disable | |
| 2 | 10.20.70.51 | 255.255.255.0 | 0.0.0.0 | Disable | |

Serial Ports:

| Port | Description | Function | Address | Baud | Bits | Stop | Parity | Flow | CTS | RTS |
|------|--------------|----------|---------|------|------|------|--------|------|-----|-----|
| 1 | Port 2/C21S | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 2 | Aux P3/C22S | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 3 | SDLC Port 1 | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 4 | Com A/C50S | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 5 | FIO | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 6 | DISPLAY/C60M | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 7 | SP7 | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |
| 8 | SP8/Com B | None | 1 | 9600 | 8 | 1 | None | None | 0 | 0 |

Unit Parameters

| | | | | | | | | | |
|---------------|---|-----------------|--------|-----------------|-----|------------------|--------|-----------|---------|
| Startup Flash | 1 | Auto Ped Clr | Enable | Red Revert | 4.0 | Backup Time | 600 | Ext Mode | Disable |
| All Red Exit | 0 | Grn Flash Freq. | 60 | Yel Flash Freq. | 60 | MCE Enable | Enable | Free Seq. | 1 |
| MCE Seq. | 1 | Start Yellow | 0.0 | Start Red | 0.0 | Start Clear Hold | 6 | | |

Phase Parameters

| Phases | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Walk Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Clear Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Don't Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 6 | 35 | 5 | 8 | 6 | 35 | 5 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Min Green 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Passage | 3.0 | 3.0 | 1.0 | 3.0 | 3.0 | 3.0 | 1.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max-1 | 12 | 45 | 0 | 24 | 12 | 45 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max-2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yel Change | 4.0 | 5.0 | 3.0 | 4.0 | 4.0 | 5.0 | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Red Clear | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Add Red Clear | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Revert | 5.0 | 5.0 | 0.0 | 5.0 | 5.0 | 5.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time B4 Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cars B4 Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduce By | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dyn Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dyn Max Step | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Advance Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delay Ped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alt Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alt Ped Clr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pre Green | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pre Clearance | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Phases | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Walk Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Clear Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Don't Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Min Green 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Passage | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max-1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max-2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yel Change | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Red Clear | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Add Red Clear | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Revert | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time B4 Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cars B4 Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduce By | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dyn Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dyn Max Step | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Advance Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delay Ped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alt Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alt Ped Clr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pre Green | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pre Clearance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Phase Options

| | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Phases | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Enable | | | | | | | | | | | | | | | | | | | | |
| Auto Flash Ent. | | | | | | | | | | | | | | | | | | | | |
| Auto Flash Exit | | | | | | | | | | | | | | | | | | | | |
| Non Actuated I | | | | | | | | | | | | | | | | | | | | |
| Non Actuated II | | | | | | | | | | | | | | | | | | | | |
| Non Lock Mem | | | | | | | | | | | | | | | | | | | | |
| Min Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Max Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Ped Recall | | | | | | | | | | | | | | | | | | | | |
| Soft Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Dual Entry | | | | | | | | | | | | | | | | | | | | |
| Sim Gap Dis | | | | | | | | | | | | | | | | | | | | |
| Guaranteed Pass | | | | | | | | | | | | | | | | | | | | |
| Act Rest Walk | | | | | | | | | | | | | | | | | | | | |
| Cond Service | | | | | | | | | | | | | | | | | | | | |
| Add Initial | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Phases | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| Enable | | | | | | | | | | | | | | | | | | | | |
| Auto Flash Ent. | | | | | | | | | | | | | | | | | | | | |
| Auto Flash Exit | | | | | | | | | | | | | | | | | | | | |
| Non Actuated I | | | | | | | | | | | | | | | | | | | | |
| Non Actuated II | | | | | | | | | | | | | | | | | | | | |
| Non Lock Mem | | | | | | | | | | | | | | | | | | | | |
| Min Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Max Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Ped Recall | | | | | | | | | | | | | | | | | | | | |
| Soft Veh Recall | | | | | | | | | | | | | | | | | | | | |
| Dual Entry | | | | | | | | | | | | | | | | | | | | |
| Sim Gap Dis | | | | | | | | | | | | | | | | | | | | |
| Guaranteed Pass | | | | | | | | | | | | | | | | | | | | |
| Act Rest Walk | | | | | | | | | | | | | | | | | | | | |
| Cond Service | | | | | | | | | | | | | | | | | | | | |
| Add Initial | | | | | | | | | | | | | | | | | | | | |

Additional Phase Options

| | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

| Phases | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Ped Clr During Yel | | | | | | | | | | | | | | | | | | | | |
| Ped Clr During Red | | | | | | | | | | | | | | | | | | | | |
| Cond Reservice | | | | | | | | | | | | | | | | | | | | |
| Yel Min Override | | | | | | | | | | | | | | | | | | | | |
| No Startup Call | | | | | | | | | | | | | | | | | | | | |
| Adv. Warn Flasher | | | | | | | | | | | | | | | | | | | | |
| No Ped Str Up Call | | | | | | | | | | | | | | | | | | | | |
| Ped Clr OVTG | | | | | | | | | | | | | | | | | | | | |
| Flash Exit Call | | | | | | | | | | | | | | | | | | | | |
| Flash Exit Ped Call | | | | | | | | | | | | | | | | | | | | |
| MinGreen2 | | | | | | | | | | | | | | | | | | | | |
| MaxGreen2 | | | | | | | | | | | | | | | | | | | | |
| MaxGreen3 | | | | | | | | | | | | | | | | | | | | |
| Ped2 | | | | | | | | | | | | | | | | | | | | |
| Ped Clear Pre Clear | | | | | | | | | | | | | | | | | | | | |
| Ped NA+ Mode | | | | | | | | | | | | | | | | | | | | |
| Red Rest | | | | | | | | | | | | | | | | | | | | |
| Serve Evy Oth Even | | | | | | | | | | | | | | | | | | | | |
| Serve Evy Oth Odd | | | | | | | | | | | | | | | | | | | | |

| Phases | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ped Clr During Yel | | | | | | | | | | | | | | | | | | | | |
| Ped Clr During Red | | | | | | | | | | | | | | | | | | | | |
| Cond Reservice | | | | | | | | | | | | | | | | | | | | |
| Yel Min Override | | | | | | | | | | | | | | | | | | | | |
| No Startup Call | | | | | | | | | | | | | | | | | | | | |
| Adv. Warn Flasher | | | | | | | | | | | | | | | | | | | | |
| No Ped Str Up Call | | | | | | | | | | | | | | | | | | | | |
| Ped Clr OVTG | | | | | | | | | | | | | | | | | | | | |
| Flash Exit Call | | | | | | | | | | | | | | | | | | | | |
| Flash Exit Ped Call | | | | | | | | | | | | | | | | | | | | |
| MinGreen2 | | | | | | | | | | | | | | | | | | | | |
| MaxGreen2 | | | | | | | | | | | | | | | | | | | | |
| MaxGreen3 | | | | | | | | | | | | | | | | | | | | |
| Ped2 | | | | | | | | | | | | | | | | | | | | |
| Ped Clear Pre Clear | | | | | | | | | | | | | | | | | | | | |
| Ped NA+ Mode | | | | | | | | | | | | | | | | | | | | |
| Red Rest | | | | | | | | | | | | | | | | | | | | |
| Serve Evy Oth Even | | | | | | | | | | | | | | | | | | | | |
| Serve Evy Oth Odd | | | | | | | | | | | | | | | | | | | | |

Phase Configuration

| Ph. | Startup | Ring | Concurrent | No Served Phases | Startup Min | Description |
|-----|---------------|------|------------|------------------|-------------|-------------|
| 1 | Phase Not On | 1 | 5,6 | | 0 | |
| 2 | Green No Walk | 1 | 5,6 | | 0 | |
| 3 | Phase Not On | 1 | 7 | | 0 | |
| 4 | Phase Not On | 1 | 7 | | 0 | |
| 5 | Phase Not On | 2 | 1,2 | | 0 | |
| 6 | Green No Walk | 2 | 1,2 | | 0 | |
| 7 | Phase Not On | 2 | 3,4,8 | | 0 | |
| 8 | Phase Not On | 1 | 7 | | 0 | |
| 9 | None | 0 | | | 0 | |
| 10 | None | 0 | | | 0 | |
| 11 | None | 0 | | | 0 | |
| 12 | None | 0 | | | 0 | |
| 13 | None | 0 | | | 0 | |
| 14 | None | 0 | | | 0 | |
| 15 | None | 0 | | | 0 | |
| 16 | None | 0 | | | 0 | |
| 17 | None | 0 | | | 0 | |
| 18 | None | 0 | | | 0 | |
| 19 | None | 0 | | | 0 | |
| 20 | None | 0 | | | 0 | |

| | | | | | | |
|----|------|---|--|--|---|--|
| 21 | None | 0 | | | 0 | |
| 22 | None | 0 | | | 0 | |
| 23 | None | 0 | | | 0 | |
| 24 | None | 0 | | | 0 | |
| 25 | None | 0 | | | 0 | |
| 26 | None | 0 | | | 0 | |
| 27 | None | 0 | | | 0 | |
| 28 | None | 0 | | | 0 | |
| 29 | None | 0 | | | 0 | |
| 30 | None | 0 | | | 0 | |
| 31 | None | 0 | | | 0 | |
| 32 | None | 0 | | | 0 | |
| 33 | None | 0 | | | 0 | |
| 34 | None | 0 | | | 0 | |
| 35 | None | 0 | | | 0 | |
| 36 | None | 0 | | | 0 | |
| 37 | None | 0 | | | 0 | |
| 38 | None | 0 | | | 0 | |
| 39 | None | 0 | | | 0 | |
| 40 | None | 0 | | | 0 | |

Sequence Configuration

Sequence 1

| Ring | Phases |
|------|---------------|
| 1 | 1,2,a,3,4,8,b |
| 2 | 5,6,a,7,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 2

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,3,4,b |
| 2 | 5,6,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 3

| Ring | Phases |
|------|-------------|
| 1 | 1,2,a,4,3,b |
| 2 | 5,6,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 4

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,4,3,b |
| 2 | 5,6,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 5

| Ring | Phases |
|------|-------------|
| 1 | 1,2,a,3,4,b |
| 2 | 6,5,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 6

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,3,4,b |
| 2 | 6,5,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 7

| Ring | Phases |
|------|-------------|
| 1 | 1,2,a,4,3,b |
| 2 | 6,5,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 8

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,4,3,b |
| 2 | 6,5,a,7,8,b |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |

Sequence 9

| Ring | Phases |
|------|-------------|
| 1 | 1,2,a,3,4,b |

Sequence 10

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,3,4,b |

Sequence 11

| Ring | Phases |
|------|-------------|
| 1 | 1,2,a,4,3,b |

Sequence 12

| Ring | Phases |
|------|-------------|
| 1 | 2,1,a,4,3,b |

| | | | | | | | |
|----|-------------|----|-------------|----|-------------|----|-------------|
| 2 | 5,6,a,8,7,b | 2 | 5,6,a,8,7,b | 2 | 5,6,a,8,7,b | 2 | 5,6,a,8,7,b |
| 3 | | 3 | | 3 | | 3 | |
| 4 | | 4 | | 4 | | 4 | |
| 5 | | 5 | | 5 | | 5 | |
| 6 | | 6 | | 6 | | 6 | |
| 7 | | 7 | | 7 | | 7 | |
| 8 | | 8 | | 8 | | 8 | |
| 9 | | 9 | | 9 | | 9 | |
| 10 | | 10 | | 10 | | 10 | |
| 11 | | 11 | | 11 | | 11 | |
| 12 | | 12 | | 12 | | 12 | |
| 13 | | 13 | | 13 | | 13 | |
| 14 | | 14 | | 14 | | 14 | |
| 15 | | 15 | | 15 | | 15 | |
| 16 | | 16 | | 16 | | 16 | |

| | | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Sequence 13 | | Sequence 14 | | Sequence 15 | | Sequence 16 | |
| Ring | Phases | Ring | Phases | Ring | Phases | Ring | Phases |
| 1 | 1,2,a,3,4,b | 1 | 2,1,a,3,4,b | 1 | 1,2,a,4,3,b | 1 | 2,1,a,4,3,b |
| 2 | 6,5,a,8,7,b | 2 | 6,5,a,8,7,b | 2 | 6,5,a,8,7,b | 2 | 6,5,a,8,7,b |
| 3 | | 3 | | 3 | | 3 | |
| 4 | | 4 | | 4 | | 4 | |
| 5 | | 5 | | 5 | | 5 | |
| 6 | | 6 | | 6 | | 6 | |
| 7 | | 7 | | 7 | | 7 | |
| 8 | | 8 | | 8 | | 8 | |
| 9 | | 9 | | 9 | | 9 | |
| 10 | | 10 | | 10 | | 10 | |

| | | | | | | | |
|-------------|--|-------------|--|-------------|--|-------------|--|
| Sequence 13 | | Sequence 14 | | Sequence 15 | | Sequence 16 | |
| 11 | | 11 | | 11 | | 11 | |
| 12 | | 12 | | 12 | | 12 | |
| 13 | | 13 | | 13 | | 13 | |
| 14 | | 14 | | 14 | | 14 | |
| 15 | | 15 | | 15 | | 15 | |
| 16 | | 16 | | 16 | | 16 | |

| | | | | | | | |
|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
| Sequence 17 | | Sequence 18 | | Sequence 19 | | Sequence 20 | |
| Ring | Phases | Ring | Phases | Ring | Phases | Ring | Phases |
| 1 | | 1 | | 1 | | 1 | |
| 2 | | 2 | | 2 | | 2 | |
| 3 | | 3 | | 3 | | 3 | |
| 4 | | 4 | | 4 | | 4 | |
| 5 | | 5 | | 5 | | 5 | |
| 6 | | 6 | | 6 | | 6 | |
| 7 | | 7 | | 7 | | 7 | |
| 8 | | 8 | | 8 | | 8 | |
| 9 | | 9 | | 9 | | 9 | |
| 10 | | 10 | | 10 | | 10 | |
| 11 | | 11 | | 11 | | 11 | |
| 12 | | 12 | | 12 | | 12 | |
| 13 | | 13 | | 13 | | 13 | |
| 14 | | 14 | | 14 | | 14 | |
| 15 | | 15 | | 15 | | 15 | |
| 16 | | 16 | | 16 | | 16 | |

Vehicle Detection Parameters

| | | | | | | | | | | | | |
|------|----------|----------|-----------------------|--------------|-------|--------|-------------|-------------|--------------|----------------|-------------|-------------|
| Det. | Call Phs | Call Ovl | Additional Call Phase | Switch Phase | Delay | Extend | Queue Limit | No Activity | Max Presence | Erratic Counts | Failed Time | Description |
| 1 | 1 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 2 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 2 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 2 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | |
|----|---|---|--|---|-----|-----|---|---|---|---|---|--|
| 5 | 2 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 2 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 3 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 4 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 4 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 4 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 4 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 4 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 13 | 1 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 14 | 3 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 15 | 5 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 16 | 6 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 17 | 6 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 18 | 6 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 19 | 6 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 20 | 6 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 21 | 7 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 22 | 8 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 23 | 8 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 24 | 8 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 25 | 8 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 26 | 8 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 27 | 5 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 28 | 7 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 29 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 30 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 31 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 32 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 33 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 34 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 35 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 36 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 37 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 38 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 39 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 40 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 41 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 42 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 43 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 44 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 45 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 46 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 47 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 48 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 49 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 50 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 51 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 52 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 53 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 54 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 56 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 57 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 58 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 59 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 60 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 61 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 62 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 63 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 64 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 65 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 66 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 67 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 68 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | |
|----|---|---|--|---|-----|-----|---|---|---|---|---|--|
| 69 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 70 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 71 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |
| 72 | 0 | 0 | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | |

Vehicle Detection Options

| Detector | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Volume Detector | | | | | | | | | | | | | | | | | | | | |
| Occupancy | | | | | | | | | | | | | | | | | | | | |
| Yellow Lock Call | | | | | | | | | | | | | | | | | | | | |
| Red Lock call | | | | | | | | | | | | | | | | | | | | |
| Passage | | | | | | | | | | | | | | | | | | | | |
| Queue | | | | | | | | | | | | | | | | | | | | |
| Call | | | | | | | | | | | | | | | | | | | | |
| Terminate | | | | | | | | | | | | | | | | | | | | |

| Detector | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Volume Detector | | | | | | | | | | | | | | | | | | | | |
| Occupancy | | | | | | | | | | | | | | | | | | | | |
| Yellow Lock Call | | | | | | | | | | | | | | | | | | | | |
| Red Lock call | | | | | | | | | | | | | | | | | | | | |
| Passage | | | | | | | | | | | | | | | | | | | | |
| Queue | | | | | | | | | | | | | | | | | | | | |
| Call | | | | | | | | | | | | | | | | | | | | |
| Terminate | | | | | | | | | | | | | | | | | | | | |

| Detector | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Volume Detector | | | | | | | | | | | | | | | | | | | | |
| Occupancy | | | | | | | | | | | | | | | | | | | | |
| Yellow Lock Call | | | | | | | | | | | | | | | | | | | | |
| Red Lock call | | | | | | | | | | | | | | | | | | | | |
| Passage | | | | | | | | | | | | | | | | | | | | |
| Queue | | | | | | | | | | | | | | | | | | | | |
| Call | | | | | | | | | | | | | | | | | | | | |
| Terminate | | | | | | | | | | | | | | | | | | | | |

| Detector | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Volume Detector | | | | | | | | | | | | |
| Occupancy | | | | | | | | | | | | |
| Yellow Lock Call | | | | | | | | | | | | |
| Red Lock call | | | | | | | | | | | | |
| Passage | | | | | | | | | | | | |
| Queue | | | | | | | | | | | | |
| Call | | | | | | | | | | | | |
| Terminate | | | | | | | | | | | | |

Data Collection Period 0

Pedestrian Detectors

| Det | Call Phase | Call Ovp | No Act | Max Presence | Erratic Count |
|-----|------------|----------|--------|--------------|---------------|
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 |
| 4 | 4 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 |
| 6 | 6 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 |
| 8 | 8 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 |

| Det | Call Phase | Call Ovp | No Act | Max Presence | Erratic Count |
|-----|------------|----------|--------|--------------|---------------|
| 21 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 |
| 33 | 0 | 0 | 0 | 0 | 0 |
| 34 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | |
|----|---|---|---|---|---|----|---|---|---|---|---|
| 15 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 |

| Overlaps | | | | Trail | Trail | Trail | Walk | Ped | Walk | Ped | | | |
|----------|-------------|-----------------|-----------------|-------|-------|-------|------|-------|------|-------|-------|-------|--------------|
| OLP | Type | Included Phases | Modifier Phases | GRN | YEL | RED | 1 | Clr 1 | 2 | Clr 2 | Delay | Flash | Descriptions |
| 1 | FYA - 4 Sec | 2 | 1 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | On | |
| 2 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 3 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 4 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 5 | FYA - 4 Sec | 6 | 5 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | On | |
| 6 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 7 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 8 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 9 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 10 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 11 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 12 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 13 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 14 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 15 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 16 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 17 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 18 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 19 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 20 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 21 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 22 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 23 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 24 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 25 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 26 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 27 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 28 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 29 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 30 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 31 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |
| 32 | Off | | | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | Off | |

Coordination Parameters

| | | | |
|------------------|-----------------|--------------|-------------|
| Operational Mode | Correction Mode | Maximum Mode | Force Mode |
| Manual Free | Shortway (Auto) | Per Pattern | Per Pattern |

Patterns

| Patt. | Cycle | Offset 1 | Offset 2 | Offset 2 | Split | Sequence | Ref. Color | Max Mode | Phs Pln | Det Pln | Ped Pln |
|-------|-------|----------|----------|----------|-------|----------|------------|----------|------------|------------|------------|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |

| | | | | | | | | | | | |
|----|---|---|---|---|---|---|-----|-----|---|---|---|
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 41 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 43 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 45 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 47 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 49 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 50 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 51 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 53 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 54 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 55 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 56 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 57 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 58 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 59 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 61 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 62 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 63 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 65 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 66 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 67 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 69 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 70 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 71 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 72 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 73 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 74 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 75 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 77 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 78 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 79 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |

| | | | | | | | | | | | |
|-----|---|---|---|---|---|---|-----|-----|---|---|---|
| 80 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 81 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 82 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 83 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 84 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 85 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 86 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 87 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 88 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 89 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 90 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 91 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 92 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 93 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 94 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 95 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 96 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 97 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 98 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 99 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 100 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 101 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 102 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 103 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 104 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 105 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 106 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 107 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 108 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 109 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 110 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 111 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 112 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 113 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 114 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 115 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 116 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 117 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 118 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 119 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 120 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 121 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 122 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 123 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 124 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 125 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 126 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 127 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |
| 128 | 0 | 0 | 0 | 0 | 0 | 0 | Yel | Inh | 1 | 1 | 1 |

Split Parameters

| Split 1 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |

| Split 2 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |

| | | | | |
|----|---|--|--|------|
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| | | | | |
|----|---|--|--|------|
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 3 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 4 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 5 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 6 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 7 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 8 | | Coord | Ref | Mode |
|---------|------|-------|-----|------|
| PH. | Time | PH | PH | |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

Split 9

Split 10

| PH. | Time | Coord PH | Ref PH | Mode |
|-----|------|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |

| PH. | Time | Coord PH | Ref PH | Mode |
|-----|------|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |

| Split 9 | | Coord PH | Ref PH | Mode |
|---------|---|-------------|-----------|------|
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 10 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 11 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 12 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 13 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 14 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 15 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |

| Split 16 | | Coord PH | Ref PH | Mode |
|----------|---|-------------|-----------|------|
| 1 | 0 | | | None |
| 2 | 0 | | | None |

| | | | | |
|----|---|--|--|------|
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| | | | | |
|----|---|--|--|------|
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 17 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 18 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 19 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |

| Split 20 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 1 | 0 | | | None |
| 2 | 0 | | | None |
| 3 | 0 | | | None |
| 4 | 0 | | | None |
| 5 | 0 | | | None |
| 6 | 0 | | | None |

| Split 19 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| Split 20 | | Coord | Ref | |
|----------|------|-------|-----|------|
| PH. | Time | PH | PH | Mode |
| 7 | 0 | | | None |
| 8 | 0 | | | None |
| 9 | 0 | | | None |
| 10 | 0 | | | None |
| 11 | 0 | | | None |
| 12 | 0 | | | None |
| 13 | 0 | | | None |
| 14 | 0 | | | None |
| 15 | 0 | | | None |
| 16 | 0 | | | None |

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Ring | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Offset | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|---------------|---|--------------|---|---|---|---|---------------|---|---|---|---|---|----|----|----|----|
| Day Plan | | 1 | | | | | | | | | | | | | | |
| Month of Year | | Days of Week | | | | | Days of Month | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 |
| | | | | | | | | | | | | | 5 | 6 | 7 | 8 |
| | | | | | | | | | | | | | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | | | 13 | 14 | 15 | 16 |

[illegible]

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| J | A | S | O | N | D | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|--------------|---|---|---|---|---|---|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|--|
| Day Plan | | | | | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month of Year | | | | | Days of Week | | | | | | | Days of Month | | | | | | | | | | | | | | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | A | S | O | N | D | | | | | | | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|--------------|---|---|---|---|---|---|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| Day Plan | | | | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month of Year | | | | | Days of Week | | | | | | | Days of Month | | | | | | | | | | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | A | S | O | N | D | | | | | | | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|----|--------------|---|---|---|---|---|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|--|
| Day Plan | | | | | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month of Year | | | | | | Days of Week | | | | | | Days of Month | | | | | | | | | | | | | | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | A | S | O | N | D | | | | | | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|---------------|---|---|---|---|--------------|---|---|---|---|---|---|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| Day Plan | | | | | 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month of Year | | | | | Days of Week | | | | | | | Days of Month | | | | | | | | | | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | A | S | O | N | D | | | | | | | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|--------------|---|---|---|---|---|---|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| Day Plan | | | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Month of Year | | | | | Days of Week | | | | | | | Days of Month | | | | | | | | | | | | | | | | | | |
| J | F | M | A | M | J | S | M | T | W | T | F | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | A | S | O | N | D | | | | | | | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|
| Day Plan 1 | | | | Day Plan 2 | | | | Day Plan 3 | | | | Day Plan 4 | | | |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 1 | 5 | 0 | 1 | 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | |
| 2 | 23 | 0 | 2 | 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | |
| 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | |
| 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | |
| 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | |

| | | | | | | | | | | | | | | | |
|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|
| Day Plan 1 | | | | Day Plan 2 | | | | Day Plan 3 | | | | Day Plan 4 | | | |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | |
| 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | |
| 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | |
| 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | |
| 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | |

| | | | | | | | | | | | | | | | |
|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|------------|------|------|-----|
| Day Plan 5 | | | | Day Plan 6 | | | | Day Plan 7 | | | | Day Plan 8 | | | |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | |
| 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | |
| 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | |
| 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | |
| 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | |
| 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | |

| | | | | | | | | | | | | | | | |
|----------|------|------|-----|----------|------|------|-----|----------|------|------|-----|----------|------|------|-----|
| 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | |
| 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | |
| 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | |
| 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | |
| Day Plan | | | 9 | Day Plan | | | 10 | Day Plan | | | 11 | Day Plan | | | 12 |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | |
| 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | |
| 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | |
| 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | |
| 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | |
| 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | |
| 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | |
| 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | |
| 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | |
| 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | |
| Day Plan | | | 13 | Day Plan | | | 14 | Day Plan | | | 15 | Day Plan | | | 16 |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | |
| 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | |
| 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | |
| 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | |
| 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | |
| 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | |
| 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | |
| 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | |
| 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | |
| 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | |
| Day Plan | | | 17 | Day Plan | | | 18 | Day Plan | | | 19 | Day Plan | | | 20 |
| Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act | Event | Hour | Min. | Act |
| 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | | 1 | 0 | 0 | |
| 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | | 2 | 0 | 0 | |
| 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | | 3 | 0 | 0 | |
| 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | | 4 | 0 | 0 | |
| 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | | 5 | 0 | 0 | |
| 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | | 6 | 0 | 0 | |
| 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | | 7 | 0 | 0 | |
| 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | | 8 | 0 | 0 | |
| 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | | 9 | 0 | 0 | |
| 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | | 10 | 0 | 0 | |

| Actions | | Aux. | | | Special Functions | | | | | | | |
|---------|------------|------|---|---|-------------------|---|---|---|---|---|---|---|
| Act | Pattern | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | Free | | | | | | | | | | | |
| 2 | Flash | | | | | | | | | | | |
| 3 | Pattern 3 | | | | | | | | | | | |
| 4 | Pattern 4 | | | | | | | | | | | |
| 5 | Pattern 5 | | | | | | | | | | | |
| 6 | Pattern 6 | | | | | | | | | | | |
| 7 | Pattern 7 | | | | | | | | | | | |
| 8 | Pattern 8 | | | | | | | | | | | |
| 9 | Pattern 9 | | | | | | | | | | | |
| 10 | Pattern 10 | | | | | | | | | | | |
| 11 | None | | | | | | | | | | | |
| 12 | None | | | | | | | | | | | |
| 13 | None | | | | | | | | | | | |
| 14 | None | | | | | | | | | | | |
| 15 | None | | | | | | | | | | | |
| 16 | None | | | | | | | | | | | |
| 17 | None | | | | | | | | | | | |
| 18 | None | | | | | | | | | | | |
| 19 | None | | | | | | | | | | | |

| Actions | | Aux. | | | Special Functions | | | | | | | |
|---------|---------|------|---|---|-------------------|---|---|---|---|---|---|---|
| Act | Pattern | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 33 | None | | | | | | | | | | | |
| 34 | None | | | | | | | | | | | |
| 35 | None | | | | | | | | | | | |
| 36 | None | | | | | | | | | | | |
| 37 | None | | | | | | | | | | | |
| 38 | None | | | | | | | | | | | |
| 39 | None | | | | | | | | | | | |
| 40 | None | | | | | | | | | | | |
| 41 | None | | | | | | | | | | | |
| 42 | None | | | | | | | | | | | |
| 43 | None | | | | | | | | | | | |
| 44 | None | | | | | | | | | | | |
| 45 | None | | | | | | | | | | | |
| 46 | None | | | | | | | | | | | |
| 47 | None | | | | | | | | | | | |
| 48 | None | | | | | | | | | | | |
| 49 | None | | | | | | | | | | | |
| 50 | None | | | | | | | | | | | |
| 51 | None | | | | | | | | | | | |

| | | | | | | | | | |
|----|------|--|--|--|--|--|--|--|--|
| 20 | None | | | | | | | | |
| 21 | None | | | | | | | | |
| 22 | None | | | | | | | | |
| 23 | None | | | | | | | | |
| 24 | None | | | | | | | | |
| 25 | None | | | | | | | | |
| 26 | None | | | | | | | | |
| 27 | None | | | | | | | | |
| 28 | None | | | | | | | | |
| 29 | None | | | | | | | | |
| 30 | None | | | | | | | | |
| 31 | None | | | | | | | | |
| 32 | None | | | | | | | | |

| | | | | | | | | | |
|----|------|--|--|--|--|--|--|--|--|
| 52 | None | | | | | | | | |
| 53 | None | | | | | | | | |
| 54 | None | | | | | | | | |
| 55 | None | | | | | | | | |
| 56 | None | | | | | | | | |
| 57 | None | | | | | | | | |
| 58 | None | | | | | | | | |
| 59 | None | | | | | | | | |
| 60 | None | | | | | | | | |
| 61 | None | | | | | | | | |
| 62 | None | | | | | | | | |
| 63 | None | | | | | | | | |
| 64 | None | | | | | | | | |

Preemption Parameters

| | | | | | | | | |
|----------------|------|------|------|------|------|------|------|------|
| Preempt | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Link | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Duration | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ent. Ped Clear | 255 | 255 | 255 | 255 | 255 | 255 | 255 | 255 |
| Track Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dwell Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Presence | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Yellow | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Ent. Red Clear | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |

Preemption Parameters

| | | | | | | | | |
|--------------------|------|------|------|------|------|------|------|------|
| Preempt | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Track Yellow | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Track Red Clear | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Exit Red | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Exit Ped Clear | 255 | 255 | 255 | 255 | 255 | 255 | 255 | 255 |
| Exit Yellow | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Exit Red | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |
| Preempt | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Non Lock Mem | | | | | | | | |
| Not Override Flash | | | | | | | | |
| NotOverrideNextPre | | | | | | | | |
| Flash Dwell | | | | | | | | |

Preemption Configuration

| | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|
| Preempt | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Track phase | | | | | | | | |
| Dwell Phase | | | | | | | | |
| Dwell Ped | | | | | | | | |
| Exit Phase | | | | | | | | |
| Track Overlap | | | | | | | | |
| Dwell overlap | | | | | | | | |
| Cycling phase | | | | | | | | |
| Cycling Ped | | | | | | | | |
| Cycling Overlap | | | | | | | | |

IO Modules

| | |
|--------|--------------|
| IO Mod | TYPE |
| 1 | Caltrans 332 |
| 2 | None |
| 3 | None |
| 4 | None |
| 5 | None |
| 6 | None |
| 7 | None |
| 8 | None |
| 9 | None |
| 10 | None |

Channel Configuration

| | | |
|------|-----------|--------|
| Chan | Ctrl Type | Source |
| 1 | Olp | 1 |
| 2 | Phs Veh | 2 |
| 3 | Phs Veh | 3 |
| 4 | Phs Veh | 4 |
| 5 | Olp | 5 |
| 6 | Phs Veh | 6 |
| 7 | Phs Veh | 7 |
| 8 | Phs Veh | 8 |
| 9 | Phs Veh | 1 |
| 10 | Wrn Flash | 2 |

| | | |
|------|-----------|--------|
| Chan | Ctrl Type | Source |
| 11 | Phs Veh | 5 |
| 12 | Wrn Flash | 6 |
| 13 | Phs Ped | 2 |
| 14 | Phs Ped | 4 |
| 15 | Phs Ped | 6 |
| 16 | Phs Ped | 8 |
| 17 | Olp | 5 |
| 18 | Olp | 6 |
| 19 | None | 0 |
| 20 | None | 0 |

Channel Options

| | | | | | | | | | | | | | | | | |
|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Channel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Flash Yellow | | | | | | | | | | | | | | | | |
| Flash Red | | | | | | | | | | | | | | | | |
| Alt Flash | | | | | | | | | | | | | | | | |
| Channel | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Flash Yellow | | | | | | | | | | | | | | | | |
| Flash Red | | | | | | | | | | | | | | | | |
| Alt Flash | | | | | | | | | | | | | | | | |

Startup Clearance Hold Type

1=off, 2=On, 3=Flash and 4= Alt Flash

| Channel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Red | | | | | | | | | | | | | | | | |
| Yellow | | | | | | | | | | | | | | | | |
| Green | | | | | | | | | | | | | | | | |
| Channel | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Red | | | | | | | | | | | | | | | | |
| Yellow | | | | | | | | | | | | | | | | |
| Green | | | | | | | | | | | | | | | | |

Phase Intervals

| Interval | Description | Red | Yel | Grn | Type |
|----------|-------------|-----|-----|-----|--------|
| 1 | notActive | On | Off | Off | Red |
| 2 | dltGrn | On | Off | Off | Red |
| 3 | PreGrn | Off | Off | On | Green |
| 4 | minGrn | Off | Off | On | Green |
| 5 | grnExt | Off | Off | On | Green |
| 6 | grnDwell | Off | Off | On | Green |
| 7 | preClear | Off | Off | On | Green |
| 8 | yelChange | Off | On | Off | Yellow |
| 9 | redClear | On | Off | Off | Red |
| 10 | redDwell | On | Off | Off | Red |
| 11 | Barrier | On | Off | Off | Red |
| 12 | | | | | |

Pedestrian Intervals

| Interval | Description | DWK | CLR | Wlk | Type |
|----------|-------------|-------|-----|-----|-----------|
| 1 | notActive | On | Off | Off | Dont Walk |
| 2 | dltPed | On | Off | Off | Dont Walk |
| 3 | walk | Off | Off | On | Walk |
| 4 | walkDwell | Off | Off | On | Walk |
| 5 | flashDtWlk | Flash | On | Off | Ped Clear |
| 6 | dWalk | On | Off | Off | Dont Walk |
| 7 | | | | | |
| 8 | | | | | |

Countdown Display

| Display | Addr | Phase | Time |
|---------|------|-------|------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

| Display | Addr | Phase | Time |
|---------|------|-------|------|
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

| Display | Addr | Phase | Time |
|---------|------|-------|------|
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |

| Display | Addr | Phase | Time |
|---------|------|-------|------|
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |

Manual Control Phase Groups

| Grp 1 | Grp 2 | Grp 3 | Grp 4 | Grp 5 | Grp 6 | Grp 7 | Grp 8 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| Ring | Ph | Ring | Ph | Ring | Ph | Ring | Ph |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| 10 | 0 | 10 | 0 | 10 | 0 | 10 | 0 |
| 11 | 0 | 11 | 0 | 11 | 0 | 11 | 0 |
| 12 | 0 | 12 | 0 | 12 | 0 | 12 | 0 |
| 13 | 0 | 13 | 0 | 13 | 0 | 13 | 0 |
| 14 | 0 | 14 | 0 | 14 | 0 | 14 | 0 |
| 15 | 0 | 15 | 0 | 15 | 0 | 15 | 0 |
| 16 | 0 | 16 | 0 | 16 | 0 | 16 | 0 |

Prioritor Settings

| Prioritor | Priority Ph | Output Dly |
|-----------|-------------|------------|
| 1 | | 0 |
| 2 | | 0 |
| 3 | | 0 |
| 4 | | 0 |

| Enabled | Lock Out Time |
|---------|---------------|
| No | 0 |

Intersection 542 at Highway 83 and Shoup Rd - Timing table, page 1

| Page 1 | Phases | | | | | | | | | | | |
|------------------------|----------|------|-----|-----|-----|------|-----|------|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Min Green | 4 | 20 | 0 | 0 | 0 | 20 | 0 | 4 | 0 | 0 | 0 | 0 |
| Passage Time I | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage Time II | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Green I | 20 | 45 | 0 | 0 | 0 | 45 | 0 | 30 | 0 | 0 | 0 | 0 |
| Max Green II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yellow Clearance | 3.0 | 5.5 | 0.0 | 0.0 | 0.0 | 5.5 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clearance | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Added Initial | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time Before Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cars Before Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Passage | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Green Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Revert Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Handicap Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Handicap Ped Clearance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Highway 83 | X | X | | | | X | | | | | | |
| Shoup Rd | | | | | | | | X | | | | |
| Compass Direction | S | N | | | | S | | W | | | | |
| Through, Turn or XPed | Left,p/p | Thru | | | | Thru | | Thru | | | | |

Intersection 542 at Highway 83 and Shoup Rd - Sequence table, page 1

| Page 1 | Ring 1 Phases | | | | Ring 2 Phases | | | | Ring 3 Phases | | | |
|------------|----------------------|---------|---|---|----------------------|---------|---|---------|---------------|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| State 1 | Vehicle | | | | | | | | | | | |
| Barrier 1 | | | | | | | | | | | | |
| State 2 | | Vehicle | | | | Vehicle | | | | | | |
| Barrier 2 | XXXXXXXXXXXXXXXXXXXX | | | | XXXXXXXXXXXXXXXXXXXX | | | | | | | |
| State 3 | | | | | | | | Vehicle | | | | |
| Barrier 3 | XXXXXXXXXXXXXXXXXXXX | | | | XXXXXXXXXXXXXXXXXXXX | | | | | | | |
| State 4 | | | | | | | | | | | | |
| Barrier 4 | | | | | | | | | | | | |
| State 5 | | | | | | | | | | | | |
| Barrier 5 | | | | | | | | | | | | |
| State 6 | | | | | | | | | | | | |
| Barrier 6 | | | | | | | | | | | | |
| State 7 | | | | | | | | | | | | |
| Barrier 7 | | | | | | | | | | | | |
| State 8 | | | | | | | | | | | | |
| Barrier 8 | | | | | | | | | | | | |
| State 9 | | | | | | | | | | | | |
| Barrier 9 | | | | | | | | | | | | |
| State 10 | | | | | | | | | | | | |
| Barrier 10 | | | | | | | | | | | | |
| State 11 | | | | | | | | | | | | |
| Barrier 11 | | | | | | | | | | | | |
| State 12 | | | | | | | | | | | | |
| Barrier 12 | | | | | | | | | | | | |

Intersection 598 at Highway 83 and North Gate Blvd. - Timing table, page 1

| Page 1 | Phases | | | | | | | | | | | |
|------------------------|--------|------|-----|------|----------|------|-----|------|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Min Green | 0 | 23 | 0 | 6 | 6 | 23 | 0 | 6 | 0 | 0 | 0 | 0 |
| Passage Time I | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage Time II | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Green I | 0 | 60 | 0 | 24 | 25 | 60 | 0 | 24 | 0 | 0 | 0 | 0 |
| Max Green II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yellow Clearance | 0.0 | 5.0 | 0.0 | 4.0 | 3.0 | 5.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clearance | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Initial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max Added Initial | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time Before Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cars Before Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Passage | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Green Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Revert Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk Time | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance | 0 | 0 | 0 | 37 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Handicap Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Handicap Ped Clearance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Highway 83 | | X | | | X | X | | | | | | |
| North Gate Blvd. | | | | X | | | | X | | | | |
| Compass Direction | | N | | E | N | S | | W | | | | |
| Through, Turn or XPed | | Thru | | Thru | Left,prt | Thru | | Thru | | | | |

Intersection 598 at Highway 83 and North Gate Blvd. - Sequence table, page 1

| Page 1 | Ring 1 Phases | | | | Ring 2 Phases | | | | Ring 3 Phases | | | |
|------------|----------------------|---------|---|-------|----------------------|-------|---|---------|---------------|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| State 1 | | | | | Vehicle | | | | | | | |
| Barrier 1 | | | | | | | | | | | | |
| State 2 | | Vehicle | | | | V & P | | | | | | |
| Barrier 2 | XXXXXXXXXXXXXXXXXXXX | | | | XXXXXXXXXXXXXXXXXXXX | | | | | | | |
| State 3 | | | | V & P | | | | Vehicle | | | | |
| Barrier 3 | XXXXXXXXXXXXXXXXXXXX | | | | XXXXXXXXXXXXXXXXXXXX | | | | | | | |
| State 4 | | | | | | | | | | | | |
| Barrier 4 | | | | | | | | | | | | |
| State 5 | | | | | | | | | | | | |
| Barrier 5 | | | | | | | | | | | | |
| State 6 | | | | | | | | | | | | |
| Barrier 6 | | | | | | | | | | | | |
| State 7 | | | | | | | | | | | | |
| Barrier 7 | | | | | | | | | | | | |
| State 8 | | | | | | | | | | | | |
| Barrier 8 | | | | | | | | | | | | |
| State 9 | | | | | | | | | | | | |
| Barrier 9 | | | | | | | | | | | | |
| State 10 | | | | | | | | | | | | |
| Barrier 10 | | | | | | | | | | | | |
| State 11 | | | | | | | | | | | | |
| Barrier 11 | | | | | | | | | | | | |
| State 12 | | | | | | | | | | | | |
| Barrier 12 | | | | | | | | | | | | |

APPENDIX B

Level of Service Definitions

The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2016:
Chapter 19 – Signalized Intersections and Chapter 20 – Two-Way Stop Controlled Intersections.

Automobile Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A

Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B

Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C

Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D

Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E

Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F

Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Level of Service (LOS) for Unsignalized TWSC Intersections

| Level of Service ($v/c \leq 1.0$) | Average Control Delay (s/veh) |
|-------------------------------------|-------------------------------|
| A | 0 - 10 |
| B | > 10 - 15 |
| C | > 15 - 25 |
| D | > 25 - 35 |
| E | > 35 - 50 |
| F | > 50 |

APPENDIX C

Capacity Worksheets

Unsignalized LOS worksheets indicate that HCM defaults were used for PHF, %HV, and other factors. Since traffic count data are available, consider using these data for existing conditions per ECM. Also, evaluate whether HCM defaults are adequate for future scenarios based on existing conditions data.























Peak hour factors and heavy vehicle percentages updated for Existing and Short-Term Background scenarios, per the ECM. Considering how the details of diversity in vehicle types and PHF are unknown for Long-Term and Total conditions, Long-Term Background and all Total scenarios will continue to use HCM defaults.

Timings

7: Black Forest Road & Hodgen Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 22 | 258 | 112 | 110 | 793 | 20 | 179 | 0 | 56 | 20 | 0 | 76 |
| Future Volume (vph) | 22 | 258 | 112 | 110 | 793 | 20 | 179 | 0 | 56 | 20 | 0 | 76 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1855 | 0 | 1770 | 1583 | 0 | 1770 | 1583 | 0 |
| Flt Permitted | 0.109 | | | 0.541 | | | 0.703 | | | 0.717 | | |
| Satd. Flow (perm) | 203 | 1863 | 1583 | 1008 | 1855 | 0 | 1310 | 1583 | 0 | 1336 | 1583 | 0 |
| Satd. Flow (RTOR) | | | 122 | | 2 | | | 607 | | | 220 | |
| Lane Group Flow (vph) | 24 | 280 | 122 | 120 | 884 | 0 | 195 | 61 | 0 | 22 | 83 | 0 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 12.0 | 12.0 | 5.0 | 12.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 11.0 | 18.0 | 18.0 | 11.0 | 18.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (s) | 11.0 | 54.0 | 54.0 | 11.0 | 54.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Total Split (%) | 12.2% | 60.0% | 60.0% | 12.2% | 60.0% | | 27.8% | 27.8% | | 27.8% | 27.8% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Recall Mode | None | Min | Min | None | Min | | None | None | | None | None | |
| Act Effect Green (s) | 37.9 | 34.0 | 34.0 | 40.6 | 39.0 | | 15.5 | 15.5 | | 15.5 | 15.5 | |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.57 | 0.55 | | 0.22 | 0.22 | | 0.22 | 0.22 | |
| v/c Ratio | 0.11 | 0.31 | 0.15 | 0.19 | 0.86 | | 0.68 | 0.07 | | 0.08 | 0.16 | |
| Control Delay | 6.8 | 13.1 | 2.7 | 6.9 | 26.0 | | 42.4 | 0.2 | | 27.8 | 0.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 6.8 | 13.1 | 2.7 | 6.9 | 26.0 | | 42.4 | 0.2 | | 27.8 | 0.7 | |
| LOS | A | B | A | A | C | | D | A | | C | A | |
| Approach Delay | | 9.7 | | | 23.8 | | | 32.4 | | | 6.3 | |
| Approach LOS | | A | | | C | | | C | | | A | |
| Queue Length 50th (ft) | 4 | 78 | 0 | 21 | 269 | | 75 | 0 | | 7 | 0 | |
| Queue Length 95th (ft) | 12 | 131 | 24 | 42 | #694 | | #200 | 0 | | 30 | 0 | |
| Internal Link Dist (ft) | | 1250 | | | 847 | | | 4848 | | | 905 | |
| Turn Bay Length (ft) | 400 | | 335 | 280 | | | 125 | | | 65 | | |
| Base Capacity (vph) | 226 | 1337 | 1171 | 634 | 1332 | | 375 | 886 | | 383 | 610 | |
| 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 | 0.11 | 0.21 | 0.10 | 0.19 | 0.66 | | 0.52 | 0.07 | | 0.06 | 0.14 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 70.8 | | | | | | | | | | | | |
| Natural Cycle: 80 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.86 | | | | | | | | | | | | |

Timings 7: Black Forest Road & Hodgen Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 78.7%







ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.




Splits and Phases: 7: Black Forest Road & Hodgen Road

| | | |
|--|--|--|
|  Ø2 |  Ø3 |  Ø4 |
| 25 s | 11 s | 54 s |
|  Ø6 |  Ø7 |  Ø8 |
| 25 s | 11 s | 54 s |

HCM 6th TWSC

8: Hodgen Road & Black Forrest Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|---|---|--------|---|-------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  | |  | |
| Traffic Vol, veh/h | 4 | 275 | 789 | 2 | 0 | 4 |
| Future Vol, veh/h | 4 | 275 | 789 | 2 | 0 | 4 |
| 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 | 4 | 299 | 858 | 2 | 0 | 4 |
| Major/Minor | Major1 | Major2 | | Minor2 | | |
| Conflicting Flow All | 860 | 0 | - | 0 | 1166 | 859 |
| Stage 1 | - | - | - | - | 859 | - |
| Stage 2 | - | - | - | - | 307 | - |
| 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 | 781 | - | - | - | 214 | 356 |
| Stage 1 | - | - | - | - | 415 | - |
| Stage 2 | - | - | - | - | 746 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 781 | - | - | - | 213 | 356 |
| Mov Cap-2 Maneuver | - | - | - | - | 213 | - |
| Stage 1 | - | - | - | - | 413 | - |
| Stage 2 | - | - | - | - | 746 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.1 | 0 | | 15.2 | | |
| HCM LOS | | | | C | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 781 | - | - | - | 356 | |
| HCM Lane V/C Ratio | 0.006 | - | - | - | 0.012 | |
| HCM Control Delay (s) | 9.6 | 0 | - | - | 15.2 | |
| HCM Lane LOS | A | A | - | - | C | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 2.8 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 16 | 42 | 5 |
| Demand Flow Rate, veh/h | 16 | 43 | 5 |
| Vehicles Circulating, veh/h | 5 | 0 | 8 |
| Vehicles Exiting, veh/h | 38 | 13 | 13 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 2.7 | 2.9 | 2.7 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 16 | 43 | 5 |
| Cap Entry Lane, veh/h | 1373 | 1380 | 1369 |
| Entry HV Adj Factor | 0.990 | 0.983 | 1.000 |
| Flow Entry, veh/h | 16 | 42 | 5 |
| Cap Entry, veh/h | 1359 | 1356 | 1369 |
| V/C Ratio | 0.012 | 0.031 | 0.004 |
| Control Delay, s/veh | 2.7 | 2.9 | 2.7 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 |

HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

























| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 2.9 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 13 | 49 | 35 |
| Demand Flow Rate, veh/h | 13 | 50 | 36 |
| Vehicles Circulating, veh/h | 20 | 10 | 5 |
| Vehicles Exiting, veh/h | 40 | 30 | 28 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 2.7 | 3.0 | 2.9 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 13 | 50 | 36 |
| Cap Entry Lane, veh/h | 1352 | 1366 | 1373 |
| Entry HV Adj Factor | 1.000 | 0.980 | 0.972 |
| Flow Entry, veh/h | 13 | 49 | 35 |
| Cap Entry, veh/h | 1352 | 1339 | 1335 |
| V/C Ratio | 0.010 | 0.037 | 0.026 |
| Control Delay, s/veh | 2.7 | 3.0 | 2.9 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 |

Timings

1: State Highway 83 & Hodgen Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 47 | 321 | 94 | 199 | 173 | 260 | 92 | 616 | 305 | 374 | 598 | 108 |
| Future Volume (vph) | 47 | 321 | 94 | 199 | 173 | 260 | 92 | 616 | 305 | 374 | 598 | 108 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1820 | 0 |
| Flt Permitted | 0.579 | | | 0.352 | | | 0.154 | | | 0.083 | | |
| Satd. Flow (perm) | 1079 | 1863 | 1583 | 656 | 1863 | 1583 | 287 | 1863 | 1583 | 155 | 1820 | 0 |
| Satd. Flow (RTOR) | | | 145 | | | 283 | | | 209 | | 10 | |
| Lane Group Flow (vph) | 51 | 349 | 102 | 216 | 188 | 283 | 100 | 670 | 332 | 407 | 767 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 35.0 | 35.0 | 6.0 | 35.0 | |
| Minimum Split (s) | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 | 42.0 | 42.0 | 12.0 | 42.0 | |
| Total Split (s) | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | 12.0 | 49.0 | 49.0 | 27.0 | 64.0 | |
| Total Split (%) | 36.7% | 36.7% | 36.7% | 36.7% | 36.7% | 36.7% | 10.0% | 40.8% | 40.8% | 22.5% | 53.3% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 7.0 | |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | |
| Act Effect Green (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 49.0 | 42.0 | 42.0 | 70.0 | 57.0 | |
| Actuated g/C Ratio | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.41 | 0.35 | 0.35 | 0.58 | 0.48 | |
| v/c Ratio | 0.15 | 0.59 | 0.17 | 1.04 | 0.32 | 0.41 | 0.52 | 1.03 | 0.48 | 1.09 | 0.88 | |
| Control Delay | 31.0 | 39.5 | 2.2 | 115.4 | 33.0 | 5.3 | 24.5 | 81.3 | 13.4 | 107.6 | 41.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 31.0 | 39.5 | 2.2 | 115.4 | 33.0 | 5.3 | 24.5 | 81.3 | 13.4 | 107.6 | 41.6 | |
| LOS | C | D | A | F | C | A | C | F | B | F | D | |
| Approach Delay | | 31.0 | | | 47.5 | | | 55.7 | | | 64.5 | |
| Approach LOS | | C | | | D | | | E | | | E | |
| Queue Length 50th (ft) | 28 | 227 | 0 | ~181 | 110 | 0 | 32 | ~554 | 67 | ~304 | 517 | |
| Queue Length 95th (ft) | 61 | 327 | 16 | #337 | 175 | 62 | 58 | #785 | 153 | #505 | #771 | |
| Internal Link Dist (ft) | | 824 | | | 1611 | | | 1078 | | | 1286 | |
| Turn Bay Length (ft) | 420 | | 420 | 350 | | 350 | 120 | | 650 | 525 | | |
| Base Capacity (vph) | 341 | 589 | 600 | 207 | 589 | 694 | 191 | 652 | 689 | 373 | 869 | |
| 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 | 0.15 | 0.59 | 0.17 | 1.04 | 0.32 | 0.41 | 0.52 | 1.03 | 0.48 | 1.09 | 0.88 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 120 | | | | | | | | | | | | |
| Actuated Cycle Length: 120 | | | | | | | | | | | | |
| Natural Cycle: 110 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 1.09 | | | | | | | | | | | | |

Timings

1: State Highway 83 & Hodgen Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 53.5

Intersection LOS: D

Intersection Capacity Utilization 101.9%

ICU Level of Service G

Analysis Period (min) 15







~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: State Highway 83 & Hodgen Road

| | | | | | |
|---|---|---|--|---|--|
|  | |  | |  | |
| 27 s | | 49 s | | 44 s | |
|  |  |  | | | |
| 12 s | 64 s | 44 s | | | |

HCM 6th TWSC

2: State Highway 83 & Stagecoach Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | ↕ | | ↕ | ↕ | ↕ | ↕ | |
| Traffic Vol, veh/h | 2 | 0 | 5 | 47 | 5 | 9 | 2 | 1075 | 23 | 7 | 825 | 0 |
| Future Vol, veh/h | 2 | 0 | 5 | 47 | 5 | 9 | 2 | 1075 | 23 | 7 | 825 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 135 | - | - | 320 | 415 | - | - |
| 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 | 2 | 0 | 5 | 51 | 5 | 10 | 2 | 1168 | 25 | 8 | 897 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1504 | 2110 | 449 | 1637 | 2085 | 584 | 897 | 0 | 0 | 1193 | 0 | 0 |
| Stage 1 | 913 | 913 | - | 1172 | 1172 | - | - | - | - | - | - | - |
| Stage 2 | 591 | 1197 | - | 465 | 913 | - | - | - | - | - | - | - |
| 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 | 84 | 50 | 557 | 67 | 52 | 455 | 753 | - | - | 581 | - | - |
| Stage 1 | 294 | 350 | - | 204 | 264 | - | - | - | - | - | - | - |
| Stage 2 | 460 | 257 | - | 547 | 350 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 74 | 49 | 557 | 65 | 51 | 455 | 753 | - | - | 581 | - | - |
| Mov Cap-2 Maneuver | 74 | 49 | - | 65 | 51 | - | - | - | - | - | - | - |
| Stage 1 | 292 | 345 | - | 202 | 262 | - | - | - | - | - | - | - |
| Stage 2 | 437 | 255 | - | 534 | 345 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|-------|----|-----|
| HCM Control Delay, s | 24.3 | 166.1 | 0 | 0.1 |
| HCM LOS | C | F | | |























| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------------------|-------|-----|-----|
| Capacity (veh/h) | 753 | - | - | 194 63 455 | 581 | - | - |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.039 0.897 0.022 | 0.013 | - | - |
| HCM Control Delay (s) | 9.8 | 0 | - | 24.3 192.6 13.1 | 11.3 | - | - |
| HCM Lane LOS | A | A | - | C F B | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 4.2 0.1 | 0 | - | - |

Timings

3: State Highway 83 & North Gate Boulevard

Background Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  | |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 191 | 0 | 742 | 0 | 0 | 0 | 722 | 1167 | 4 | 2 | 899 | 143 |
| Future Volume (vph) | 191 | 0 | 742 | 0 | 0 | 0 | 722 | 1167 | 4 | 2 | 899 | 143 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 0 | 1863 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.757 | | | | | | 0.154 | | | 0.219 | | |
| Satd. Flow (perm) | 1410 | 1863 | 1583 | 0 | 1863 | 0 | 287 | 3539 | 1583 | 408 | 3539 | 1583 |
| Satd. Flow (RTOR) | | | 626 | | | | | | 39 | | | 155 |
| Lane Group Flow (vph) | 208 | 0 | 807 | 0 | 0 | 0 | 785 | 1268 | 4 | 2 | 977 | 155 |
| Turn Type | Perm | | Perm | | | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 10.0 | 12.0 | 12.0 | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | | 33.0 | 61.0 | 61.0 | 28.0 | 28.0 | 28.0 |
| Total Split (%) | 27.4% | 27.4% | 27.4% | 27.4% | 27.4% | | 39.3% | 72.6% | 72.6% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 3.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | | 6.0 | | 5.0 | 7.0 | 7.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Act Effect Green (s) | 17.0 | | 17.0 | | | | 56.0 | 54.0 | 54.0 | 22.0 | 22.0 | 22.0 |
| Actuated g/C Ratio | 0.20 | | 0.20 | | | | 0.67 | 0.64 | 0.64 | 0.26 | 0.26 | 0.26 |
| v/c Ratio | 0.73 | | 0.99 | | | | 1.15 | 0.56 | 0.00 | 0.02 | 1.06 | 0.29 |
| Control Delay | 48.2 | | 38.0 | | | | 104.9 | 9.5 | 0.0 | 24.0 | 77.1 | 6.0 |
| Queue Delay | 0.0 | | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 48.2 | | 38.0 | | | | 104.9 | 9.5 | 0.0 | 24.0 | 77.1 | 6.0 |
| LOS | D | | D | | | | F | A | A | C | E | A |
| Approach Delay | | 40.1 | | | | | | 45.9 | | | 67.3 | |
| Approach LOS | | D | | | | | | D | | | E | |
| Queue Length 50th (ft) | 103 | | 104 | | | | ~439 | 173 | 0 | 1 | ~300 | 0 |
| Queue Length 95th (ft) | #205 | | #372 | | | | #658 | 225 | 0 | 6 | #421 | 44 |
| Internal Link Dist (ft) | | 997 | | | 136 | | | 1617 | | | 2154 | |
| Turn Bay Length (ft) | 225 | | 285 | | | | 900 | | 400 | 750 | | 730 |
| Base Capacity (vph) | 285 | | 819 | | | | 685 | 2275 | 1031 | 106 | 926 | 529 |
| 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 | 0.73 | | 0.99 | | | | 1.15 | 0.56 | 0.00 | 0.02 | 1.06 | 0.29 |

Intersection Summary

Cycle Length: 84

Actuated Cycle Length: 84

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.15

Timings 3: State Highway 83 & North Gate Boulevard

Background Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 50.3

Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15






~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: State Highway 83 & North Gate Boulevard

| | | | |
|--|--|--|--|
|  Ø2 61 s | |  Ø4 23 s | |
|  Ø5 33 s |  Ø6 28 s |  Ø8 23 s | |

Timings

4: State Highway 83 & Shoup Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | ↑↑↑ | ↗ | ↘ | ↑↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 1869 | 446 | 331 | 1452 | 202 | 155 |
| Future Volume (vph) | 1869 | 446 | 331 | 1452 | 202 | 155 |
| Satd. Flow (prot) | 5085 | 1583 | 1770 | 5085 | 1770 | 1583 |
| Flt Permitted | | | 0.080 | | | |
| Satd. Flow (perm) | 5085 | 1583 | 149 | 5085 | 1863 | 1583 |
| Satd. Flow (RTOR) | | 485 | | | | 168 |
| Lane Group Flow (vph) | 2032 | 485 | 360 | 1578 | 220 | 168 |
| Turn Type | NA | Perm | pm+pt | NA | Perm | Perm |
| Protected Phases | 2 | | 1 | 6 | | |
| Permitted Phases | | 2 | 6 | | 8 | 8 |
| Detector Phase | 2 | 2 | 1 | 6 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | 4.0 | 20.0 | 4.0 | 4.0 |
| Minimum Split (s) | 27.5 | 27.5 | 9.0 | 27.5 | 10.0 | 10.0 |
| Total Split (s) | 51.0 | 51.0 | 23.0 | 74.0 | 21.0 | 21.0 |
| Total Split (%) | 53.7% | 53.7% | 24.2% | 77.9% | 22.1% | 22.1% |
| Yellow Time (s) | 5.5 | 5.5 | 3.0 | 5.5 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.5 | 7.5 | 5.0 | 7.5 | 6.0 | 6.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | Max | Max | None | Max | None | None |
| Act Effect Green (s) | 44.7 | 44.7 | 69.0 | 66.5 | 14.0 | 14.0 |
| Actuated g/C Ratio | 0.48 | 0.48 | 0.73 | 0.71 | 0.15 | 0.15 |
| v/c Ratio | 0.84 | 0.48 | 0.90 | 0.44 | 0.79 | 0.44 |
| Control Delay | 26.3 | 3.3 | 51.2 | 6.4 | 59.8 | 9.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.3 | 3.3 | 51.2 | 6.4 | 59.8 | 9.9 |
| LOS | C | A | D | A | E | A |
| Approach Delay | 21.9 | | | 14.7 | 38.2 | |
| Approach LOS | C | | | B | D | |
| Queue Length 50th (ft) | 391 | 0 | 157 | 131 | 128 | 0 |
| Queue Length 95th (ft) | 463 | 53 | #315 | 157 | #235 | 55 |
| Internal Link Dist (ft) | 1042 | | | 1734 | 675 | |
| Turn Bay Length (ft) | | 710 | 980 | | | 500 |
| Base Capacity (vph) | 2414 | 1005 | 419 | 3596 | 297 | 393 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.84 | 0.48 | 0.86 | 0.44 | 0.74 | 0.43 |
| Intersection Summary | | | | | | |
| Cycle Length: 95 | | | | | | |
| Actuated Cycle Length: 94.1 | | | | | | |
| Natural Cycle: 75 | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | |
| Maximum v/c Ratio: 0.90 | | | | | | |

Timings

4: State Highway 83 & Shoup Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

Intersection Signal Delay: 20.3

Intersection LOS: C

Intersection Capacity Utilization 81.1%





ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: State Highway 83 & Shoup Road

















| | | |
|--|--|--|
|  Ø1 |  Ø2 | |
| 23 s | 51 s | |
|  Ø6 | |  Ø8 |
| 74 s | | 21 s |

Timings

5: Black Forest Road & Shoup Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 112 | 264 | 166 | 29 | 81 | 11 | 85 | 282 | 36 | 27 | 256 | 101 |
| Future Volume (vph) | 112 | 264 | 166 | 29 | 81 | 11 | 85 | 282 | 36 | 27 | 256 | 101 |
| Satd. Flow (prot) | 0 | 1769 | 0 | 0 | 1818 | 0 | 0 | 1822 | 0 | 0 | 1790 | 0 |
| Flt Permitted | | 0.896 | | | 0.826 | | | 0.822 | | | 0.952 | |
| Satd. Flow (perm) | 0 | 1601 | 0 | 0 | 1520 | 0 | 0 | 1513 | 0 | 0 | 1709 | 0 |
| Satd. Flow (RTOR) | | 32 | | | 7 | | | 7 | | | 24 | |
| Lane Group Flow (vph) | 0 | 589 | 0 | 0 | 132 | 0 | 0 | 438 | 0 | 0 | 417 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Minimum Split (s) | 14.0 | 14.0 | | 14.0 | 14.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Total Split (s) | 47.0 | 47.0 | | 47.0 | 47.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 52.2% | 52.2% | | 52.2% | 52.2% | | 47.8% | 47.8% | | 47.8% | 47.8% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Act Effect Green (s) | | 33.0 | | | 33.0 | | | 37.3 | | | 37.3 | |
| Actuated g/C Ratio | | 0.40 | | | 0.40 | | | 0.45 | | | 0.45 | |
| v/c Ratio | | 0.89 | | | 0.22 | | | 0.64 | | | 0.53 | |
| Control Delay | | 39.0 | | | 15.5 | | | 24.0 | | | 19.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 39.0 | | | 15.5 | | | 24.0 | | | 19.9 | |
| LOS | | D | | | B | | | C | | | B | |
| Approach Delay | | 39.0 | | | 15.5 | | | 24.0 | | | 19.9 | |
| Approach LOS | | D | | | B | | | C | | | B | |
| Queue Length 50th (ft) | | 261 | | | 41 | | | 171 | | | 146 | |
| Queue Length 95th (ft) | | #421 | | | 77 | | | 311 | | | 263 | |
| Internal Link Dist (ft) | | 965 | | | 1070 | | | 1292 | | | 16527 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 819 | | | 766 | | | 689 | | | 787 | |
| 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 | | 0.72 | | | 0.17 | | | 0.64 | | | 0.53 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 82.4 | | | | | | | | | | | | |
| Natural Cycle: 60 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.89 | | | | | | | | | | | | |

Timings

5: Black Forest Road & Shoup Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 27.8

Intersection LOS: C

Intersection Capacity Utilization 91.2%





ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Black Forest Road & Shoup Road

| | |
|--|--|
|  Ø2 |  Ø4 |
| 43 s | 47 s |
|  Ø6 |  Ø8 |
| 43 s | 47 s |























| 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 | 5 | 4 | 11 | 4 | 4 | 4 | 5 | 200 | 0 | 9 | 200 | 2 |
| Future Vol, veh/h | 5 | 4 | 11 | 4 | 4 | 4 | 5 | 200 | 0 | 9 | 200 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 4 | 12 | 4 | 4 | 4 | 5 | 217 | 0 | 10 | 217 | 2 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | | | Major2 | | | |
| Conflicting Flow All | 469 | 465 | 218 | 473 | 466 | 217 | 219 | 0 | 0 | 217 | 0 | 0 |
| Stage 1 | 238 | 238 | - | 227 | 227 | - | - | - | - | - | - | - |
| Stage 2 | 231 | 227 | - | 246 | 239 | - | - | - | - | - | - | - |
| 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 | 505 | 495 | 822 | 501 | 494 | 823 | 1350 | - | - | 1353 | - | - |
| Stage 1 | 765 | 708 | - | 776 | 716 | - | - | - | - | - | - | - |
| Stage 2 | 772 | 716 | - | 758 | 708 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 494 | 489 | 822 | 486 | 488 | 823 | 1350 | - | - | 1353 | - | - |
| Mov Cap-2 Maneuver | 494 | 489 | - | 486 | 488 | - | - | - | - | - | - | - |
| Stage 1 | 762 | 702 | - | 773 | 713 | - | - | - | - | - | - | - |
| Stage 2 | 760 | 713 | - | 736 | 702 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | | | SB | | | |
| HCM Control Delay, s | 10.9 | | 11.5 | | 0.2 | | | | 0.3 | | | |
| HCM LOS | B | | B | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR | | | | |
| Capacity (veh/h) | 1350 | - | - | 631 | 564 | 1353 | - | - | | | | |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.034 | 0.023 | 0.007 | - | - | | | | |
| HCM Control Delay (s) | 7.7 | 0 | - | 10.9 | 11.5 | 7.7 | 0 | - | | | | |
| HCM Lane LOS | A | A | - | B | B | A | A | - | | | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.1 | 0 | - | - | | | | |

Timings

7: Black Forest Road & Hodgen Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 107 | 694 | 185 | 58 | 377 | 20 | 128 | 6 | 114 | 49 | 2 | 38 |
| Future Volume (vph) | 107 | 694 | 185 | 58 | 377 | 20 | 128 | 6 | 114 | 49 | 2 | 38 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1848 | 0 | 1770 | 1598 | 0 | 1770 | 1596 | 0 |
| Flt Permitted | 0.420 | | | 0.190 | | | 0.729 | | | 0.673 | | |
| Satd. Flow (perm) | 782 | 1863 | 1583 | 354 | 1848 | 0 | 1358 | 1598 | 0 | 1254 | 1596 | 0 |
| Satd. Flow (RTOR) | | | 201 | | 5 | | | 124 | | | 41 | |
| Lane Group Flow (vph) | 116 | 754 | 201 | 63 | 432 | 0 | 139 | 131 | 0 | 53 | 43 | 0 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 12.0 | 12.0 | 5.0 | 12.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 11.0 | 18.0 | 18.0 | 11.0 | 18.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (s) | 11.0 | 57.0 | 57.0 | 11.0 | 57.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | |
| Total Split (%) | 12.2% | 63.3% | 63.3% | 12.2% | 63.3% | | 24.4% | 24.4% | | 24.4% | 24.4% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Recall Mode | None | Min | Min | None | Min | | None | None | | None | None | |
| Act Effect Green (s) | 36.9 | 34.4 | 34.4 | 35.3 | 31.5 | | 12.5 | 12.5 | | 12.5 | 12.5 | |
| Actuated g/C Ratio | 0.56 | 0.52 | 0.52 | 0.54 | 0.48 | | 0.19 | 0.19 | | 0.19 | 0.19 | |
| v/c Ratio | 0.22 | 0.77 | 0.22 | 0.20 | 0.49 | | 0.54 | 0.32 | | 0.22 | 0.13 | |
| Control Delay | 6.2 | 19.8 | 2.2 | 6.6 | 13.7 | | 37.6 | 9.9 | | 30.7 | 12.0 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 6.2 | 19.8 | 2.2 | 6.6 | 13.7 | | 37.6 | 9.9 | | 30.7 | 12.0 | |
| LOS | A | B | A | A | B | | D | A | | C | B | |
| Approach Delay | | 15.0 | | | 12.8 | | | 24.2 | | | 22.3 | |
| Approach LOS | | B | | | B | | | C | | | C | |
| Queue Length 50th (ft) | 16 | 258 | 0 | 8 | 113 | | 54 | 2 | | 19 | 1 | |
| Queue Length 95th (ft) | 35 | 431 | 28 | 22 | 194 | | 135 | 51 | | 60 | 29 | |
| Internal Link Dist (ft) | | 1250 | | | 847 | | | 4848 | | | 905 | |
| Turn Bay Length (ft) | 400 | | 335 | 280 | | | 125 | | | 65 | | |
| Base Capacity (vph) | 522 | 1469 | 1290 | 309 | 1458 | | 363 | 518 | | 335 | 457 | |
| 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 | 0.22 | 0.51 | 0.16 | 0.20 | 0.30 | | 0.38 | 0.25 | | 0.16 | 0.09 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 65.6 | | | | | | | | | | | | |
| Natural Cycle: 60 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.77 | | | | | | | | | | | | |

Timings

7: Black Forest Road & Hodgen Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

Intersection Signal Delay: 16.1







Intersection LOS: B

Intersection Capacity Utilization 69.5%

ICU Level of Service C




Analysis Period (min) 15

Splits and Phases: 7: Black Forest Road & Hodgen Road

| | | |
|--|--|--|
|  Ø2 |  Ø3 |  Ø4 |
| 22 s | 11 s | 57 s |
|  Ø6 |  Ø7 |  Ø8 |
| 22 s | 11 s | 57 s |

HCM 6th TWSC
8: Hodgen Road & Black Forrest Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|---|---|--------|---|-------|
| Int Delay, s/veh | 0 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  | |  | |
| Traffic Vol, veh/h | 4 | 726 | 387 | 0 | 0 | 0 |
| Future Vol, veh/h | 4 | 726 | 387 | 0 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 789 | 421 | 0 | 0 | 0 |
| Major/Minor | Major1 | Major2 | | Minor2 | | |
| Conflicting Flow All | 421 | 0 | - | 0 | 1218 | 421 |
| Stage 1 | - | - | - | - | 421 | - |
| Stage 2 | - | - | - | - | 797 | - |
| 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 | 1138 | - | - | - | 199 | 632 |
| Stage 1 | - | - | - | - | 662 | - |
| Stage 2 | - | - | - | - | 444 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1138 | - | - | - | 198 | 632 |
| Mov Cap-2 Maneuver | - | - | - | - | 198 | - |
| Stage 1 | - | - | - | - | 658 | - |
| Stage 2 | - | - | - | - | 444 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0 | 0 | | 0 | | |
| HCM LOS | | | | A | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 1138 | - | - | - | - | |
| HCM Lane V/C Ratio | 0.004 | - | - | - | - | |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 0 | |
| HCM Lane LOS | A | A | - | - | A | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Background Traffic Conditions

Year 2042 - AM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 2.8 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 22 | 9 | 2 |
| Demand Flow Rate, veh/h | 22 | 9 | 2 |
| Vehicles Circulating, veh/h | 4 | 0 | 22 |
| Vehicles Exiting, veh/h | 5 | 24 | 4 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 2.8 | 2.7 | 2.7 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 22 | 9 | 2 |
| Cap Entry Lane, veh/h | 1374 | 1380 | 1349 |
| Entry HV Adj Factor | 0.980 | 0.989 | 1.000 |
| Flow Entry, veh/h | 22 | 9 | 2 |
| Cap Entry, veh/h | 1347 | 1365 | 1349 |
| V/C Ratio | 0.016 | 0.007 | 0.001 |
| Control Delay, s/veh | 2.8 | 2.7 | 2.7 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 |

HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Background Traffic Conditions
Year 2042 - AM Peak Hour

























| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 2.8 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 33 | 25 | 26 |
| Demand Flow Rate, veh/h | 34 | 25 | 26 |
| Vehicles Circulating, veh/h | 10 | 2 | 30 |
| Vehicles Exiting, veh/h | 17 | 54 | 14 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 2.9 | 2.8 | 2.8 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 34 | 25 | 26 |
| Cap Entry Lane, veh/h | 1366 | 1377 | 1338 |
| Entry HV Adj Factor | 0.971 | 1.000 | 1.000 |
| Flow Entry, veh/h | 33 | 25 | 26 |
| Cap Entry, veh/h | 1326 | 1377 | 1338 |
| V/C Ratio | 0.025 | 0.018 | 0.019 |
| Control Delay, s/veh | 2.9 | 2.8 | 2.8 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 |

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2027 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 100 | 104 | 97 | 279 | 197 | 264 | 134 | 353 | 83 | 133 | 447 | 63 |
| Future Volume (vph) | 100 | 104 | 97 | 279 | 197 | 264 | 134 | 353 | 83 | 133 | 447 | 63 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1829 | 0 |
| Flt Permitted | 0.537 | | | 0.684 | | | 0.311 | | | 0.469 | | |
| Satd. Flow (perm) | 1000 | 1863 | 1583 | 1274 | 1863 | 1583 | 579 | 1863 | 1583 | 874 | 1829 | 0 |
| Satd. Flow (RTOR) | | | 135 | | | 287 | | | 121 | | 12 | |
| Lane Group Flow (vph) | 109 | 113 | 105 | 303 | 214 | 287 | 146 | 384 | 90 | 145 | 554 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | |
| Minimum Split (s) | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 | 42.0 | 42.0 | 12.0 | 42.0 | |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 12.0 | 45.0 | 45.0 | 12.0 | 45.0 | |
| Total Split (%) | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 14.8% | 55.6% | 55.6% | 14.8% | 55.6% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 7.0 | |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | |
| Act Effct Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 45.0 | 38.0 | 38.0 | 45.0 | 38.0 | |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.56 | 0.47 | 0.47 | 0.56 | 0.47 | |
| v/c Ratio | 0.49 | 0.27 | 0.23 | 1.07 | 0.52 | 0.50 | 0.36 | 0.44 | 0.11 | 0.26 | 0.64 | |
| Control Delay | 36.2 | 28.2 | 4.3 | 107.1 | 32.9 | 6.9 | 8.9 | 16.4 | 1.7 | 7.6 | 20.2 | |
| 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 | 36.2 | 28.2 | 4.3 | 107.1 | 32.9 | 6.9 | 8.9 | 16.4 | 1.7 | 7.6 | 20.2 | |
| LOS | D | C | A | F | C | A | A | B | A | A | C | |
| Approach Delay | | 23.2 | | | 51.6 | | | 12.5 | | | 17.6 | |
| Approach LOS | | C | | | D | | | B | | | B | |
| Queue Length 50th (ft) | 49 | 48 | 0 | ~173 | 96 | 0 | 27 | 124 | 0 | 26 | 199 | |
| Queue Length 95th (ft) | 100 | 92 | 25 | #325 | 163 | 60 | 49 | 195 | 14 | 48 | 307 | |
| Internal Link Dist (ft) | | 824 | | | 1611 | | | 1078 | | | 1286 | |
| Turn Bay Length (ft) | 420 | | 420 | 350 | | 350 | 120 | | 650 | 525 | | |
| Base Capacity (vph) | 222 | 414 | 456 | 283 | 414 | 575 | 409 | 874 | 806 | 551 | 864 | |
| 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 | 0.49 | 0.27 | 0.23 | 1.07 | 0.52 | 0.50 | 0.36 | 0.44 | 0.11 | 0.26 | 0.64 | |

Intersection Summary

Cycle Length: 81

Actuated Cycle Length: 81

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 28.2

Intersection LOS: C

Intersection Capacity Utilization 79.5%

ICU Level of Service D

Analysis Period (min) 15

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2027 - AM Peak Hour







~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






Queue shown is maximum after two cycles.

Splits and Phases: 1: State Highway 83 & Hodgen Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø4 |
| 12 s | 45 s | 24 s |
|  Ø5 |  Ø6 (R) |  Ø8 |
| 12 s | 45 s | 24 s |

HCM 6th TWSC
2: State Highway 83 & Stagecoach Road




















Total Traffic Conditions
Year 2027 - AM Peak Hour

| Intersection | | | | | | | | | | | | |
|----------------------------|--------|---|--------|----------------------------|---|-------|--------|---|------|---|---|------|
| Int Delay, s/veh | 36 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | |  |  | |
| Traffic Vol, veh/h | 1 | 1 | 5 | 142 | 0 | 150 | 0 | 434 | 111 | 94 | 727 | 1 |
| Future Vol, veh/h | 1 | 1 | 5 | 142 | 0 | 150 | 0 | 434 | 111 | 94 | 727 | 1 |
| 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 | - | - | - | - | - | 135 | - | - | 320 | 415 | - | - |
| 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 | 1 | 1 | 5 | 154 | 0 | 163 | 0 | 472 | 121 | 102 | 790 | 1 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
| Conflicting Flow All | 1609 | 1588 | 791 | 1470 | 1467 | 472 | 791 | 0 | 0 | 593 | 0 | 0 |
| Stage 1 | 995 | 995 | - | 472 | 472 | - | - | - | - | - | - | - |
| Stage 2 | 614 | 593 | - | 998 | 995 | - | - | - | - | - | - | - |
| 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 | 84 | 108 | 390 | ~ 105 | 128 | 592 | 829 | - | - | 983 | - | - |
| Stage 1 | 295 | 323 | - | 573 | 559 | - | - | - | - | - | - | - |
| Stage 2 | 479 | 493 | - | 294 | 323 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 56 | 97 | 390 | ~ 95 | 115 | 592 | 829 | - | - | 983 | - | - |
| Mov Cap-2 Maneuver | 56 | 97 | - | ~ 95 | 115 | - | - | - | - | - | - | - |
| Stage 1 | 295 | 289 | - | 573 | 559 | - | - | - | - | - | - | - |
| Stage 2 | 347 | 493 | - | 259 | 289 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | |
| HCM Control Delay, s | 27 | | 202 | | 0 | | 1 | | | | | |
| HCM LOS | D | | F | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1WBLn2 | SBL | SBT | SBR | | | | | |
| Capacity (veh/h) | 829 | - | - | 171 95 592 | 983 | - | - | | | | | |
| HCM Lane V/C Ratio | - | - | - | 0.044 1.625 0.275 | 0.104 | - | - | | | | | |
| HCM Control Delay (s) | 0 | - | - | 27\$ 401.3 13.4 | 9.1 | - | - | | | | | |
| HCM Lane LOS | A | - | - | D F B | A | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 12.2 1.1 | 0.3 | - | - | | | | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | | | *: All major volume in platoon | | | | |

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  |  | |  |  |  |  | |
| Traffic Volume (vph) | 1 | 1 | 5 | 142 | 0 | 150 | 0 | 434 | 111 | 94 | 727 | 1 |
| Future Volume (vph) | 1 | 1 | 5 | 142 | 0 | 150 | 0 | 434 | 111 | 94 | 727 | 1 |
| Satd. Flow (prot) | 0 | 1672 | 0 | 0 | 1770 | 1583 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Flt Permitted | | 0.953 | | | 0.753 | | | | | 0.332 | | |
| Satd. Flow (perm) | 0 | 1605 | 0 | 0 | 1403 | 1583 | 0 | 1863 | 1583 | 618 | 1863 | 0 |
| Satd. Flow (RTOR) | | 5 | | | | 163 | | | 130 | | | |
| Lane Group Flow (vph) | 0 | 7 | 0 | 0 | 154 | 163 | 0 | 472 | 121 | 102 | 791 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 | 35.0 | 35.0 | 35.0 | 14.0 | 35.0 | |
| Minimum Split (s) | 13.5 | 13.5 | | 13.5 | 13.5 | 13.5 | 42.0 | 42.0 | 42.0 | 21.0 | 42.0 | |
| Total Split (s) | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 | 42.0 | 42.0 | 42.0 | 21.0 | 63.0 | |
| Total Split (%) | 21.3% | 21.3% | | 21.3% | 21.3% | 21.3% | 52.5% | 52.5% | 52.5% | 26.3% | 78.8% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.5 | | | 5.5 | 5.5 | | 7.0 | 7.0 | 7.0 | 7.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | None | | None | None | None | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | | 11.0 | | | 11.0 | 11.0 | | 39.7 | 39.7 | 56.5 | 56.5 | |
| Actuated g/C Ratio | | 0.14 | | | 0.14 | 0.14 | | 0.50 | 0.50 | 0.71 | 0.71 | |
| v/c Ratio | | 0.03 | | | 0.80 | 0.46 | | 0.51 | 0.14 | 0.16 | 0.60 | |
| Control Delay | | 21.5 | | | 63.9 | 10.1 | | 18.1 | 2.9 | 4.4 | 8.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 21.5 | | | 63.9 | 10.1 | | 18.1 | 2.9 | 4.4 | 8.5 | |
| LOS | | C | | | E | B | | B | A | A | A | |
| Approach Delay | | 21.5 | | | 36.2 | | | 15.0 | | | 8.1 | |
| Approach LOS | | C | | | D | | | B | | | A | |
| Queue Length 50th (ft) | | 1 | | | 75 | 0 | | 171 | 0 | 14 | 172 | |
| Queue Length 95th (ft) | | 12 | | | #170 | 52 | | 265 | 25 | 27 | 265 | |
| Internal Link Dist (ft) | | 862 | | | 898 | | | 913 | | | 1101 | |
| Turn Bay Length (ft) | | | | | | 135 | | | 320 | 415 | | |
| Base Capacity (vph) | | 235 | | | 201 | 367 | | 924 | 850 | 638 | 1315 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 0.03 | | | 0.77 | 0.44 | | 0.51 | 0.14 | 0.16 | 0.60 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 80 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings 2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 15.3

Intersection LOS: B

Intersection Capacity Utilization 98.3%







ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.






















Splits and Phases: 2: State Highway 83 & Stagecoach Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø4 |
| 21 s | 42 s | 17 s |
|  Ø6 (R) |  Ø8 |  Ø8 |
| 63 s | | 17 s |

Timings

3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2027 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  | |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 84 | 0 | 373 | 0 | 0 | 0 | 599 | 497 | 0 | 0 | 858 | 196 |
| Future Volume (vph) | 84 | 0 | 373 | 0 | 0 | 0 | 599 | 497 | 0 | 0 | 858 | 196 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 0 | 1863 | 0 | 1770 | 3539 | 0 | 1863 | 3539 | 1583 |
| Flt Permitted | 0.757 | | | | | | 0.151 | | | | | |
| Satd. Flow (perm) | 1410 | 1863 | 1583 | 0 | 1863 | 0 | 281 | 3539 | 0 | 1863 | 3539 | 1583 |
| Satd. Flow (RTOR) | | | 471 | | | | | | | | | 213 |
| Lane Group Flow (vph) | 91 | 0 | 405 | 0 | 0 | 0 | 651 | 540 | 0 | 0 | 933 | 213 |
| Turn Type | Perm | | Perm | | | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 10.0 | 12.0 | | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 25.0 | 60.0 | | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | | 29.8% | 71.4% | | 41.7% | 41.7% | 41.7% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 3.0 | 5.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | | 6.0 | | 5.0 | 7.0 | | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Act Effct Green (s) | 10.4 | | 10.4 | | | | 55.1 | 53.1 | | | 29.0 | 29.0 |
| Actuated g/C Ratio | 0.14 | | 0.14 | | | | 0.72 | 0.69 | | | 0.38 | 0.38 |
| v/c Ratio | 0.48 | | 0.65 | | | | 1.10 | 0.22 | | | 0.69 | 0.29 |
| Control Delay | 38.7 | | 6.9 | | | | 88.7 | 4.9 | | | 23.9 | 4.0 |
| Queue Delay | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 38.7 | | 6.9 | | | | 88.7 | 4.9 | | | 23.9 | 4.0 |
| LOS | D | | A | | | | F | A | | | C | A |
| Approach Delay | | 12.7 | | | | | | 50.7 | | | 20.2 | |
| Approach LOS | | B | | | | | | D | | | C | |
| Queue Length 50th (ft) | 41 | | 0 | | | | ~289 | 40 | | | 191 | 0 |
| Queue Length 95th (ft) | 84 | | 40 | | | | #546 | 75 | | | 288 | 43 |
| Internal Link Dist (ft) | | 997 | | | 136 | | | 1617 | | | 2154 | |
| Turn Bay Length (ft) | 225 | | 285 | | | | 900 | | | | | 730 |
| Base Capacity (vph) | 332 | | 733 | | | | 592 | 2456 | | | 1343 | 733 |
| Starvation Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | 0.27 | | 0.55 | | | | 1.10 | 0.22 | | | 0.69 | 0.29 |

Intersection Summary

Cycle Length: 84

Actuated Cycle Length: 76.5

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.10

Timings 3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2027 - AM Peak Hour

Intersection Signal Delay: 31.7

Intersection LOS: C

Intersection Capacity Utilization 75.7%

ICU Level of Service D

Analysis Period (min) 15






~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: State Highway 83 & North Gate Boulevard

| | | | |
|--|--|--|--|
|  Ø2 60 s | |  Ø4 24 s | |
|  Ø5 25 s |  Ø6 35 s |  Ø8 24 s | |

Timings
4: State Highway 83 & Shoup Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | ↑↑ | ↗ | ↘ | ↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 963 | 128 | 81 | 1185 | 358 | 239 |
| Future Volume (vph) | 963 | 128 | 81 | 1185 | 358 | 239 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | | | 0.179 | | | |
| Satd. Flow (perm) | 3539 | 1583 | 333 | 3539 | 1863 | 1583 |
| Satd. Flow (RTOR) | | 139 | | | | 260 |
| Lane Group Flow (vph) | 1047 | 139 | 88 | 1288 | 389 | 260 |
| Turn Type | NA | Perm | pm+pt | NA | Perm | Perm |
| Protected Phases | 2 | | 1 | 6 | | |
| Permitted Phases | | 2 | 6 | | 8 | 8 |
| Detector Phase | 2 | 2 | 1 | 6 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | 4.0 | 20.0 | 4.0 | 4.0 |
| Minimum Split (s) | 27.5 | 27.5 | 9.0 | 27.5 | 10.0 | 10.0 |
| Total Split (s) | 45.0 | 45.0 | 20.0 | 65.0 | 30.0 | 30.0 |
| Total Split (%) | 47.4% | 47.4% | 21.1% | 68.4% | 31.6% | 31.6% |
| Yellow Time (s) | 5.5 | 5.5 | 3.0 | 5.5 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.5 | 7.5 | 5.0 | 7.5 | 6.0 | 6.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | Max | Max | None | Max | None | None |
| Act Effect Green (s) | 47.5 | 47.5 | 60.1 | 57.6 | 22.2 | 22.2 |
| Actuated g/C Ratio | 0.51 | 0.51 | 0.64 | 0.62 | 0.24 | 0.24 |
| v/c Ratio | 0.58 | 0.16 | 0.27 | 0.59 | 0.88 | 0.45 |
| Control Delay | 18.9 | 3.1 | 8.8 | 12.4 | 56.3 | 6.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 18.9 | 3.1 | 8.8 | 12.4 | 56.3 | 6.6 |
| LOS | B | A | A | B | E | A |
| Approach Delay | 17.1 | | | 12.2 | 36.4 | |
| Approach LOS | B | | | B | D | |
| Queue Length 50th (ft) | 238 | 0 | 19 | 233 | 222 | 0 |
| Queue Length 95th (ft) | 316 | 31 | 37 | 295 | #373 | 59 |
| Internal Link Dist (ft) | 1042 | | | 1734 | 675 | |
| Turn Bay Length (ft) | | 710 | 980 | | | 500 |
| Base Capacity (vph) | 1802 | 874 | 445 | 2184 | 479 | 600 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.58 | 0.16 | 0.20 | 0.59 | 0.81 | 0.43 |
| Intersection Summary | | | | | | |
| Cycle Length: 95 | | | | | | |
| Actuated Cycle Length: 93.3 | | | | | | |
| Natural Cycle: 60 | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | |
| Maximum v/c Ratio: 0.88 | | | | | | |

Timings

4: State Highway 83 & Shoup Road

Total Traffic Conditions

Year 2027 - AM Peak Hour

Intersection Signal Delay: 18.9

Intersection LOS: B

Intersection Capacity Utilization 66.4%





ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

















Splits and Phases: 4: State Highway 83 & Shoup Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 | |
| 20 s | 45 s | |
|  Ø6 | |  Ø8 |
| 65 s | | 30 s |

Timings

5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 84 | 61 | 45 | 16 | 128 | 25 | 97 | 225 | 10 | 30 | 270 | 140 |
| Future Volume (vph) | 84 | 61 | 45 | 16 | 128 | 25 | 97 | 225 | 10 | 30 | 270 | 140 |
| Satd. Flow (prot) | 0 | 1763 | 0 | 0 | 1816 | 0 | 0 | 1829 | 0 | 0 | 1777 | 0 |
| Flt Permitted | | 0.727 | | | 0.961 | | | 0.765 | | | 0.960 | |
| Satd. Flow (perm) | 0 | 1311 | 0 | 0 | 1754 | 0 | 0 | 1419 | 0 | 0 | 1711 | 0 |
| Satd. Flow (RTOR) | | 18 | | | 10 | | | 3 | | | 41 | |
| Lane Group Flow (vph) | 0 | 206 | 0 | 0 | 183 | 0 | 0 | 361 | 0 | 0 | 478 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Minimum Split (s) | 14.0 | 14.0 | | 14.0 | 14.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Total Split (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 55.0 | 55.0 | | 55.0 | 55.0 | |
| Total Split (%) | 38.9% | 38.9% | | 38.9% | 38.9% | | 61.1% | 61.1% | | 61.1% | 61.1% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Act Effct Green (s) | | 15.5 | | | 15.5 | | | 49.2 | | | 49.2 | |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | | 0.64 | | | 0.64 | |
| v/c Ratio | | 0.74 | | | 0.51 | | | 0.40 | | | 0.43 | |
| Control Delay | | 42.2 | | | 30.3 | | | 9.2 | | | 8.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 42.2 | | | 30.3 | | | 9.2 | | | 8.5 | |
| LOS | | D | | | C | | | A | | | A | |
| Approach Delay | | 42.2 | | | 30.3 | | | 9.2 | | | 8.5 | |
| Approach LOS | | D | | | C | | | A | | | A | |
| Queue Length 50th (ft) | | 84 | | | 73 | | | 71 | | | 88 | |
| Queue Length 95th (ft) | | 155 | | | 131 | | | 161 | | | 193 | |
| Internal Link Dist (ft) | | 965 | | | 1070 | | | 1292 | | | 16527 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 508 | | | 671 | | | 910 | | | 1111 | |
| 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 | | 0.41 | | | 0.27 | | | 0.40 | | | 0.43 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 76.7 | | | | | | | | | | | | |
| Natural Cycle: 40 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.74 | | | | | | | | | | | | |





Timings
5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

Intersection Signal Delay: 17.6
Intersection Capacity Utilization 80.5%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service D

Splits and Phases: 5: Black Forest Road & Shoup Road

| | |
|--|---|
|  Ø2 |  Ø4 |
| 55 s | 35 s |
|  Ø6 |  Ø8 |
| 55 s | 35 s |

HCM 6th TWSC
6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions
Year 2027 - AM Peak Hour



















| Intersection | | | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|-------|--------|-------|--------|------|------|-------|------|------|---|--|
| Int Delay, s/veh | 6.2 | | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | | ↘ | | ↖ | | ↗ | |
| Traffic Vol, veh/h | 73 | 0 | 148 | 6 | 1 | 2 | 100 | 96 | 1 | 1 | 132 | 50 | | |
| Future Vol, veh/h | 73 | 0 | 148 | 6 | 1 | 2 | 100 | 96 | 1 | 1 | 132 | 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 | - | - | - | - | - | - | 195 | - | - | - | - | 195 | | |
| 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 | 79 | 0 | 161 | 7 | 1 | 2 | 109 | 104 | 1 | 1 | 143 | 54 | | |
| | | | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | | | |
| Conflicting Flow All | 469 | 468 | 143 | 576 | 522 | 105 | 197 | 0 | 0 | 105 | 0 | 0 | | |
| Stage 1 | 145 | 145 | - | 323 | 323 | - | - | - | - | - | - | - | | |
| Stage 2 | 324 | 323 | - | 253 | 199 | - | - | - | - | - | - | - | | |
| 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 | 505 | 493 | 905 | 428 | 459 | 949 | 1376 | - | - | 1486 | - | - | | |
| Stage 1 | 858 | 777 | - | 689 | 650 | - | - | - | - | - | - | - | | |
| Stage 2 | 688 | 650 | - | 751 | 736 | - | - | - | - | - | - | - | | |
| Platoon blocked, % | | | | | | | | - | - | | - | - | | |
| Mov Cap-1 Maneuver | 472 | 454 | 905 | 330 | 422 | 949 | 1376 | - | - | 1486 | - | - | | |
| Mov Cap-2 Maneuver | 472 | 454 | - | 330 | 422 | - | - | - | - | - | - | - | | |
| Stage 1 | 790 | 776 | - | 635 | 599 | - | - | - | - | - | - | - | | |
| Stage 2 | 631 | 599 | - | 617 | 735 | - | - | - | - | - | - | - | | |
| | | | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | | | |
| HCM Control Delay, s | 12.9 | | 14.3 | | 4 | | 0 | | | | | | | |
| HCM LOS | B | | B | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR | | | | | | |
| Capacity (veh/h) | 1376 | - | - | 695 | 397 | 1486 | - | - | | | | | | |
| HCM Lane V/C Ratio | 0.079 | - | - | 0.346 | 0.025 | 0.001 | - | - | | | | | | |
| HCM Control Delay (s) | 7.8 | - | - | 12.9 | 14.3 | 7.4 | 0 | - | | | | | | |
| HCM Lane LOS | A | - | - | B | B | A | A | - | | | | | | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 1.5 | 0.1 | 0 | - | - | | | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2027 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | |  |  | | |  |  |
| Traffic Volume (vph) | 73 | 0 | 148 | 6 | 1 | 2 | 100 | 96 | 1 | 1 | 132 | 50 |
| Future Volume (vph) | 73 | 0 | 148 | 6 | 1 | 2 | 100 | 96 | 1 | 1 | 132 | 50 |
| Satd. Flow (prot) | 0 | 1666 | 0 | 0 | 1751 | 0 | 1770 | 1861 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | | 0.886 | | | 0.726 | | 0.545 | | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1500 | 0 | 0 | 1316 | 0 | 1015 | 1861 | 0 | 0 | 1861 | 1583 |
| Satd. Flow (RTOR) | | 164 | | | 2 | | | 1 | | | | 155 |
| Lane Group Flow (vph) | 0 | 240 | 0 | 0 | 10 | 0 | 109 | 105 | 0 | 0 | 144 | 54 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 10.5 | 10.5 | | 10.5 | 10.5 | | 11.0 | 14.0 | | 14.0 | 14.0 | 14.0 |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 13.0 | 35.0 | | 22.0 | 22.0 | 22.0 |
| Total Split (%) | 41.7% | 41.7% | | 41.7% | 41.7% | | 21.7% | 58.3% | | 36.7% | 36.7% | 36.7% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.5 | | | 5.5 | | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | | 9.4 | | | 9.4 | | 39.1 | 39.1 | | | 28.4 | 28.4 |
| Actuated g/C Ratio | | 0.16 | | | 0.16 | | 0.65 | 0.65 | | | 0.47 | 0.47 |
| v/c Ratio | | 0.65 | | | 0.05 | | 0.15 | 0.09 | | | 0.16 | 0.07 |
| Control Delay | | 16.5 | | | 17.6 | | 5.5 | 5.1 | | | 13.0 | 0.2 |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | 16.5 | | | 17.6 | | 5.5 | 5.1 | | | 13.0 | 0.2 |
| LOS | | B | | | B | | A | A | | | B | A |
| Approach Delay | | 16.5 | | | 17.6 | | | 5.3 | | | 9.5 | |
| Approach LOS | | B | | | B | | | A | | | A | |
| Queue Length 50th (ft) | | 25 | | | 3 | | 11 | 11 | | | 29 | 0 |
| Queue Length 95th (ft) | | 74 | | | 12 | | 36 | 34 | | | 78 | 0 |
| Internal Link Dist (ft) | | 750 | | | 806 | | | 16527 | | | 4563 | |
| Turn Bay Length (ft) | | | | | | | 195 | | | | | 195 |
| Base Capacity (vph) | | 598 | | | 429 | | 756 | 1213 | | | 880 | 830 |
| Starvation Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | | 0.40 | | | 0.02 | | 0.14 | 0.09 | | | 0.16 | 0.07 |

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2027 - AM Peak Hour

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.8



Intersection LOS: B

Intersection Capacity Utilization 41.5%

ICU Level of Service A










Analysis Period (min) 15

Splits and Phases: 6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

| | | |
|--|---|--|
|  Ø2 (L) 35 s |   Ø6 (R) 22 s |  Ø4 25 s  Ø8 25 s |
| | | |

HCM 6th TWSC
7: Ridge Run Road/Black Forest Road & Hodgen Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|------|---|---|------|---|--|------|
| Int Delay, s/veh | 1.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 14 | 190 | 6 | 0 | 525 | 13 | 8 | 0 | 0 | 13 | 0 | 49 |
| Future Vol, veh/h | 14 | 190 | 6 | 0 | 525 | 13 | 8 | 0 | 0 | 13 | 0 | 49 |
| 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 | 400 | - | 335 | 280 | - | - | - | - | - | 65 | - | - |
| 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 | 15 | 207 | 7 | 0 | 571 | 14 | 9 | 0 | 0 | 14 | 0 | 53 |







| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 585 | 0 | 0 | 214 | 0 | 0 | 842 | 822 | 207 | 819 | 822 | 578 |
| Stage 1 | - | - | - | - | - | - | 237 | 237 | - | 578 | 578 | - |
| Stage 2 | - | - | - | - | - | - | 605 | 585 | - | 241 | 244 | - |
| 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 | 990 | - | - | 1356 | - | - | 284 | 309 | 833 | 294 | 309 | 516 |
| Stage 1 | - | - | - | - | - | - | 766 | 709 | - | 501 | 501 | - |
| Stage 2 | - | - | - | - | - | - | 485 | 498 | - | 762 | 704 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 990 | - | - | 1356 | - | - | 252 | 304 | 833 | 290 | 304 | 516 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 252 | 304 | - | 290 | 304 | - |
| Stage 1 | - | - | - | - | - | - | 755 | 698 | - | 493 | 501 | - |
| Stage 2 | - | - | - | - | - | - | 435 | 498 | - | 750 | 693 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 0.6 | | | 0 | | | 19.8 | | | 13.9 | | |
| HCM LOS | | | | | | | C | | | B | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h) | 252 | - | 990 | - | - | 1356 | - | - | 290 | 516 |
| HCM Lane V/C Ratio | 0.035 | - | 0.015 | - | - | - | - | - | 0.049 | 0.103 |
| HCM Control Delay (s) | 19.8 | 0 | 8.7 | - | - | 0 | - | - | 18 | 12.8 |
| HCM Lane LOS | C | A | A | - | - | A | - | - | C | B |
| HCM 95th %tile Q(veh) | 0.1 | - | 0 | - | - | 0 | - | - | 0.2 | 0.3 |

HCM 6th TWSC
8: Black Forest Road/Black Forrest Road & Hodgen Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|---|---|---|---|------|--------|---|-------|--------|---|-------|
| Int Delay, s/veh | 11.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  |  |  |  | | |  | | |  | |
| Traffic Vol, veh/h | 2 | 176 | 97 | 87 | 507 | 1 | 155 | 0 | 60 | 0 | 0 | 2 |
| Future Vol, veh/h | 2 | 176 | 97 | 87 | 507 | 1 | 155 | 0 | 60 | 0 | 0 | 2 |
| 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 | - | - | 260 | 290 | - | - | - | - | - | - | - | - |
| 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 | 2 | 191 | 105 | 95 | 551 | 1 | 168 | 0 | 65 | 0 | 0 | 2 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 552 | 0 | 0 | 296 | 0 | 0 | 938 | 937 | 191 | 1022 | 1042 | 552 |
| Stage 1 | - | - | - | - | - | - | 195 | 195 | - | 742 | 742 | - |
| Stage 2 | - | - | - | - | - | - | 743 | 742 | - | 280 | 300 | - |
| 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 | 1018 | - | - | 1265 | - | - | 244 | 265 | 851 | 214 | 230 | 533 |
| Stage 1 | - | - | - | - | - | - | 807 | 739 | - | 408 | 422 | - |
| Stage 2 | - | - | - | - | - | - | 407 | 422 | - | 727 | 666 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1018 | - | - | 1265 | - | - | 229 | 245 | 851 | 186 | 212 | 533 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 229 | 245 | - | 186 | 212 | - |
| Stage 1 | - | - | - | - | - | - | 805 | 738 | - | 407 | 390 | - |
| Stage 2 | - | - | - | - | - | - | 375 | 390 | - | 670 | 665 | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.1 | | | 1.2 | | | 54.9 | | | 11.8 | | |
| HCM LOS | | | | | | | F | | | B | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 288 | 1018 | - | - | 1265 | - | - | 533 | | | | |
| HCM Lane V/C Ratio | 0.811 | 0.002 | - | - | 0.075 | - | - | 0.004 | | | | |
| HCM Control Delay (s) | 54.9 | 8.5 | 0 | - | 8.1 | - | - | 11.8 | | | | |
| HCM Lane LOS | F | A | A | - | A | - | - | B | | | | |
| HCM 95th %tile Q(veh) | 6.6 | 0 | - | - | 0.2 | - | - | 0 | | | | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 4.2 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 182 | 279 | 55 |
| Demand Flow Rate, veh/h | 185 | 284 | 57 |
| Vehicles Circulating, veh/h | 21 | 27 | 162 |
| Vehicles Exiting, veh/h | 290 | 192 | 44 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 3.8 | 4.5 | 3.6 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 185 | 284 | 57 |
| Cap Entry Lane, veh/h | 1351 | 1342 | 1170 |
| Entry HV Adj Factor | 0.983 | 0.982 | 0.965 |
| Flow Entry, veh/h | 182 | 279 | 55 |
| Cap Entry, veh/h | 1327 | 1318 | 1129 |
| V/C Ratio | 0.137 | 0.212 | 0.049 |
| Control Delay, s/veh | 3.8 | 4.5 | 3.6 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 1 | 0 |

HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Total Traffic Conditions
Year 2027 - AM Peak Hour

























| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 4.2 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 268 | 57 | 211 |
| Demand Flow Rate, veh/h | 273 | 58 | 216 |
| Vehicles Circulating, veh/h | 40 | 181 | 3 |
| Vehicles Exiting, veh/h | 199 | 38 | 310 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.5 | 3.6 | 4.0 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 273 | 58 | 216 |
| Cap Entry Lane, veh/h | 1325 | 1147 | 1376 |
| Entry HV Adj Factor | 0.982 | 0.983 | 0.977 |
| Flow Entry, veh/h | 268 | 57 | 211 |
| Cap Entry, veh/h | 1300 | 1127 | 1344 |
| V/C Ratio | 0.206 | 0.051 | 0.157 |
| Control Delay, s/veh | 4.5 | 3.6 | 4.0 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 1 |

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2027 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 30 | 244 | 214 | 128 | 141 | 197 | 180 | 456 | 196 | 278 | 461 | 70 |
| Future Volume (vph) | 30 | 244 | 214 | 128 | 141 | 197 | 180 | 456 | 196 | 278 | 461 | 70 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1825 | 0 |
| Flt Permitted | 0.660 | | | 0.434 | | | 0.291 | | | 0.363 | | |
| Satd. Flow (perm) | 1229 | 1863 | 1583 | 808 | 1863 | 1583 | 542 | 1863 | 1583 | 676 | 1825 | 0 |
| Satd. Flow (RTOR) | | | 233 | | | 214 | | | 213 | | 13 | |
| Lane Group Flow (vph) | 33 | 265 | 233 | 139 | 153 | 214 | 196 | 496 | 213 | 302 | 577 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | |
| Minimum Split (s) | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 | 42.0 | 42.0 | 12.0 | 42.0 | |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 12.0 | 45.0 | 45.0 | 12.0 | 45.0 | |
| Total Split (%) | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 14.8% | 55.6% | 55.6% | 14.8% | 55.6% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 7.0 | |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | |
| Act Effct Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 45.0 | 38.0 | 38.0 | 45.0 | 38.0 | |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.56 | 0.47 | 0.47 | 0.56 | 0.47 | |
| v/c Ratio | 0.12 | 0.64 | 0.44 | 0.78 | 0.37 | 0.41 | 0.50 | 0.57 | 0.25 | 0.66 | 0.67 | |
| Control Delay | 26.7 | 36.7 | 6.8 | 60.2 | 29.8 | 6.8 | 11.5 | 18.7 | 2.7 | 16.4 | 21.0 | |
| 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 | 26.7 | 36.7 | 6.8 | 60.2 | 29.8 | 6.8 | 11.5 | 18.7 | 2.7 | 16.4 | 21.0 | |
| LOS | C | D | A | E | C | A | B | B | A | B | C | |
| Approach Delay | | 22.9 | | | 28.4 | | | 13.4 | | | 19.4 | |
| Approach LOS | | C | | | C | | | B | | | B | |
| Queue Length 50th (ft) | 13 | 122 | 0 | 66 | 66 | 0 | 37 | 174 | 0 | 61 | 211 | |
| Queue Length 95th (ft) | 37 | 202 | 55 | #162 | 120 | 53 | 64 | 267 | 34 | 99 | 325 | |
| Internal Link Dist (ft) | | 824 | | | 1611 | | | 1078 | | | 1286 | |
| Turn Bay Length (ft) | 420 | | 420 | 350 | | 350 | 120 | | 650 | 525 | | |
| Base Capacity (vph) | 273 | 414 | 533 | 179 | 414 | 518 | 392 | 874 | 855 | 456 | 863 | |
| 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 | 0.12 | 0.64 | 0.44 | 0.78 | 0.37 | 0.41 | 0.50 | 0.57 | 0.25 | 0.66 | 0.67 | |

Intersection Summary

Cycle Length: 81

Actuated Cycle Length: 81

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 85.3%

ICU Level of Service E

Analysis Period (min) 15

Timings

1: State Highway 83 & Hodgen Road







Total Traffic Conditions

Year 2027 - PM Peak Hour

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: State Highway 83 & Hodgen Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø4 |
| 12 s | 45 s | 24 s |
|  Ø5 |  Ø6 (R) |  Ø8 |
| 12 s | 45 s | 24 s |

HCM 6th TWSC
2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 179 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↔ | | | ↔ | ↔ | | ↔ | ↔ | ↔ | ↔ | |
| Traffic Vol, veh/h | 1 | 0 | 3 | 181 | 3 | 187 | 1 | 690 | 207 | 235 | 530 | 0 |
| Future Vol, veh/h | 1 | 0 | 3 | 181 | 3 | 187 | 1 | 690 | 207 | 235 | 530 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 135 | - | - | 320 | 415 | - | - |
| 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 | 1 | 0 | 3 | 197 | 3 | 203 | 1 | 750 | 225 | 255 | 576 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 2054 | 2063 | 576 | 1840 | 1838 | 750 | 576 | 0 | 0 | 975 | 0 | 0 |
| Stage 1 | 1086 | 1086 | - | 752 | 752 | - | - | - | - | - | - | - |
| Stage 2 | 968 | 977 | - | 1088 | 1086 | - | - | - | - | - | - | - |
| 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 | 41 | 55 | 517 | ~ 58 | 76 | 411 | 997 | - | - | 707 | - | - |
| Stage 1 | 262 | 292 | - | 402 | 418 | - | - | - | - | - | - | - |
| Stage 2 | 305 | 329 | - | 261 | 292 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 14 | 35 | 517 | ~ 41 | 48 | 411 | 997 | - | - | 707 | - | - |
| Mov Cap-2 Maneuver | 14 | 35 | - | ~ 41 | 48 | - | - | - | - | - | - | - |
| Stage 1 | 261 | 187 | - | 401 | 417 | - | - | - | - | - | - | - |
| Stage 2 | 153 | 328 | - | ~ 166 | 187 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|----------|----|----|
| HCM Control Delay, s | 80.5 | \$ 974.3 | 0 | 4 |
| HCM LOS | F | F | | |




















| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------------------------|-----|-----|-----|
| Capacity (veh/h) | 997 | - | - | 52 41 411 707 | - | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.084 4.878 0.495 0.361 | - | - | - |
| HCM Control Delay (s) | 8.6 | 0 | - | 80 \$ 1942.1 22 12.9 | - | - | - |
| HCM Lane LOS | A | A | - | F F C B | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.3 23.1 2.7 1.6 | - | - | - |

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

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  |  | |  |  |  |  | |
| Traffic Volume (vph) | 1 | 0 | 3 | 181 | 3 | 187 | 1 | 690 | 207 | 235 | 530 | 0 |
| Future Volume (vph) | 1 | 0 | 3 | 181 | 3 | 187 | 1 | 690 | 207 | 235 | 530 | 0 |
| Satd. Flow (prot) | 0 | 1655 | 0 | 0 | 1775 | 1583 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Flt Permitted | | 0.933 | | | 0.727 | | | | | 0.108 | | |
| Satd. Flow (perm) | 0 | 1562 | 0 | 0 | 1354 | 1583 | 0 | 1863 | 1583 | 201 | 1863 | 0 |
| Satd. Flow (RTOR) | | 133 | | | | 203 | | | 225 | | | |
| Lane Group Flow (vph) | 0 | 4 | 0 | 0 | 200 | 203 | 0 | 751 | 225 | 255 | 576 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 | 35.0 | 35.0 | 35.0 | 14.0 | 35.0 | |
| Minimum Split (s) | 13.5 | 13.5 | | 13.5 | 13.5 | 13.5 | 42.0 | 42.0 | 42.0 | 21.0 | 42.0 | |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | 21.0 | 48.0 | 48.0 | 48.0 | 21.0 | 69.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | 23.3% | 53.3% | 53.3% | 53.3% | 23.3% | 76.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.5 | | | 5.5 | 5.5 | | 7.0 | 7.0 | 7.0 | 7.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | None | | None | None | None | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effect Green (s) | | 15.0 | | | 15.0 | 15.0 | | 41.5 | 41.5 | 62.5 | 62.5 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | 0.17 | | 0.46 | 0.46 | 0.69 | 0.69 | |
| v/c Ratio | | 0.01 | | | 0.88 | 0.47 | | 0.88 | 0.26 | 0.67 | 0.45 | |
| Control Delay | | 0.0 | | | 74.9 | 8.9 | | 35.6 | 3.0 | 22.8 | 7.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 0.0 | | | 74.9 | 8.9 | | 35.6 | 3.0 | 22.8 | 7.5 | |
| LOS | | A | | | E | A | | D | A | C | A | |
| Approach Delay | | | | | 41.7 | | | 28.0 | | | 12.2 | |
| Approach LOS | | | | | D | | | C | | | B | |
| Queue Length 50th (ft) | | 0 | | | 112 | 0 | | 376 | 0 | 67 | 127 | |
| Queue Length 95th (ft) | | 0 | | | #234 | 58 | | #607 | 38 | 149 | 189 | |
| Internal Link Dist (ft) | | 862 | | | 898 | | | 913 | | | 1101 | |
| Turn Bay Length (ft) | | | | | | 135 | | | 320 | 415 | | |
| Base Capacity (vph) | | 379 | | | 233 | 440 | | 858 | 850 | 383 | 1293 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 0.01 | | | 0.86 | 0.46 | | 0.88 | 0.26 | 0.67 | 0.45 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 90 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions

Year 2027 - PM Peak Hour

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 24.5

Intersection LOS: C

Intersection Capacity Utilization 98.6%

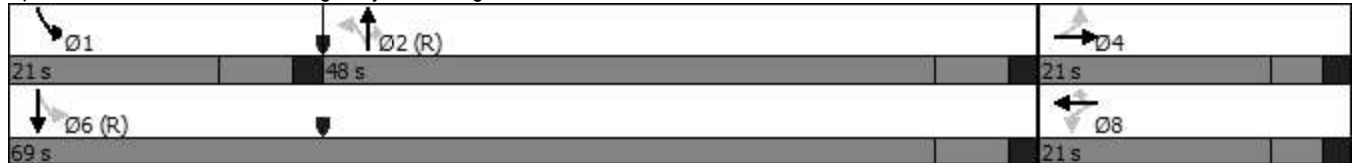
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: State Highway 83 & Stagecoach Road
























Timings

3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions

Year 2027 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  | |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 200 | 0 | 476 | 0 | 0 | 0 | 464 | 864 | 2 | 1 | 667 | 153 |
| Future Volume (vph) | 200 | 0 | 476 | 0 | 0 | 0 | 464 | 864 | 2 | 1 | 667 | 153 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 0 | 1863 | 0 | 1770 | 3539 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.757 | | | | | | 0.226 | | | 0.304 | | |
| Satd. Flow (perm) | 1410 | 1863 | 1583 | 0 | 1863 | 0 | 421 | 3539 | 0 | 566 | 3539 | 1583 |
| Satd. Flow (RTOR) | | | 493 | | | | | | | | | 166 |
| Lane Group Flow (vph) | 217 | 0 | 517 | 0 | 0 | 0 | 504 | 941 | 0 | 1 | 725 | 166 |
| Turn Type | Perm | | Perm | | | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 10.0 | 12.0 | | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | | 25.0 | 60.0 | | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | | 29.8% | 71.4% | | 41.7% | 41.7% | 41.7% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 3.0 | 5.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | | 6.0 | | 5.0 | 7.0 | | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | Max | Max | | Max | Max | Max |
| Act Effct Green (s) | 15.9 | | 15.9 | | | | 55.1 | 53.1 | | 29.0 | 29.0 | 29.0 |
| Actuated g/C Ratio | 0.19 | | 0.19 | | | | 0.67 | 0.65 | | 0.35 | 0.35 | 0.35 |
| v/c Ratio | 0.79 | | 0.73 | | | | 0.82 | 0.41 | | 0.01 | 0.58 | 0.25 |
| Control Delay | 53.2 | | 10.8 | | | | 25.0 | 7.9 | | 18.0 | 24.2 | 4.4 |
| Queue Delay | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 53.2 | | 10.8 | | | | 25.0 | 7.9 | | 18.0 | 24.2 | 4.4 |
| LOS | D | | B | | | | C | A | | B | C | A |
| Approach Delay | | 23.3 | | | | | | 13.9 | | | 20.5 | |
| Approach LOS | | C | | | | | | B | | | C | |
| Queue Length 50th (ft) | 107 | | 10 | | | | 141 | 117 | | 0 | 163 | 0 |
| Queue Length 95th (ft) | #208 | | 106 | | | | #314 | 154 | | 4 | 220 | 40 |
| Internal Link Dist (ft) | | 997 | | | 136 | | | 1617 | | | 2154 | |
| Turn Bay Length (ft) | 225 | | 285 | | | | 900 | | | 750 | | 730 |
| Base Capacity (vph) | 310 | | 732 | | | | 611 | 2289 | | 200 | 1252 | 667 |
| Starvation Cap Reductn | 0 | | 0 | | | | 0 | 0 | | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | | | | 0 | 0 | | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | | | | 0 | 0 | | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.70 | | 0.71 | | | | 0.82 | 0.41 | | 0.01 | 0.58 | 0.25 |

Intersection Summary

Cycle Length: 84

Actuated Cycle Length: 82

Natural Cycle: 60

Control Type: Actuated-Uncoordinated






Maximum v/c Ratio: 0.82

Timings 3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2027 - PM Peak Hour

Intersection Signal Delay: 18.1 Intersection LOS: B
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: State Highway 83 & North Gate Boulevard

| | | | |
|--|--|--|--|
|  Ø2 60 s | |  Ø4 24 s | |
|  Ø5 25 s |  Ø6 35 s |  Ø8 24 s | |

Timings
4: State Highway 83 & Shoup Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | ↑↑ | ↗ | ↘ | ↑↑ | ↙ | ↖ |
| Traffic Volume (vph) | 1315 | 324 | 212 | 1022 | 160 | 100 |
| Future Volume (vph) | 1315 | 324 | 212 | 1022 | 160 | 100 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | | | 0.085 | | | |
| Satd. Flow (perm) | 3539 | 1583 | 158 | 3539 | 1863 | 1583 |
| Satd. Flow (RTOR) | | 352 | | | | 109 |
| Lane Group Flow (vph) | 1429 | 352 | 230 | 1111 | 174 | 109 |
| Turn Type | NA | Perm | pm+pt | NA | Perm | Perm |
| Protected Phases | 2 | | 1 | 6 | | |
| Permitted Phases | | 2 | 6 | | 8 | 8 |
| Detector Phase | 2 | 2 | 1 | 6 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | 4.0 | 20.0 | 4.0 | 4.0 |
| Minimum Split (s) | 27.5 | 27.5 | 9.0 | 27.5 | 10.0 | 10.0 |
| Total Split (s) | 45.0 | 45.0 | 20.0 | 65.0 | 30.0 | 30.0 |
| Total Split (%) | 47.4% | 47.4% | 21.1% | 68.4% | 31.6% | 31.6% |
| Yellow Time (s) | 5.5 | 5.5 | 3.0 | 5.5 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.5 | 7.5 | 5.0 | 7.5 | 6.0 | 6.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | Max | Max | None | Max | None | None |
| Act Effect Green (s) | 41.8 | 41.8 | 60.1 | 57.6 | 13.0 | 13.0 |
| Actuated g/C Ratio | 0.50 | 0.50 | 0.71 | 0.68 | 0.15 | 0.15 |
| v/c Ratio | 0.81 | 0.37 | 0.72 | 0.46 | 0.60 | 0.32 |
| Control Delay | 24.4 | 3.1 | 29.0 | 7.3 | 42.2 | 9.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 24.4 | 3.1 | 29.0 | 7.3 | 42.2 | 9.2 |
| LOS | C | A | C | A | D | A |
| Approach Delay | 20.2 | | | 11.0 | 29.5 | |
| Approach LOS | C | | | B | C | |
| Queue Length 50th (ft) | 318 | 0 | 61 | 121 | 87 | 0 |
| Queue Length 95th (ft) | #561 | 49 | 145 | 196 | 149 | 42 |
| Internal Link Dist (ft) | 1042 | | | 1734 | 675 | |
| Turn Bay Length (ft) | | 710 | 980 | | | 500 |
| Base Capacity (vph) | 1759 | 964 | 400 | 2422 | 532 | 530 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.81 | 0.37 | 0.57 | 0.46 | 0.33 | 0.21 |
| Intersection Summary | | | | | | |
| Cycle Length: 95 | | | | | | |
| Actuated Cycle Length: 84.1 | | | | | | |
| Natural Cycle: 60 | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | |
| Maximum v/c Ratio: 0.81 | | | | | | |

Timings

4: State Highway 83 & Shoup Road

Total Traffic Conditions

Year 2027 - PM Peak Hour

Intersection Signal Delay: 17.4

Intersection LOS: B

Intersection Capacity Utilization 72.4%





ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: State Highway 83 & Shoup Road

















| | | |
|--|--|--|
|  Ø1 |  Ø2 | |
| 20 s | 45 s | |
|  Ø6 | |  Ø8 |
| 65 s | | 30 s |

Timings

5: Black Forest Road & Shoup Road

Total Traffic Conditions

Year 2027 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 110 | 169 | 107 | 19 | 52 | 45 | 54 | 335 | 23 | 47 | 286 | 95 |
| Future Volume (vph) | 110 | 169 | 107 | 19 | 52 | 45 | 54 | 335 | 23 | 47 | 286 | 95 |
| Satd. Flow (prot) | 0 | 1769 | 0 | 0 | 1752 | 0 | 0 | 1835 | 0 | 0 | 1798 | 0 |
| Flt Permitted | | 0.870 | | | 0.898 | | | 0.892 | | | 0.914 | |
| Satd. Flow (perm) | 0 | 1561 | 0 | 0 | 1586 | 0 | 0 | 1648 | 0 | 0 | 1651 | 0 |
| Satd. Flow (RTOR) | | 23 | | | 37 | | | 5 | | | 25 | |
| Lane Group Flow (vph) | 0 | 420 | 0 | 0 | 127 | 0 | 0 | 448 | 0 | 0 | 465 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Minimum Split (s) | 14.0 | 14.0 | | 14.0 | 14.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Total Split (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 55.0 | 55.0 | | 55.0 | 55.0 | |
| Total Split (%) | 38.9% | 38.9% | | 38.9% | 38.9% | | 61.1% | 61.1% | | 61.1% | 61.1% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Act Effect Green (s) | | 25.6 | | | 25.6 | | | 49.2 | | | 49.2 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.57 | | | 0.57 | |
| v/c Ratio | | 0.88 | | | 0.26 | | | 0.48 | | | 0.49 | |
| Control Delay | | 48.7 | | | 17.6 | | | 14.0 | | | 13.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 48.7 | | | 17.6 | | | 14.0 | | | 13.6 | |
| LOS | | D | | | B | | | B | | | B | |
| Approach Delay | | 48.7 | | | 17.6 | | | 14.0 | | | 13.6 | |
| Approach LOS | | D | | | B | | | B | | | B | |
| Queue Length 50th (ft) | | 206 | | | 37 | | | 147 | | | 147 | |
| Queue Length 95th (ft) | | #363 | | | 79 | | | 228 | | | 230 | |
| Internal Link Dist (ft) | | 965 | | | 1070 | | | 1292 | | | 16527 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 538 | | | 556 | | | 935 | | | 945 | |
| 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 | | 0.78 | | | 0.23 | | | 0.48 | | | 0.49 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 86.8 | | | | | | | | | | | | |
| Natural Cycle: 55 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.88 | | | | | | | | | | | | |





Timings

5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

Intersection Signal Delay: 24.2 Intersection LOS: C
Intersection Capacity Utilization 69.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Black Forest Road & Shoup Road

| | |
|--|---|
|  Ø2 |  Ø4 |
| 55 s | 35 s |
|  Ø6 |  Ø8 |
| 55 s | 35 s |

HCM 6th TWSC
6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions
Year 2027 - PM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | | ↕ | ↕ |
| Traffic Vol, veh/h | 93 | 2 | 188 | 2 | 2 | 2 | 249 | 129 | 0 | 6 | 129 | 116 |
| Future Vol, veh/h | 93 | 2 | 188 | 2 | 2 | 2 | 249 | 129 | 0 | 6 | 129 | 116 |
| 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 | - | - | - | - | - | - | 195 | - | - | - | - | 195 |
| 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 | 101 | 2 | 204 | 2 | 2 | 2 | 271 | 140 | 0 | 7 | 140 | 126 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 838 | 836 | 140 | 1002 | 962 | 140 | 266 | 0 | 0 | 140 | 0 | 0 |
| Stage 1 | 154 | 154 | - | 682 | 682 | - | - | - | - | - | - | - |
| Stage 2 | 684 | 682 | - | 320 | 280 | - | - | - | - | - | - | - |
| 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 | 286 | 303 | 908 | 221 | 256 | 908 | 1298 | - | - | 1443 | - | - |
| Stage 1 | 848 | 770 | - | 440 | 450 | - | - | - | - | - | - | - |
| Stage 2 | 439 | 450 | - | 692 | 679 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 237 | 238 | 908 | 142 | 201 | 908 | 1298 | - | - | 1443 | - | - |
| Mov Cap-2 Maneuver | 237 | 238 | - | 142 | 201 | - | - | - | - | - | - | - |
| Stage 1 | 671 | 765 | - | 348 | 356 | - | - | - | - | - | - | - |
| Stage 2 | 344 | 356 | - | 532 | 675 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 26.5 | | 21.2 | | 5.6 | | 0.2 | |
| HCM LOS | D | | C | | | | | |



















| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1298 | - | - | 466 | 229 | 1443 | - |
| HCM Lane V/C Ratio | 0.209 | - | - | 0.66 | 0.028 | 0.005 | - |
| HCM Control Delay (s) | 8.5 | - | - | 26.5 | 21.2 | 7.5 | 0 |
| HCM Lane LOS | A | - | - | D | C | A | A |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 4.7 | 0.1 | 0 | - |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2027 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | |  |  | | |  |  |
| Traffic Volume (vph) | 93 | 2 | 188 | 2 | 2 | 2 | 249 | 129 | 0 | 6 | 129 | 116 |
| Future Volume (vph) | 93 | 2 | 188 | 2 | 2 | 2 | 249 | 129 | 0 | 6 | 129 | 116 |
| Satd. Flow (prot) | 0 | 1668 | 0 | 0 | 1750 | 0 | 1770 | 1863 | 0 | 0 | 1859 | 1583 |
| Flt Permitted | | 0.888 | | | 0.898 | | 0.520 | | | | 0.987 | |
| Satd. Flow (perm) | 0 | 1505 | 0 | 0 | 1597 | 0 | 969 | 1863 | 0 | 0 | 1839 | 1583 |
| Satd. Flow (RTOR) | | 172 | | | 2 | | | | | | | 155 |
| Lane Group Flow (vph) | 0 | 307 | 0 | 0 | 6 | 0 | 271 | 140 | 0 | 0 | 147 | 126 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 10.5 | | 10.5 | 10.5 | | 11.0 | 14.0 | | 14.0 | 14.0 | 14.0 |
| Total Split (s) | 24.0 | 24.0 | | 24.0 | 24.0 | | 16.0 | 36.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (%) | 40.0% | 40.0% | | 40.0% | 40.0% | | 26.7% | 60.0% | | 33.3% | 33.3% | 33.3% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.5 | | | 5.5 | | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | | 11.6 | | | 11.6 | | 36.9 | 36.9 | | | 21.8 | 21.8 |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | 0.62 | 0.62 | | | 0.36 | 0.36 |
| v/c Ratio | | 0.72 | | | 0.02 | | 0.38 | 0.12 | | | 0.22 | 0.19 |
| Control Delay | | 19.2 | | | 14.2 | | 8.2 | 6.5 | | | 17.2 | 3.5 |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | 19.2 | | | 14.2 | | 8.2 | 6.5 | | | 17.2 | 3.5 |
| LOS | | B | | | B | | A | A | | | B | A |
| Approach Delay | | 19.2 | | | 14.2 | | | 7.6 | | | 10.9 | |
| Approach LOS | | B | | | B | | | A | | | B | |
| Queue Length 50th (ft) | | 44 | | | 1 | | 37 | 18 | | | 36 | 0 |
| Queue Length 95th (ft) | | 100 | | | 8 | | 96 | 51 | | | 88 | 26 |
| Internal Link Dist (ft) | | 750 | | | 806 | | | 16527 | | | 4563 | |
| Turn Bay Length (ft) | | | | | | | 195 | | | | | 195 |
| Base Capacity (vph) | | 583 | | | 493 | | 734 | 1146 | | | 667 | 672 |
| Starvation Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | | 0.53 | | | 0.01 | | 0.37 | 0.12 | | | 0.22 | 0.19 |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 60 | | | | | | | | | | | | |
| Actuated Cycle Length: 60 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 45 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2027 - PM Peak Hour

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 12.1

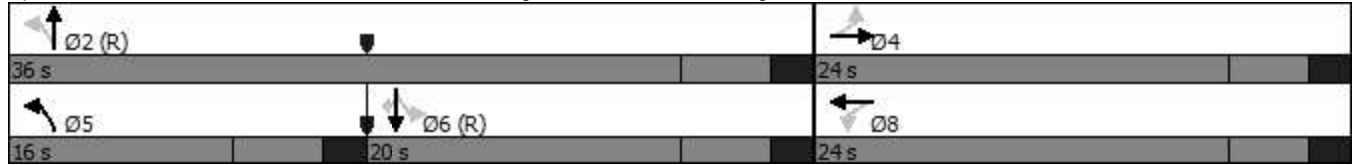
Intersection LOS: B

Intersection Capacity Utilization 57.5%

ICU Level of Service B










Analysis Period (min) 15

Splits and Phases: 6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle



HCM 6th TWSC
7: Ridge Run Road/Black Forest Road & Hodgen Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| 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 | 68 | 495 | 20 | 2 | 280 | 13 | 19 | 2 | 5 | 31 | 1 | 24 |
| Future Vol, veh/h | 68 | 495 | 20 | 2 | 280 | 13 | 19 | 2 | 5 | 31 | 1 | 24 |
| 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 | 400 | - | 335 | 280 | - | - | - | - | - | 65 | - | - |
| 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 | 74 | 538 | 22 | 2 | 304 | 14 | 21 | 2 | 5 | 34 | 1 | 26 |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 318 | 0 | 0 | 560 | 0 | 0 | 1015 | 1008 | 538 | 1016 | 1023 | 311 |
| Stage 1 | - | - | - | - | - | - | 686 | 686 | - | 315 | 315 | - |
| Stage 2 | - | - | - | - | - | - | 329 | 322 | - | 701 | 708 | - |
| 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 | 1242 | - | - | 1011 | - | - | 217 | 240 | 543 | 216 | 236 | 729 |
| Stage 1 | - | - | - | - | - | - | 438 | 448 | - | 696 | 656 | - |
| Stage 2 | - | - | - | - | - | - | 684 | 651 | - | 429 | 438 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1242 | - | - | 1011 | - | - | 199 | 225 | 543 | 202 | 221 | 729 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 199 | 225 | - | 202 | 221 | - |
| Stage 1 | - | - | - | - | - | - | 412 | 421 | - | 654 | 655 | - |
| Stage 2 | - | - | - | - | - | - | 657 | 650 | - | 397 | 412 | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.9 | | | 0.1 | | | 22.3 | | | 19.3 | | |
| HCM LOS | | | | | | | C | | | C | | |
| Minor Lane/Major Mvmt | NBLn1 NBLn2 | | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | | |
| Capacity (veh/h) | 199 | 387 | 1242 | - | - | 1011 | - | - | 202 | 668 | | |
| HCM Lane V/C Ratio | 0.104 | 0.02 | 0.06 | - | - | 0.002 | - | - | 0.167 | 0.041 | | |
| HCM Control Delay (s) | 25.2 | 14.5 | 8.1 | - | - | 8.6 | - | - | 26.4 | 10.6 | | |
| HCM Lane LOS | D | B | A | - | - | A | - | - | D | B | | |
| HCM 95th %tile Q(veh) | 0.3 | 0.1 | 0.2 | - | - | 0 | - | - | 0.6 | 0.1 | | |

HCM 6th TWSC
8: Black Forest Road/Black Forrest Road & Hodgen Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|-------|--------|-------|-------|
| Int Delay, s/veh | 9.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↗ | ↖ | ↗ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 466 | 176 | 73 | 248 | 0 | 125 | 1 | 98 | 0 | 0 | 0 |
| Future Vol, veh/h | 2 | 466 | 176 | 73 | 248 | 0 | 125 | 1 | 98 | 0 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 260 | 290 | - | - | - | - | - | - | - | - |
| 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 | 2 | 507 | 191 | 79 | 270 | 0 | 136 | 1 | 107 | 0 | 0 | 0 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 270 | 0 | 0 | 698 | 0 | 0 | 939 | 939 | 507 | 1089 | 1130 | 270 |
| Stage 1 | - | - | - | - | - | - | 511 | 511 | - | 428 | 428 | - |
| Stage 2 | - | - | - | - | - | - | 428 | 428 | - | 661 | 702 | - |
| 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 | 1293 | - | - | 898 | - | - | 244 | 264 | 566 | 193 | 204 | 769 |
| Stage 1 | - | - | - | - | - | - | 545 | 537 | - | 605 | 585 | - |
| Stage 2 | - | - | - | - | - | - | 605 | 585 | - | 452 | 440 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1293 | - | - | 898 | - | - | 227 | 240 | 566 | 145 | 185 | 769 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 227 | 240 | - | 145 | 185 | - |
| Stage 1 | - | - | - | - | - | - | 543 | 535 | - | 603 | 534 | - |
| Stage 2 | - | - | - | - | - | - | 552 | 534 | - | 365 | 439 | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0 | | | 2.1 | | | 49.4 | | | 0 | | |
| HCM LOS | | | | | | | E | | | A | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 308 | 1293 | - | - | 898 | - | - | - | | | | |
| HCM Lane V/C Ratio | 0.791 | 0.002 | - | - | 0.088 | - | - | - | | | | |
| HCM Control Delay (s) | 49.4 | 7.8 | 0 | - | 9.4 | - | - | 0 | | | | |
| HCM Lane LOS | E | A | A | - | A | - | - | A | | | | |
| HCM 95th %tile Q(veh) | 6.3 | 0 | - | - | 0.3 | - | - | - | | | | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 5.4 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 430 | 342 | 67 |
| Demand Flow Rate, veh/h | 439 | 349 | 69 |
| Vehicles Circulating, veh/h | 44 | 34 | 397 |
| Vehicles Exiting, veh/h | 339 | 432 | 86 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 5.8 | 5.0 | 4.7 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 439 | 349 | 69 |
| Cap Entry Lane, veh/h | 1319 | 1333 | 920 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.971 |
| Flow Entry, veh/h | 430 | 342 | 67 |
| Cap Entry, veh/h | 1293 | 1306 | 894 |
| V/C Ratio | 0.333 | 0.262 | 0.075 |
| Control Delay, s/veh | 5.8 | 5.0 | 4.7 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 1 | 1 | 0 |

























HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Total Traffic Conditions
Year 2027 - PM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 5.6 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 350 | 49 | 475 |
| Demand Flow Rate, veh/h | 357 | 50 | 484 |
| Vehicles Circulating, veh/h | 40 | 426 | 18 |
| Vehicles Exiting, veh/h | 436 | 76 | 379 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 5.1 | 4.6 | 6.0 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 357 | 50 | 484 |
| Cap Entry Lane, veh/h | 1325 | 894 | 1355 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h | 350 | 49 | 475 |
| Cap Entry, veh/h | 1299 | 876 | 1330 |
| V/C Ratio | 0.269 | 0.056 | 0.357 |
| Control Delay, s/veh | 5.1 | 4.6 | 6.0 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 2 |

Timings
1: State Highway 83 & Hodgen Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 155 | 153 | 115 | 435 | 293 | 398 | 156 | 523 | 130 | 198 | 683 | 98 |
| Future Volume (vph) | 155 | 153 | 115 | 435 | 293 | 398 | 156 | 523 | 130 | 198 | 683 | 98 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1827 | 0 |
| Flt Permitted | 0.440 | | | 0.629 | | | 0.085 | | | 0.183 | | |
| Satd. Flow (perm) | 820 | 1863 | 1583 | 1172 | 1863 | 1583 | 158 | 1863 | 1583 | 341 | 1827 | 0 |
| Satd. Flow (RTOR) | | | 125 | | | 267 | | | 141 | | 7 | |
| Lane Group Flow (vph) | 168 | 166 | 125 | 473 | 318 | 433 | 170 | 568 | 141 | 215 | 849 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 35.0 | 35.0 | 6.0 | 35.0 | |
| Minimum Split (s) | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 | 42.0 | 42.0 | 12.0 | 42.0 | |
| Total Split (s) | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 12.0 | 54.0 | 54.0 | 15.0 | 57.0 | |
| Total Split (%) | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 10.0% | 45.0% | 45.0% | 12.5% | 47.5% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 7.0 | |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | |
| Act Effct Green (s) | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 54.0 | 47.0 | 47.0 | 60.0 | 50.0 | |
| Actuated g/C Ratio | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.45 | 0.39 | 0.39 | 0.50 | 0.42 | |
| v/c Ratio | 0.55 | 0.24 | 0.19 | 1.08 | 0.46 | 0.57 | 1.13 | 0.78 | 0.20 | 0.78 | 1.11 | |
| Control Delay | 37.7 | 26.9 | 5.0 | 102.0 | 30.9 | 14.0 | 136.5 | 40.8 | 4.5 | 37.1 | 100.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 37.7 | 26.9 | 5.0 | 102.0 | 30.9 | 14.0 | 136.5 | 40.8 | 4.5 | 37.1 | 100.6 | |
| LOS | D | C | A | F | C | B | F | D | A | D | F | |
| Approach Delay | | 24.9 | | | 52.4 | | | 53.5 | | | 87.8 | |
| Approach LOS | | C | | | D | | | D | | | F | |
| Queue Length 50th (ft) | 101 | 87 | 0 | ~408 | 184 | 94 | ~100 | 380 | 0 | 87 | ~751 | |
| Queue Length 95th (ft) | 179 | 141 | 39 | #616 | 269 | 198 | #244 | 528 | 40 | #166 | #1000 | |
| Internal Link Dist (ft) | | 824 | | | 1611 | | | 1078 | | | 1286 | |
| Turn Bay Length (ft) | 420 | | 420 | 350 | | 350 | 120 | | 650 | 525 | | |
| Base Capacity (vph) | 307 | 698 | 671 | 439 | 698 | 760 | 151 | 729 | 705 | 277 | 765 | |
| 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 | 0.55 | 0.24 | 0.19 | 1.08 | 0.46 | 0.57 | 1.13 | 0.78 | 0.20 | 0.78 | 1.11 | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.13

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2042 - AM Peak Hour

Intersection Signal Delay: 59.6

Intersection LOS: E

Intersection Capacity Utilization 103.5%

ICU Level of Service G

Analysis Period (min) 15







~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.







Queue shown is maximum after two cycles.

Splits and Phases: 1: State Highway 83 & Hodgen Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 |  Ø4 |
| 15 s | 54 s | 51 s |
|  Ø5 |  Ø6 |  Ø8 |
| 12 s | 57 s | 51 s |

HCM 6th TWSC
2: State Highway 83 & Stagecoach Road




















Total Traffic Conditions
Year 2042 - AM Peak Hour

| Intersection | | | | | | | | | | | | |
|----------------------------|--------|---|----------|----------------------------|---|------|--------|---|------|---|---|---|
| Int Delay, s/veh | 59.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | |  |  |  |
| Traffic Vol, veh/h | 2 | 2 | 7 | 155 | 0 | 154 | 0 | 675 | 130 | 96 | 1132 | 2 |
| Future Vol, veh/h | 2 | 2 | 7 | 155 | 0 | 154 | 0 | 675 | 130 | 96 | 1132 | 2 |
| 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 | - | - | - | - | - | 135 | - | - | 320 | 415 | - | - |
| 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 | 2 | 2 | 8 | 168 | 0 | 167 | 0 | 734 | 141 | 104 | 1230 | 2 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
| Conflicting Flow All | 1806 | 2314 | 616 | 1558 | 2174 | 367 | 1232 | 0 | 0 | 875 | 0 | 0 |
| Stage 1 | 1439 | 1439 | - | 734 | 734 | - | - | - | - | - | - | - |
| Stage 2 | 367 | 875 | - | 824 | 1440 | - | - | - | - | - | - | - |
| 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 | 50 | 37 | 433 | ~ 76 | 46 | 630 | 561 | - | - | 767 | - | - |
| Stage 1 | 140 | 197 | - | 378 | 424 | - | - | - | - | - | - | - |
| Stage 2 | 625 | 365 | - | 333 | 196 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 33 | 32 | 433 | ~ 64 | 40 | 630 | 561 | - | - | 767 | - | - |
| Mov Cap-2 Maneuver | 33 | 32 | - | ~ 64 | 40 | - | - | - | - | - | - | - |
| Stage 1 | 140 | 170 | - | 378 | 424 | - | - | - | - | - | - | - |
| Stage 2 | 459 | 365 | - | 279 | 169 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | |
| HCM Control Delay, s | 58.5 | | \$ 446.5 | | 0 | | 0.8 | | | | | |
| HCM LOS | F | | F | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1WBLn2 | SBL | SBT | SBR | | | | | |
| Capacity (veh/h) | 561 | - | - | 79 64 630 | 767 | - | - | | | | | |
| HCM Lane V/C Ratio | - | - | - | 0.151 2.632 0.266 | 0.136 | - | - | | | | | |
| HCM Control Delay (s) | 0 | - | - | 58.5\$ 877.5 12.8 | 10.4 | - | - | | | | | |
| HCM Lane LOS | A | - | - | F F B | B | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.5 16.8 1.1 | 0.5 | - | - | | | | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | | | *: All major volume in platoon | | | | |

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  |  | |  |  |  |  | |
| Traffic Volume (vph) | 2 | 2 | 7 | 155 | 0 | 154 | 0 | 675 | 130 | 96 | 1132 | 2 |
| Future Volume (vph) | 2 | 2 | 7 | 155 | 0 | 154 | 0 | 675 | 130 | 96 | 1132 | 2 |
| Satd. Flow (prot) | 0 | 1682 | 0 | 0 | 1770 | 1583 | 0 | 3539 | 1583 | 1770 | 3539 | 0 |
| Flt Permitted | | 0.942 | | | 0.750 | | | | | 0.278 | | |
| Satd. Flow (perm) | 0 | 1597 | 0 | 0 | 1397 | 1583 | 0 | 3539 | 1583 | 518 | 3539 | 0 |
| Satd. Flow (RTOR) | | 8 | | | | 167 | | | 141 | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 168 | 167 | 0 | 734 | 141 | 104 | 1232 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 | 35.0 | 35.0 | 35.0 | 14.0 | 35.0 | |
| Minimum Split (s) | 13.5 | 13.5 | | 13.5 | 13.5 | 13.5 | 42.0 | 42.0 | 42.0 | 21.0 | 42.0 | |
| Total Split (s) | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 | 42.0 | 42.0 | 42.0 | 21.0 | 63.0 | |
| Total Split (%) | 21.3% | 21.3% | | 21.3% | 21.3% | 21.3% | 52.5% | 52.5% | 52.5% | 26.3% | 78.8% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.5 | | | 5.5 | 5.5 | | 7.0 | 7.0 | 7.0 | 7.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | None | | None | None | None | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effect Green (s) | | 11.3 | | | 11.3 | 11.3 | | 39.4 | 39.4 | 56.2 | 56.2 | |
| Actuated g/C Ratio | | 0.14 | | | 0.14 | 0.14 | | 0.49 | 0.49 | 0.70 | 0.70 | |
| v/c Ratio | | 0.05 | | | 0.86 | 0.46 | | 0.42 | 0.17 | 0.18 | 0.50 | |
| Control Delay | | 21.0 | | | 71.7 | 10.0 | | 15.5 | 3.2 | 4.6 | 6.3 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 21.0 | | | 71.7 | 10.0 | | 15.5 | 3.2 | 4.6 | 6.3 | |
| LOS | | C | | | E | A | | B | A | A | A | |
| Approach Delay | | 21.0 | | | 40.9 | | | 13.5 | | | 6.2 | |
| Approach LOS | | C | | | D | | | B | | | A | |
| Queue Length 50th (ft) | | 2 | | | 83 | 0 | | 132 | 0 | 14 | 124 | |
| Queue Length 95th (ft) | | 16 | | | #190 | 52 | | 180 | 30 | 27 | 163 | |
| Internal Link Dist (ft) | | 862 | | | 898 | | | 913 | | | 1101 | |
| Turn Bay Length (ft) | | | | | | 135 | | | 320 | 415 | | |
| Base Capacity (vph) | | 236 | | | 200 | 370 | | 1743 | 851 | 582 | 2487 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 0.05 | | | 0.84 | 0.45 | | 0.42 | 0.17 | 0.18 | 0.50 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 80 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings 2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 13.3

Intersection LOS: B

Intersection Capacity Utilization 92.0%







ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.























Splits and Phases: 2: State Highway 83 & Stagecoach Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø4 |
| 21 s | 42 s | 17 s |
|  Ø6 (R) |  Ø7 |  Ø8 |
| 63 s | | 17 s |

Timings

3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  | |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 114 | 0 | 582 | 0 | 0 | 0 | 934 | 748 | 0 | 0 | 1297 | 279 |
| Future Volume (vph) | 114 | 0 | 582 | 0 | 0 | 0 | 934 | 748 | 0 | 0 | 1297 | 279 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 0 | 1863 | 0 | 1770 | 3539 | 1863 | 1863 | 3539 | 1583 |
| Flt Permitted | 0.757 | | | | | | 0.125 | | | | | |
| Satd. Flow (perm) | 1410 | 1863 | 1583 | 0 | 1863 | 0 | 233 | 3539 | 1863 | 1863 | 3539 | 1583 |
| Satd. Flow (RTOR) | | | 593 | | | | | | | | | 235 |
| Lane Group Flow (vph) | 124 | 0 | 633 | 0 | 0 | 0 | 1015 | 813 | 0 | 0 | 1410 | 303 |
| Turn Type | Perm | | Perm | | | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 10.0 | 12.0 | 12.0 | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | | 37.0 | 71.0 | 71.0 | 34.0 | 34.0 | 34.0 |
| Total Split (%) | 15.5% | 15.5% | 15.5% | 15.5% | 15.5% | | 44.0% | 84.5% | 84.5% | 40.5% | 40.5% | 40.5% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 3.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | | 6.0 | | 5.0 | 7.0 | 7.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 7.0 | | 7.0 | | | | 66.0 | 64.0 | | | 28.0 | 28.0 |
| Actuated g/C Ratio | 0.08 | | 0.08 | | | | 0.79 | 0.76 | | | 0.33 | 0.33 |
| v/c Ratio | 1.06 | | 0.94 | | | | 1.32 | 0.30 | | | 1.20 | 0.44 |
| Control Delay | 141.2 | | 28.8 | | | | 176.2 | 3.4 | | | 124.6 | 7.9 |
| Queue Delay | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 141.2 | | 28.8 | | | | 176.2 | 3.4 | | | 124.6 | 7.9 |
| LOS | F | | C | | | | F | A | | | F | A |
| Approach Delay | | 47.3 | | | | | | 99.3 | | | 104.0 | |
| Approach LOS | | D | | | | | | F | | | F | |
| Queue Length 50th (ft) | ~73 | | 20 | | | | ~653 | 53 | | | ~480 | 25 |
| Queue Length 95th (ft) | #179 | | #216 | | | | #889 | 72 | | | #610 | 86 |
| Internal Link Dist (ft) | | 997 | | | 136 | | | 1617 | | | 2154 | |
| Turn Bay Length (ft) | 225 | | 285 | | | | 900 | | | | | 730 |
| Base Capacity (vph) | 117 | | 675 | | | | 768 | 2696 | | | 1179 | 684 |
| Starvation Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | 1.06 | | 0.94 | | | | 1.32 | 0.30 | | | 1.20 | 0.44 |

Intersection Summary

Cycle Length: 84

Actuated Cycle Length: 84

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.32

Timings 3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 92.0

Intersection LOS: F

Intersection Capacity Utilization 108.1%

ICU Level of Service G

Analysis Period (min) 15






~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: State Highway 83 & North Gate Boulevard

| | | | |
|---|--|---|--|
|  71 s | |  13 s | |
|  37 s | |  34 s | |
| | |  13 s | |

Timings

4: State Highway 83 & Shoup Road

Total Traffic Conditions

Year 2042 - AM Peak Hour

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | ↑↑↑ | ↗ | ↘ | ↑↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 1474 | 191 | 126 | 1806 | 544 | 372 |
| Future Volume (vph) | 1474 | 191 | 126 | 1806 | 544 | 372 |
| Satd. Flow (prot) | 5085 | 1583 | 1770 | 5085 | 1770 | 1583 |
| Flt Permitted | | | 0.099 | | | |
| Satd. Flow (perm) | 5085 | 1583 | 184 | 5085 | 1863 | 1583 |
| Satd. Flow (RTOR) | | 208 | | | | 137 |
| Lane Group Flow (vph) | 1602 | 208 | 137 | 1963 | 591 | 404 |
| Turn Type | NA | Perm | pm+pt | NA | Perm | Perm |
| Protected Phases | 2 | | 1 | 6 | | |
| Permitted Phases | | 2 | 6 | | 8 | 8 |
| Detector Phase | 2 | 2 | 1 | 6 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | 4.0 | 20.0 | 4.0 | 4.0 |
| Minimum Split (s) | 27.5 | 27.5 | 9.0 | 27.5 | 10.0 | 10.0 |
| Total Split (s) | 43.0 | 43.0 | 10.0 | 53.0 | 42.0 | 42.0 |
| Total Split (%) | 45.3% | 45.3% | 10.5% | 55.8% | 44.2% | 44.2% |
| Yellow Time (s) | 5.5 | 5.5 | 3.0 | 5.5 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.5 | 7.5 | 5.0 | 7.5 | 6.0 | 6.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | Max | Max | None | Max | None | None |
| Act Effect Green (s) | 35.6 | 35.6 | 48.1 | 45.6 | 32.3 | 32.3 |
| Actuated g/C Ratio | 0.39 | 0.39 | 0.53 | 0.50 | 0.35 | 0.35 |
| v/c Ratio | 0.81 | 0.28 | 0.75 | 0.77 | 0.90 | 0.62 |
| Control Delay | 29.6 | 4.1 | 39.9 | 22.1 | 46.2 | 20.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 29.6 | 4.1 | 39.9 | 22.1 | 46.2 | 20.2 |
| LOS | C | A | D | C | D | C |
| Approach Delay | 26.7 | | | 23.2 | 35.7 | |
| Approach LOS | C | | | C | D | |
| Queue Length 50th (ft) | 318 | 0 | 42 | 354 | 319 | 124 |
| Queue Length 95th (ft) | 380 | 44 | #126 | 419 | #506 | 222 |
| Internal Link Dist (ft) | 1042 | | | 1734 | 675 | |
| Turn Bay Length (ft) | | 710 | 980 | | | 500 |
| Base Capacity (vph) | 1978 | 742 | 183 | 2535 | 734 | 707 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.81 | 0.28 | 0.75 | 0.77 | 0.81 | 0.57 |
| Intersection Summary | | | | | | |
| Cycle Length: 95 | | | | | | |
| Actuated Cycle Length: 91.5 | | | | | | |
| Natural Cycle: 80 | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | |
| Maximum v/c Ratio: 0.90 | | | | | | |

Timings

4: State Highway 83 & Shoup Road

Total Traffic Conditions

Year 2042 - AM Peak Hour

Intersection Signal Delay: 27.0

Intersection LOS: C

Intersection Capacity Utilization 81.0%





ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

















Splits and Phases: 4: State Highway 83 & Shoup Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 | |
| 10 s | 43 s | |
|  Ø6 |  Ø8 | |
| 53 s | 42 s | |

Timings

5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 123 | 96 | 70 | 25 | 199 | 30 | 152 | 316 | 16 | 33 | 368 | 205 |
| Future Volume (vph) | 123 | 96 | 70 | 25 | 199 | 30 | 152 | 316 | 16 | 33 | 368 | 205 |
| Satd. Flow (prot) | 0 | 1763 | 0 | 0 | 1824 | 0 | 0 | 1827 | 0 | 0 | 1772 | 0 |
| Flt Permitted | | 0.646 | | | 0.947 | | | 0.621 | | | 0.954 | |
| Satd. Flow (perm) | 0 | 1164 | 0 | 0 | 1736 | 0 | 0 | 1152 | 0 | 0 | 1695 | 0 |
| Satd. Flow (RTOR) | | 19 | | | 8 | | | 3 | | | 45 | |
| Lane Group Flow (vph) | 0 | 314 | 0 | 0 | 276 | 0 | 0 | 525 | 0 | 0 | 659 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Minimum Split (s) | 14.0 | 14.0 | | 14.0 | 14.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Total Split (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 55.0 | 55.0 | | 55.0 | 55.0 | |
| Total Split (%) | 38.9% | 38.9% | | 38.9% | 38.9% | | 61.1% | 61.1% | | 61.1% | 61.1% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Act Effect Green (s) | | 24.8 | | | 24.8 | | | 49.2 | | | 49.2 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.57 | | | 0.57 | |
| v/c Ratio | | 0.90 | | | 0.55 | | | 0.80 | | | 0.67 | |
| Control Delay | | 57.4 | | | 29.2 | | | 27.1 | | | 16.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 57.4 | | | 29.2 | | | 27.1 | | | 16.9 | |
| LOS | | E | | | C | | | C | | | B | |
| Approach Delay | | 57.4 | | | 29.2 | | | 27.1 | | | 16.9 | |
| Approach LOS | | E | | | C | | | C | | | B | |
| Queue Length 50th (ft) | | 153 | | | 121 | | | 228 | | | 236 | |
| Queue Length 95th (ft) | | #297 | | | 197 | | | #446 | | | 373 | |
| Internal Link Dist (ft) | | 965 | | | 1070 | | | 1292 | | | 16527 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 406 | | | 592 | | | 659 | | | 988 | |
| 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 | | 0.77 | | | 0.47 | | | 0.80 | | | 0.67 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 86 | | | | | | | | | | | | |
| Natural Cycle: 60 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.90 | | | | | | | | | | | | |





Timings

5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 109.5% ICU Level of Service H
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Black Forest Road & Shoup Road

| | |
|--|---|
|  Ø2 |  Ø4 |
| 55 s | 35 s |
|  Ø6 |  Ø8 |
| 55 s | 35 s |

HCM 6th TWSC
6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions
Year 2042 - AM Peak Hour



















| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|-------|-------|--------|-------|------|--------|-------|------|------|
| Int Delay, s/veh | 6.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | | ↖ | | ↕ | |
| Traffic Vol, veh/h | 74 | 0 | 150 | 9 | 2 | 4 | 105 | 150 | 2 | 2 | 206 | 52 |
| Future Vol, veh/h | 74 | 0 | 150 | 9 | 2 | 4 | 105 | 150 | 2 | 2 | 206 | 52 |
| 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 | - | - | - | - | - | - | 195 | - | - | - | - | 195 |
| 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 | 80 | 0 | 163 | 10 | 2 | 4 | 114 | 163 | 2 | 2 | 224 | 57 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | | Major1 | | | Major2 | | | |
| Conflicting Flow All | 623 | 621 | 224 | 730 | 677 | 164 | 281 | 0 | 0 | 165 | 0 | 0 |
| Stage 1 | 228 | 228 | - | 392 | 392 | - | - | - | - | - | - | - |
| Stage 2 | 395 | 393 | - | 338 | 285 | - | - | - | - | - | - | - |
| 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 | 398 | 403 | 815 | 338 | 375 | 881 | 1282 | - | - | 1413 | - | - |
| Stage 1 | 775 | 715 | - | 633 | 606 | - | - | - | - | - | - | - |
| Stage 2 | 630 | 606 | - | 676 | 676 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 367 | 366 | 815 | 251 | 341 | 881 | 1282 | - | - | 1413 | - | - |
| Mov Cap-2 Maneuver | 367 | 366 | - | 251 | 341 | - | - | - | - | - | - | - |
| Stage 1 | 706 | 714 | - | 577 | 552 | - | - | - | - | - | - | - |
| Stage 2 | 569 | 552 | - | 540 | 675 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 15.6 | | 16.7 | | | 3.3 | | | 0.1 | | | |
| HCM LOS | C | | C | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR | | | | |
| Capacity (veh/h) | 1282 | - | - | 581 | 324 | 1413 | - | - | | | | |
| HCM Lane V/C Ratio | 0.089 | - | - | 0.419 | 0.05 | 0.002 | - | - | | | | |
| HCM Control Delay (s) | 8.1 | - | - | 15.6 | 16.7 | 7.6 | 0 | - | | | | |
| HCM Lane LOS | A | - | - | C | C | A | A | - | | | | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 2.1 | 0.2 | 0 | - | - | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | |  |  | | |  |  |
| Traffic Volume (vph) | 74 | 0 | 150 | 9 | 2 | 4 | 105 | 150 | 2 | 2 | 206 | 52 |
| Future Volume (vph) | 74 | 0 | 150 | 9 | 2 | 4 | 105 | 150 | 2 | 2 | 206 | 52 |
| Satd. Flow (prot) | 0 | 1666 | 0 | 0 | 1745 | 0 | 1770 | 1859 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | | 0.884 | | | 0.720 | | 0.506 | | | | 0.998 | |
| Satd. Flow (perm) | 0 | 1497 | 0 | 0 | 1296 | 0 | 943 | 1859 | 0 | 0 | 1859 | 1583 |
| Satd. Flow (RTOR) | | 164 | | | 4 | | | 2 | | | | 155 |
| Lane Group Flow (vph) | 0 | 243 | 0 | 0 | 16 | 0 | 114 | 165 | 0 | 0 | 226 | 57 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 10.5 | 10.5 | | 10.5 | 10.5 | | 11.0 | 14.0 | | 14.0 | 14.0 | 14.0 |
| Total Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 12.0 | 37.0 | | 25.0 | 25.0 | 25.0 |
| Total Split (%) | 38.3% | 38.3% | | 38.3% | 38.3% | | 20.0% | 61.7% | | 41.7% | 41.7% | 41.7% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.5 | | | 5.5 | | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | | 9.5 | | | 9.5 | | 39.0 | 39.0 | | | 28.5 | 28.5 |
| Actuated g/C Ratio | | 0.16 | | | 0.16 | | 0.65 | 0.65 | | | 0.48 | 0.48 |
| v/c Ratio | | 0.65 | | | 0.08 | | 0.16 | 0.14 | | | 0.26 | 0.07 |
| Control Delay | | 16.7 | | | 17.2 | | 5.6 | 5.3 | | | 13.3 | 0.2 |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | 16.7 | | | 17.2 | | 5.6 | 5.3 | | | 13.3 | 0.2 |
| LOS | | B | | | B | | A | A | | | B | A |
| Approach Delay | | 16.7 | | | 17.2 | | | 5.4 | | | 10.7 | |
| Approach LOS | | B | | | B | | | A | | | B | |
| Queue Length 50th (ft) | | 26 | | | 4 | | 12 | 18 | | | 48 | 0 |
| Queue Length 95th (ft) | | 76 | | | 16 | | 38 | 51 | | | 114 | 0 |
| Internal Link Dist (ft) | | 750 | | | 806 | | | 16527 | | | 4848 | |
| Turn Bay Length (ft) | | | | | | | 195 | | | | | 195 |
| Base Capacity (vph) | | 552 | | | 380 | | 708 | 1209 | | | 881 | 832 |
| Starvation Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | | 0.44 | | | 0.04 | | 0.16 | 0.14 | | | 0.26 | 0.07 |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 60 | | | | | | | | | | | | |
| Actuated Cycle Length: 60 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 40 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2042 - AM Peak Hour

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.8






Intersection LOS: B

Intersection Capacity Utilization 47.5%

ICU Level of Service A























Analysis Period (min) 15

Splits and Phases: 6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

| | | | |
|--|--|---|--|
|  Ø2 (L) 37 s | |  Ø4 23 s | |
|  Ø5 12 s | |  Ø8 23 s | |
|  Ø6 (R) 25 s | | | |

Timings
7: Black Forest Road & Hodgen Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 22 | 282 | 161 | 134 | 809 | 20 | 258 | 0 | 96 | 20 | 0 | 76 |
| Future Volume (vph) | 22 | 282 | 161 | 134 | 809 | 20 | 258 | 0 | 96 | 20 | 0 | 76 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1855 | 0 | 1770 | 1583 | 0 | 1770 | 1583 | 0 |
| Flt Permitted | 0.108 | | | 0.486 | | | 0.703 | | | 0.690 | | |
| Satd. Flow (perm) | 201 | 1863 | 1583 | 905 | 1855 | 0 | 1310 | 1583 | 0 | 1285 | 1583 | 0 |
| Satd. Flow (RTOR) | | | 175 | | 2 | | | 574 | | | 215 | |
| Lane Group Flow (vph) | 24 | 307 | 175 | 146 | 901 | 0 | 280 | 104 | 0 | 22 | 83 | 0 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 12.0 | 12.0 | 5.0 | 12.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 11.0 | 18.0 | 18.0 | 11.0 | 18.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (s) | 11.0 | 54.0 | 54.0 | 11.0 | 54.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Total Split (%) | 12.2% | 60.0% | 60.0% | 12.2% | 60.0% | | 27.8% | 27.8% | | 27.8% | 27.8% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Recall Mode | None | Min | Min | None | Min | | None | None | | None | None | |
| Act Effct Green (s) | 38.1 | 33.0 | 33.0 | 42.2 | 40.5 | | 19.5 | 19.5 | | 19.5 | 19.5 | |
| Actuated g/C Ratio | 0.50 | 0.43 | 0.43 | 0.55 | 0.53 | | 0.26 | 0.26 | | 0.26 | 0.26 | |
| v/c Ratio | 0.12 | 0.38 | 0.22 | 0.26 | 0.91 | | 0.84 | 0.12 | | 0.07 | 0.15 | |
| Control Delay | 7.2 | 15.0 | 2.5 | 7.9 | 31.9 | | 54.2 | 0.3 | | 27.7 | 0.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 7.2 | 15.0 | 2.5 | 7.9 | 31.9 | | 54.2 | 0.3 | | 27.7 | 0.6 | |
| LOS | A | B | A | A | C | | D | A | | C | A | |
| Approach Delay | | 10.3 | | | 28.5 | | | 39.6 | | | 6.2 | |
| Approach LOS | | B | | | C | | | D | | | A | |
| Queue Length 50th (ft) | 4 | 92 | 0 | 28 | 304 | | 122 | 0 | | 8 | 0 | |
| Queue Length 95th (ft) | 12 | 144 | 29 | 49 | #716 | | #324 | 0 | | 30 | 0 | |
| Internal Link Dist (ft) | | 1250 | | | 847 | | | 4848 | | | 905 | |
| Turn Bay Length (ft) | 400 | | 335 | 280 | | | 125 | | | 65 | | |
| Base Capacity (vph) | 206 | 1207 | 1087 | 560 | 1202 | | 335 | 833 | | 329 | 565 | |
| 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 | 0.12 | 0.25 | 0.16 | 0.26 | 0.75 | | 0.84 | 0.12 | | 0.07 | 0.15 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 76.1 | | | | | | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.91 | | | | | | | | | | | | |

Timings

7: Black Forest Road & Hodgen Road

Total Traffic Conditions

Year 2042 - AM Peak Hour

Intersection Signal Delay: 24.9

Intersection LOS: C

Intersection Capacity Utilization 83.9%







ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.




Queue shown is maximum after two cycles.

Splits and Phases: 7: Black Forest Road & Hodgen Road

| | | |
|--|--|--|
|  Ø2 |  Ø3 |  Ø4 |
| 25 s | 11 s | 54 s |
|  Ø6 |  Ø7 |  Ø8 |
| 25 s | 11 s | 54 s |

HCM 6th TWSC
8: Hodgen Road & Black Forrest Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|---|---|--------|---|-------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  | |  | |
| Traffic Vol, veh/h | 4 | 465 | 1141 | 2 | 0 | 4 |
| Future Vol, veh/h | 4 | 465 | 1141 | 2 | 0 | 4 |
| 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 | 4 | 505 | 1240 | 2 | 0 | 4 |
| | | | | | | |
| Major/Minor | Major1 | Major2 | | Minor2 | | |
| Conflicting Flow All | 1242 | 0 | - | 0 | 1754 | 1241 |
| Stage 1 | - | - | - | - | 1241 | - |
| Stage 2 | - | - | - | - | 513 | - |
| 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 | 561 | - | - | - | 94 | 213 |
| Stage 1 | - | - | - | - | 273 | - |
| Stage 2 | - | - | - | - | 601 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 561 | - | - | - | 93 | 213 |
| Mov Cap-2 Maneuver | - | - | - | - | 93 | - |
| Stage 1 | - | - | - | - | 270 | - |
| Stage 2 | - | - | - | - | 601 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.1 | 0 | | 22.3 | | |
| HCM LOS | | | | C | | |
| | | | | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 561 | - | - | - | 213 | |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.02 | |
| HCM Control Delay (s) | 11.5 | 0 | - | - | 22.3 | |
| HCM Lane LOS | B | A | - | - | C | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 4.3 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 186 | 294 | 58 |
| Demand Flow Rate, veh/h | 190 | 299 | 60 |
| Vehicles Circulating, veh/h | 23 | 27 | 164 |
| Vehicles Exiting, veh/h | 303 | 197 | 48 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 3.9 | 4.6 | 3.6 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 190 | 299 | 60 |
| Cap Entry Lane, veh/h | 1348 | 1342 | 1167 |
| Entry HV Adj Factor | 0.978 | 0.982 | 0.967 |
| Flow Entry, veh/h | 186 | 294 | 58 |
| Cap Entry, veh/h | 1318 | 1318 | 1128 |
| V/C Ratio | 0.141 | 0.223 | 0.051 |
| Control Delay, s/veh | 3.9 | 4.6 | 3.6 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 1 | 0 |

HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Total Traffic Conditions
Year 2042 - AM Peak Hour

























| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 4.3 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 272 | 75 | 222 |
| Demand Flow Rate, veh/h | 277 | 77 | 227 |
| Vehicles Circulating, veh/h | 47 | 184 | 5 |
| Vehicles Exiting, veh/h | 214 | 48 | 319 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.6 | 3.8 | 4.0 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 277 | 77 | 227 |
| Cap Entry Lane, veh/h | 1315 | 1144 | 1373 |
| Entry HV Adj Factor | 0.982 | 0.974 | 0.978 |
| Flow Entry, veh/h | 272 | 75 | 222 |
| Cap Entry, veh/h | 1292 | 1114 | 1343 |
| V/C Ratio | 0.211 | 0.067 | 0.165 |
| Control Delay, s/veh | 4.6 | 3.8 | 4.0 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 1 |

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 47 | 359 | 248 | 199 | 203 | 290 | 213 | 677 | 305 | 412 | 675 | 108 |
| Future Volume (vph) | 47 | 359 | 248 | 199 | 203 | 290 | 213 | 677 | 305 | 412 | 675 | 108 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1824 | 0 |
| Flt Permitted | 0.531 | | | 0.298 | | | 0.095 | | | 0.083 | | |
| Satd. Flow (perm) | 989 | 1863 | 1583 | 555 | 1863 | 1583 | 177 | 1863 | 1583 | 155 | 1824 | 0 |
| Satd. Flow (RTOR) | | | 242 | | | 315 | | | 174 | | 9 | |
| Lane Group Flow (vph) | 51 | 390 | 270 | 216 | 221 | 315 | 232 | 736 | 332 | 448 | 851 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 | 35.0 | 35.0 | 6.0 | 35.0 | |
| Minimum Split (s) | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 | 42.0 | 42.0 | 12.0 | 42.0 | |
| Total Split (s) | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | 44.0 | 12.0 | 49.0 | 49.0 | 27.0 | 64.0 | |
| Total Split (%) | 36.7% | 36.7% | 36.7% | 36.7% | 36.7% | 36.7% | 10.0% | 40.8% | 40.8% | 22.5% | 53.3% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 7.0 | |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | None | Max | |
| Act Effct Green (s) | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 49.0 | 42.0 | 42.0 | 70.0 | 57.0 | |
| Actuated g/C Ratio | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.41 | 0.35 | 0.35 | 0.58 | 0.48 | |
| v/c Ratio | 0.16 | 0.66 | 0.41 | 1.23 | 0.38 | 0.44 | 1.54 | 1.13 | 0.50 | 1.20 | 0.98 | |
| Control Delay | 31.4 | 41.9 | 7.4 | 181.3 | 34.1 | 5.4 | 296.3 | 113.1 | 16.8 | 146.2 | 56.7 | |
| 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 | 31.4 | 41.9 | 7.4 | 181.3 | 34.1 | 5.4 | 296.3 | 113.1 | 16.8 | 146.2 | 56.7 | |
| LOS | C | D | A | F | C | A | F | F | B | F | E | |
| Approach Delay | | 28.0 | | | 64.4 | | | 121.2 | | | 87.5 | |
| Approach LOS | | C | | | E | | | F | | | F | |
| Queue Length 50th (ft) | 28 | 260 | 15 | ~207 | 132 | 0 | ~201 | ~661 | 91 | ~371 | 625 | |
| Queue Length 95th (ft) | 61 | 372 | 80 | #363 | 204 | 64 | #365 | #896 | 179 | #579 | #914 | |
| Internal Link Dist (ft) | | 824 | | | 1611 | | | 1078 | | | 1286 | |
| Turn Bay Length (ft) | 420 | | 420 | 350 | | 350 | 120 | | 650 | 525 | | |
| Base Capacity (vph) | 313 | 589 | 666 | 175 | 589 | 716 | 151 | 652 | 667 | 373 | 871 | |
| 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 | 0.16 | 0.66 | 0.41 | 1.23 | 0.38 | 0.44 | 1.54 | 1.13 | 0.50 | 1.20 | 0.98 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 120 | | | | | | | | | | | | |
| Actuated Cycle Length: 120 | | | | | | | | | | | | |
| Natural Cycle: 140 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 1.54 | | | | | | | | | | | | |

Timings

1: State Highway 83 & Hodgen Road

Total Traffic Conditions

Year 2042 - PM Peak Hour

Intersection Signal Delay: 83.6

Intersection LOS: F

Intersection Capacity Utilization 109.2%

ICU Level of Service H

Analysis Period (min) 15







~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: State Highway 83 & Hodgen Road

| | | | | | |
|--|--|--|--|---|--|
|  Ø1 | |  Ø2 | |  Ø4 | |
| 27 s | | 49 s | | 44 s | |
|  Ø5 | |  Ø6 | |  Ø8 | |
| 12 s | | 64 s | | 44 s | |

HCM 6th TWSC
2: State Highway 83 & Stagecoach Road




















Total Traffic Conditions
Year 2042 - PM Peak Hour

| Intersection | | | | | | | | | | | | |
|----------------------------|--------|------------------------|-----------|----------------------------|--------|------|--------|--------------------------------|------|------|------|------|
| Int Delay, s/veh | 462.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | ↕ | | |
| Traffic Vol, veh/h | 2 | 0 | 5 | 198 | 5 | 190 | 2 | 1075 | 215 | 237 | 825 | 0 |
| Future Vol, veh/h | 2 | 0 | 5 | 198 | 5 | 190 | 2 | 1075 | 215 | 237 | 825 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 135 | - | - | 320 | 415 | - | - |
| 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 | 2 | 0 | 5 | 215 | 5 | 207 | 2 | 1168 | 234 | 258 | 897 | 0 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
| Conflicting Flow All | 2004 | 2819 | 449 | 2137 | 2585 | 584 | 897 | 0 | 0 | 1402 | 0 | 0 |
| Stage 1 | 1413 | 1413 | - | 1172 | 1172 | - | - | - | - | - | - | - |
| Stage 2 | 591 | 1406 | - | 965 | 1413 | - | - | - | - | - | - | - |
| 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 | 35 | 18 | 557 | ~ 28 | 25 | 455 | 753 | - | - | 483 | - | - |
| Stage 1 | 145 | 202 | - | ~ 204 | 264 | - | - | - | - | - | - | - |
| Stage 2 | 460 | 204 | - | 274 | 202 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 7 | 8 | 557 | ~ 16 | 11 | 455 | 753 | - | - | 483 | - | - |
| Mov Cap-2 Maneuver | 7 | 8 | - | ~ 16 | 11 | - | - | - | - | - | - | - |
| Stage 1 | 143 | 94 | - | ~ 201 | 260 | - | - | - | - | - | - | - |
| Stage 2 | 243 | 201 | - | ~ 126 | 94 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | |
| HCM Control Delay, s | 213.5 | | \$ 3221.7 | | 0.1 | | 4.6 | | | | | |
| HCM LOS | F | | F | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1WBLn2 | SBL | SBT | SBR | | | | | |
| Capacity (veh/h) | 753 | - | - | 24 16 455 | 483 | - | - | | | | | |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.317 13.791 0.454 | 0.533 | - | - | | | | | |
| HCM Control Delay (s) | 9.8 | 0.1 | - | 213.5 \$ 6219 19.3 | 20.7 | - | - | | | | | |
| HCM Lane LOS | A | A | - | F F C | C | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 1 28.5 2.3 | 3.1 | - | - | | | | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | | | *: All major volume in platoon | | | | |

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  |  | |  |  |  |  | |
| Traffic Volume (vph) | 2 | 0 | 5 | 198 | 5 | 190 | 2 | 1075 | 215 | 237 | 825 | 0 |
| Future Volume (vph) | 2 | 0 | 5 | 198 | 5 | 190 | 2 | 1075 | 215 | 237 | 825 | 0 |
| Satd. Flow (prot) | 0 | 1660 | 0 | 0 | 1775 | 1583 | 0 | 3539 | 1583 | 1770 | 3539 | 0 |
| Flt Permitted | | 0.897 | | | 0.726 | | | 0.954 | | 0.107 | | |
| Satd. Flow (perm) | 0 | 1510 | 0 | 0 | 1352 | 1583 | 0 | 3376 | 1583 | 199 | 3539 | 0 |
| Satd. Flow (RTOR) | | 150 | | | | 207 | | | 234 | | | |
| Lane Group Flow (vph) | 0 | 7 | 0 | 0 | 220 | 207 | 0 | 1170 | 234 | 258 | 897 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | 8 | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 | 35.0 | 35.0 | 35.0 | 14.0 | 35.0 | |
| Minimum Split (s) | 13.5 | 13.5 | | 13.5 | 13.5 | 13.5 | 42.0 | 42.0 | 42.0 | 21.0 | 42.0 | |
| Total Split (s) | 17.0 | 17.0 | | 17.0 | 17.0 | 17.0 | 42.0 | 42.0 | 42.0 | 21.0 | 63.0 | |
| Total Split (%) | 21.3% | 21.3% | | 21.3% | 21.3% | 21.3% | 52.5% | 52.5% | 52.5% | 26.3% | 78.8% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.5 | | | 5.5 | 5.5 | | 7.0 | 7.0 | 7.0 | 7.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | None | | None | None | None | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effect Green (s) | | 11.5 | | | 11.5 | 11.5 | | 35.0 | 35.0 | 56.0 | 56.0 | |
| Actuated g/C Ratio | | 0.14 | | | 0.14 | 0.14 | | 0.44 | 0.44 | 0.70 | 0.70 | |
| v/c Ratio | | 0.02 | | | 1.13 | 0.51 | | 0.79 | 0.28 | 0.62 | 0.36 | |
| Control Delay | | 0.2 | | | 140.5 | 9.9 | | 24.3 | 3.1 | 19.3 | 5.3 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 0.2 | | | 140.5 | 9.9 | | 24.3 | 3.1 | 19.3 | 5.3 | |
| LOS | | A | | | F | A | | C | A | B | A | |
| Approach Delay | | 0.2 | | | 77.2 | | | 20.7 | | | 8.4 | |
| Approach LOS | | A | | | E | | | C | | | A | |
| Queue Length 50th (ft) | | 0 | | | ~130 | 0 | | 255 | 0 | 58 | 78 | |
| Queue Length 95th (ft) | | 0 | | | #263 | 57 | | 337 | 38 | 135 | 105 | |
| Internal Link Dist (ft) | | 862 | | | 898 | | | 913 | | | 1101 | |
| Turn Bay Length (ft) | | | | | | 135 | | | 320 | 415 | | |
| Base Capacity (vph) | | 345 | | | 194 | 404 | | 1477 | 824 | 414 | 2477 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 0.02 | | | 1.13 | 0.51 | | 0.79 | 0.28 | 0.62 | 0.36 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 80 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings

2: State Highway 83 & Stagecoach Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 24.0

Intersection LOS: C

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15







~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.























Splits and Phases: 2: State Highway 83 & Stagecoach Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø4 |
| 21 s | 42 s | 17 s |
|  Ø6 (R) |  Ø8 |  Ø8 |
| 63 s | | 17 s |

Timings

3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  | |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 268 | 0 | 742 | 0 | 0 | 0 | 722 | 1285 | 4 | 2 | 989 | 204 |
| Future Volume (vph) | 268 | 0 | 742 | 0 | 0 | 0 | 722 | 1285 | 4 | 2 | 989 | 204 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 0 | 1863 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.757 | | | | | | 0.154 | | | 0.192 | | |
| Satd. Flow (perm) | 1410 | 1863 | 1583 | 0 | 1863 | 0 | 287 | 3539 | 1583 | 358 | 3539 | 1583 |
| Satd. Flow (RTOR) | | | 625 | | | | | | 39 | | | 222 |
| Lane Group Flow (vph) | 291 | 0 | 807 | 0 | 0 | 0 | 785 | 1397 | 4 | 2 | 1075 | 222 |
| Turn Type | Perm | | Perm | | | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | | 10.0 | 12.0 | 12.0 | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | | 33.0 | 61.0 | 61.0 | 28.0 | 28.0 | 28.0 |
| Total Split (%) | 27.4% | 27.4% | 27.4% | 27.4% | 27.4% | | 39.3% | 72.6% | 72.6% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 3.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | | 6.0 | | 5.0 | 7.0 | 7.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 17.0 | | 17.0 | | | | 56.0 | 54.0 | 54.0 | 22.0 | 22.0 | 22.0 |
| Actuated g/C Ratio | 0.20 | | 0.20 | | | | 0.67 | 0.64 | 0.64 | 0.26 | 0.26 | 0.26 |
| v/c Ratio | 1.02 | | 0.99 | | | | 1.15 | 0.61 | 0.00 | 0.02 | 1.16 | 0.38 |
| Control Delay | 94.9 | | 38.3 | | | | 104.9 | 10.3 | 0.0 | 24.0 | 115.0 | 5.9 |
| Queue Delay | 0.0 | | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 94.9 | | 38.3 | | | | 104.9 | 10.3 | 0.0 | 24.0 | 115.0 | 5.9 |
| LOS | F | | D | | | | F | B | A | C | F | A |
| Approach Delay | | 53.3 | | | | | | 44.3 | | | 96.2 | |
| Approach LOS | | D | | | | | | D | | | F | |
| Queue Length 50th (ft) | ~159 | | 105 | | | | ~439 | 203 | 0 | 1 | ~357 | 0 |
| Queue Length 95th (ft) | #317 | | #373 | | | | #658 | 262 | 0 | 6 | #480 | 51 |
| Internal Link Dist (ft) | | 997 | | | 136 | | | 1617 | | | 2154 | |
| Turn Bay Length (ft) | 225 | | 285 | | | | 900 | | 400 | 750 | | 730 |
| Base Capacity (vph) | 285 | | 818 | | | | 685 | 2275 | 1031 | 93 | 926 | 578 |
| 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 | 1.02 | | 0.99 | | | | 1.15 | 0.61 | 0.00 | 0.02 | 1.16 | 0.38 |

Intersection Summary

Cycle Length: 84

Actuated Cycle Length: 84

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.16

Timings 3: State Highway 83 & North Gate Boulevard

Total Traffic Conditions
Year 2042 - PM Peak Hour

Intersection Signal Delay: 61.2

Intersection LOS: E

Intersection Capacity Utilization 96.4%

ICU Level of Service F

Analysis Period (min) 15






~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: State Highway 83 & North Gate Boulevard

| | | | |
|--|--|--|--|
|  Ø2 61 s | |  Ø4 23 s | |
|  Ø5 33 s |  Ø6 28 s |  Ø8 23 s | |

Timings
4: State Highway 83 & Shoup Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | ↑↑↑ | ↗ | ↘ | ↑↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 1984 | 484 | 331 | 1542 | 232 | 155 |
| Future Volume (vph) | 1984 | 484 | 331 | 1542 | 232 | 155 |
| Satd. Flow (prot) | 5085 | 1583 | 1770 | 5085 | 1770 | 1583 |
| Flt Permitted | | | 0.081 | | | |
| Satd. Flow (perm) | 5085 | 1583 | 151 | 5085 | 1863 | 1583 |
| Satd. Flow (RTOR) | | 526 | | | | 168 |
| Lane Group Flow (vph) | 2157 | 526 | 360 | 1676 | 252 | 168 |
| Turn Type | NA | Perm | pm+pt | NA | Perm | Perm |
| Protected Phases | 2 | | 1 | 6 | | |
| Permitted Phases | | 2 | 6 | | 8 | 8 |
| Detector Phase | 2 | 2 | 1 | 6 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | 4.0 | 20.0 | 4.0 | 4.0 |
| Minimum Split (s) | 27.5 | 27.5 | 9.0 | 27.5 | 10.0 | 10.0 |
| Total Split (s) | 51.0 | 51.0 | 23.0 | 74.0 | 21.0 | 21.0 |
| Total Split (%) | 53.7% | 53.7% | 24.2% | 77.9% | 22.1% | 22.1% |
| Yellow Time (s) | 5.5 | 5.5 | 3.0 | 5.5 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.5 | 7.5 | 5.0 | 7.5 | 6.0 | 6.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | Max | Max | None | Max | None | None |
| Act Effct Green (s) | 44.5 | 44.5 | 69.0 | 66.5 | 14.6 | 14.6 |
| Actuated g/C Ratio | 0.47 | 0.47 | 0.73 | 0.70 | 0.15 | 0.15 |
| v/c Ratio | 0.90 | 0.51 | 0.90 | 0.47 | 0.88 | 0.44 |
| Control Delay | 30.0 | 3.4 | 51.1 | 6.8 | 69.6 | 9.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.0 | 3.4 | 51.1 | 6.8 | 69.6 | 9.7 |
| LOS | C | A | D | A | E | A |
| Approach Delay | 24.8 | | | 14.6 | 45.6 | |
| Approach LOS | C | | | B | D | |
| Queue Length 50th (ft) | 433 | 0 | 156 | 143 | 150 | 0 |
| Queue Length 95th (ft) | #526 | 55 | #314 | 171 | #284 | 55 |
| Internal Link Dist (ft) | 1042 | | | 1734 | 675 | |
| Turn Bay Length (ft) | | 710 | 980 | | | 500 |
| Base Capacity (vph) | 2394 | 1023 | 418 | 3573 | 295 | 392 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.90 | 0.51 | 0.86 | 0.47 | 0.85 | 0.43 |
| Intersection Summary | | | | | | |
| Cycle Length: 95 | | | | | | |
| Actuated Cycle Length: 94.6 | | | | | | |
| Natural Cycle: 80 | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | |
| Maximum v/c Ratio: 0.90 | | | | | | |

Timings

4: State Highway 83 & Shoup Road

Total Traffic Conditions

Year 2042 - PM Peak Hour

Intersection Signal Delay: 22.5

Intersection LOS: C

Intersection Capacity Utilization 84.9%





ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

















Queue shown is maximum after two cycles.

Splits and Phases: 4: State Highway 83 & Shoup Road

| | | |
|--|--|--|
|  Ø1 |  Ø2 | |
| 23 s | 51 s | |
|  Ø6 | |  Ø8 |
| 74 s | | 21 s |

Timings
5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (vph) | 150 | 264 | 166 | 29 | 81 | 49 | 85 | 436 | 36 | 57 | 377 | 131 |
| Future Volume (vph) | 150 | 264 | 166 | 29 | 81 | 49 | 85 | 436 | 36 | 57 | 377 | 131 |
| Satd. Flow (prot) | 0 | 1767 | 0 | 0 | 1770 | 0 | 0 | 1831 | 0 | 0 | 1796 | 0 |
| Flt Permitted | | 0.863 | | | 0.856 | | | 0.771 | | | 0.876 | |
| Satd. Flow (perm) | 0 | 1545 | 0 | 0 | 1529 | 0 | 0 | 1423 | 0 | 0 | 1581 | 0 |
| Satd. Flow (RTOR) | | 29 | | | 32 | | | 5 | | | 20 | |
| Lane Group Flow (vph) | 0 | 630 | 0 | 0 | 173 | 0 | 0 | 605 | 0 | 0 | 614 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Minimum Split (s) | 14.0 | 14.0 | | 14.0 | 14.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Total Split (s) | 47.0 | 47.0 | | 47.0 | 47.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 52.2% | 52.2% | | 52.2% | 52.2% | | 47.8% | 47.8% | | 47.8% | 47.8% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Act Effect Green (s) | | 36.8 | | | 36.8 | | | 37.2 | | | 37.2 | |
| Actuated g/C Ratio | | 0.43 | | | 0.43 | | | 0.43 | | | 0.43 | |
| v/c Ratio | | 0.93 | | | 0.26 | | | 0.98 | | | 0.88 | |
| Control Delay | | 44.5 | | | 13.5 | | | 59.2 | | | 40.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 44.5 | | | 13.5 | | | 59.2 | | | 40.0 | |
| LOS | | D | | | B | | | E | | | D | |
| Approach Delay | | 44.5 | | | 13.5 | | | 59.2 | | | 40.0 | |
| Approach LOS | | D | | | B | | | E | | | D | |
| Queue Length 50th (ft) | | 301 | | | 46 | | | ~370 | | | 316 | |
| Queue Length 95th (ft) | | #521 | | | 89 | | | #578 | | | #539 | |
| Internal Link Dist (ft) | | 965 | | | 1070 | | | 1292 | | | 16527 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 754 | | | 748 | | | 617 | | | 694 | |
| 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 | | 0.84 | | | 0.23 | | | 0.98 | | | 0.88 | |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 90 | | | | | | | | | | | | |
| Actuated Cycle Length: 86 | | | | | | | | | | | | |
| Natural Cycle: 80 | | | | | | | | | | | | |
| Control Type: Actuated-Uncoordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.98 | | | | | | | | | | | | |

Timings 5: Black Forest Road & Shoup Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

Intersection Signal Delay: 44.9

Intersection LOS: D

Intersection Capacity Utilization 101.5%

ICU Level of Service G

Analysis Period (min) 15





~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Black Forest Road & Shoup Road

| | |
|--|--|
|  Ø2 |  Ø4 |
| 43 s | 47 s |
|  Ø6 |  Ø8 |
| 43 s | 47 s |

HCM 6th TWSC
6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions
Year 2042 - PM Peak Hour



















| Intersection | | | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|-------|--------|-------|--------|------|------|-------|------|------|---|--|
| Int Delay, s/veh | 14.7 | | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | |
| Lane Configurations | | ↕ | | | ↕ | | ↙ | | ↘ | | ↙ | | ↘ | |
| Traffic Vol, veh/h | 95 | 4 | 192 | 4 | 4 | 4 | 235 | 200 | 0 | 9 | 200 | 117 | | |
| Future Vol, veh/h | 95 | 4 | 192 | 4 | 4 | 4 | 235 | 200 | 0 | 9 | 200 | 117 | | |
| 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 | - | - | - | - | - | - | 195 | - | - | - | - | 195 | | |
| 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 | 103 | 4 | 209 | 4 | 4 | 4 | 255 | 217 | 0 | 10 | 217 | 127 | | |
| | | | | | | | | | | | | | | |
| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | | | |
| Conflicting Flow All | 968 | 964 | 217 | 1134 | 1091 | 217 | 344 | 0 | 0 | 217 | 0 | 0 | | |
| Stage 1 | 237 | 237 | - | 727 | 727 | - | - | - | - | - | - | - | | |
| Stage 2 | 731 | 727 | - | 407 | 364 | - | - | - | - | - | - | - | | |
| 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 | 233 | 255 | 823 | 180 | 215 | 823 | 1215 | - | - | 1353 | - | - | | |
| Stage 1 | 766 | 709 | - | 415 | 429 | - | - | - | - | - | - | - | | |
| Stage 2 | 413 | 429 | - | 621 | 624 | - | - | - | - | - | - | - | | |
| Platoon blocked, % | | | | | | | | - | - | | - | - | | |
| Mov Cap-1 Maneuver | 189 | 200 | 823 | 110 | 168 | 823 | 1215 | - | - | 1353 | - | - | | |
| Mov Cap-2 Maneuver | 189 | 200 | - | 110 | 168 | - | - | - | - | - | - | - | | |
| Stage 1 | 605 | 703 | - | 328 | 339 | - | - | - | - | - | - | - | | |
| Stage 2 | 320 | 339 | - | 457 | 618 | - | - | - | - | - | - | - | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | | | |
| HCM Control Delay, s | 45.4 | | 25.9 | | 4.7 | | 0.2 | | | | | | | |
| HCM LOS | E | | D | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR | | | | | | |
| Capacity (veh/h) | 1215 | - | - | 385 | 185 | 1353 | - | - | | | | | | |
| HCM Lane V/C Ratio | 0.21 | - | - | 0.822 | 0.071 | 0.007 | - | - | | | | | | |
| HCM Control Delay (s) | 8.8 | - | - | 45.4 | 25.9 | 7.7 | 0 | - | | | | | | |
| HCM Lane LOS | A | - | - | E | D | A | A | - | | | | | | |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 7.4 | 0.2 | 0 | - | - | | | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | |  |  | | |  |  |
| Traffic Volume (vph) | 95 | 4 | 192 | 4 | 4 | 4 | 235 | 200 | 0 | 9 | 200 | 117 |
| Future Volume (vph) | 95 | 4 | 192 | 4 | 4 | 4 | 235 | 200 | 0 | 9 | 200 | 117 |
| Satd. Flow (prot) | 0 | 1670 | 0 | 0 | 1750 | 0 | 1770 | 1863 | 0 | 0 | 1859 | 1583 |
| Flt Permitted | | 0.886 | | | 0.877 | | 0.484 | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 1504 | 0 | 0 | 1560 | 0 | 902 | 1863 | 0 | 0 | 1833 | 1583 |
| Satd. Flow (RTOR) | | 168 | | | 4 | | | | | | | 155 |
| Lane Group Flow (vph) | 0 | 316 | 0 | 0 | 12 | 0 | 255 | 217 | 0 | 0 | 227 | 127 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 10.5 | 10.5 | | 10.5 | 10.5 | | 11.0 | 14.0 | | 14.0 | 14.0 | 14.0 |
| Total Split (s) | 23.6 | 23.6 | | 23.6 | 23.6 | | 15.0 | 36.4 | | 21.4 | 21.4 | 21.4 |
| Total Split (%) | 39.3% | 39.3% | | 39.3% | 39.3% | | 25.0% | 60.7% | | 35.7% | 35.7% | 35.7% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.5 | | | 5.5 | | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | | 11.8 | | | 11.8 | | 36.7 | 36.7 | | | 21.9 | 21.9 |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | 0.61 | 0.61 | | | 0.36 | 0.36 |
| v/c Ratio | | 0.73 | | | 0.04 | | 0.38 | 0.19 | | | 0.34 | 0.19 |
| Control Delay | | 20.5 | | | 14.1 | | 8.3 | 6.9 | | | 18.0 | 3.4 |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | | 20.5 | | | 14.1 | | 8.3 | 6.9 | | | 18.0 | 3.4 |
| LOS | | C | | | B | | A | A | | | B | A |
| Approach Delay | | 20.5 | | | 14.1 | | | 7.6 | | | 12.8 | |
| Approach LOS | | C | | | B | | | A | | | B | |
| Queue Length 50th (ft) | | 48 | | | 2 | | 36 | 30 | | | 59 | 0 |
| Queue Length 95th (ft) | | 108 | | | 12 | | 88 | 75 | | | 127 | 25 |
| Internal Link Dist (ft) | | 750 | | | 806 | | | 16527 | | | 4848 | |
| Turn Bay Length (ft) | | | | | | | 195 | | | | | 195 |
| Base Capacity (vph) | | 571 | | | 473 | | 689 | 1138 | | | 667 | 675 |
| Starvation Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | | | 0 | 0 |
| Reduced v/c Ratio | | 0.55 | | | 0.03 | | 0.37 | 0.19 | | | 0.34 | 0.19 |
| Intersection Summary | | | | | | | | | | | | |
| Cycle Length: 60 | | | | | | | | | | | | |
| Actuated Cycle Length: 60 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | | | | | | | | | | |
| Natural Cycle: 45 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |

Timings

6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle

Total Traffic Conditions

Year 2042 - PM Peak Hour

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 12.8






Intersection LOS: B

Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Black Forest Road & Old Stagecoach Road/Terra Ridge Circle























| | | | |
|--|--|---|---|
|  Ø2 (L) 36.4 s |  Ø6 (R) 21.4 s |  Ø4 23.6 s |  Ø8 23.6 s |
| | | | |
|  Ø5 15 s | | | |

Timings

7: Black Forest Road & Hodgen Road

Total Traffic Conditions

Year 2042 - PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  |  |
| Traffic Volume (vph) | 107 | 724 | 311 | 121 | 415 | 20 | 227 | 6 | 164 | 49 | 2 | 38 |
| Future Volume (vph) | 107 | 724 | 311 | 121 | 415 | 20 | 227 | 6 | 164 | 49 | 2 | 38 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1850 | 0 | 1770 | 1595 | 0 | 1770 | 1596 | 0 |
| Flt Permitted | 0.391 | | | 0.134 | | | 0.729 | | | 0.610 | | |
| Satd. Flow (perm) | 728 | 1863 | 1583 | 250 | 1850 | 0 | 1358 | 1595 | 0 | 1136 | 1596 | 0 |
| Satd. Flow (RTOR) | | | 338 | | 5 | | | 178 | | | 41 | |
| Lane Group Flow (vph) | 116 | 787 | 338 | 132 | 473 | 0 | 247 | 185 | 0 | 53 | 43 | 0 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 12.0 | 12.0 | 5.0 | 12.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 11.0 | 18.0 | 18.0 | 11.0 | 18.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (s) | 11.0 | 57.0 | 57.0 | 11.0 | 57.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | |
| Total Split (%) | 12.2% | 63.3% | 63.3% | 12.2% | 63.3% | | 24.4% | 24.4% | | 24.4% | 24.4% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Recall Mode | None | Min | Min | None | Min | | None | None | | None | None | |
| Act Effct Green (s) | 41.2 | 37.5 | 37.5 | 41.2 | 37.5 | | 16.6 | 16.6 | | 16.6 | 16.6 | |
| Actuated g/C Ratio | 0.55 | 0.50 | 0.50 | 0.55 | 0.50 | | 0.22 | 0.22 | | 0.22 | 0.22 | |
| v/c Ratio | 0.25 | 0.84 | 0.35 | 0.54 | 0.51 | | 0.82 | 0.38 | | 0.21 | 0.11 | |
| Control Delay | 6.7 | 25.8 | 2.2 | 14.9 | 14.5 | | 56.4 | 8.5 | | 31.6 | 11.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 6.7 | 25.8 | 2.2 | 14.9 | 14.5 | | 56.4 | 8.5 | | 31.6 | 11.7 | |
| LOS | A | C | A | B | B | | E | A | | C | B | |
| Approach Delay | | 17.6 | | | 14.6 | | | 35.9 | | | 22.7 | |
| Approach LOS | | B | | | B | | | D | | | C | |
| Queue Length 50th (ft) | 19 | 313 | 0 | 22 | 144 | | 115 | 3 | | 21 | 1 | |
| Queue Length 95th (ft) | 35 | 466 | 35 | 41 | 216 | | #298 | 59 | | 61 | 29 | |
| Internal Link Dist (ft) | | 1250 | | | 847 | | | 4848 | | | 905 | |
| Turn Bay Length (ft) | 400 | | 335 | 280 | | | 125 | | | 65 | | |
| Base Capacity (vph) | 473 | 1317 | 1218 | 243 | 1310 | | 301 | 492 | | 251 | 385 | |
| 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 | 0.25 | 0.60 | 0.28 | 0.54 | 0.36 | | 0.82 | 0.38 | | 0.21 | 0.11 | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 74.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Timings

7: Black Forest Road & Hodgen Road

Total Traffic Conditions

Year 2042 - PM Peak Hour

Intersection Signal Delay: 20.4

Intersection LOS: C

Intersection Capacity Utilization 84.1%







ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.




Queue shown is maximum after two cycles.

Splits and Phases: 7: Black Forest Road & Hodgen Road

| | | |
|--|--|--|
|  Ø2 |  Ø3 |  Ø4 |
| 22 s | 11 s | 57 s |
|  Ø6 |  Ø7 |  Ø8 |
| 22 s | 11 s | 57 s |

HCM 6th TWSC
8: Hodgen Road & Black Forrest Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|---|---|--------|---|-------|
| Int Delay, s/veh | 0 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  | |  | |
| Traffic Vol, veh/h | 4 | 1142 | 680 | 0 | 0 | 0 |
| Future Vol, veh/h | 4 | 1142 | 680 | 0 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 1241 | 739 | 0 | 0 | 0 |
| | | | | | | |
| Major/Minor | Major1 | Major2 | | Minor2 | | |
| Conflicting Flow All | 739 | 0 | - | 0 | 1988 | 739 |
| Stage 1 | - | - | - | - | 739 | - |
| Stage 2 | - | - | - | - | 1249 | - |
| 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 | 867 | - | - | - | 67 | 417 |
| Stage 1 | - | - | - | - | 472 | - |
| Stage 2 | - | - | - | - | 270 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 867 | - | - | - | 66 | 417 |
| Mov Cap-2 Maneuver | - | - | - | - | 66 | - |
| Stage 1 | - | - | - | - | 465 | - |
| Stage 2 | - | - | - | - | 270 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0 | 0 | | 0 | | |
| HCM LOS | A | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 867 | - | - | - | - | - |
| HCM Lane V/C Ratio | 0.005 | - | - | - | - | - |
| HCM Control Delay (s) | 9.2 | 0 | - | - | 0 | |
| HCM Lane LOS | A | A | - | - | A | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - | |

HCM 6th Roundabout
9: Allen Ranch Road & Old Stagecoach Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 5.5 | | |
| Intersection LOS | A | | |
| Approach | EB | WB | NB |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 438 | 347 | 68 |
| Demand Flow Rate, veh/h | 447 | 354 | 70 |
| Vehicles Circulating, veh/h | 47 | 34 | 405 |
| Vehicles Exiting, veh/h | 341 | 441 | 89 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 5.9 | 5.1 | 4.8 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 447 | 354 | 70 |
| Cap Entry Lane, veh/h | 1315 | 1333 | 913 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.971 |
| Flow Entry, veh/h | 438 | 347 | 68 |
| Cap Entry, veh/h | 1289 | 1306 | 887 |
| V/C Ratio | 0.340 | 0.266 | 0.077 |
| Control Delay, s/veh | 5.9 | 5.1 | 4.8 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 2 | 1 | 0 |

HCM 6th Roundabout
10: Shortwall Drive & Old Stagecoach Road & Stagecoach Road

Total Traffic Conditions
Year 2042 - PM Peak Hour

| Intersection | | | |
|-----------------------------|-------|-------|-------|
| Intersection Delay, s/veh | 5.7 | | |
| Intersection LOS | A | | |
| Approach | WB | NB | SE |
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 363 | 57 | 485 |
| Demand Flow Rate, veh/h | 371 | 58 | 494 |
| Vehicles Circulating, veh/h | 43 | 428 | 30 |
| Vehicles Exiting, veh/h | 443 | 96 | 384 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 5.3 | 4.7 | 6.2 |
| Approach LOS | A | A | A |
| Lane | Left | Left | Left |
| Designated Moves | LR | LR | LR |
| Assumed Moves | LR | LR | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 371 | 58 | 494 |
| Cap Entry Lane, veh/h | 1321 | 892 | 1338 |
| Entry HV Adj Factor | 0.978 | 0.983 | 0.982 |
| Flow Entry, veh/h | 363 | 57 | 485 |
| Cap Entry, veh/h | 1292 | 876 | 1314 |
| V/C Ratio | 0.281 | 0.065 | 0.369 |
| Control Delay, s/veh | 5.3 | 4.7 | 6.2 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 2 |

APPENDIX D

Warrant Analysis Forms

Standard:

04 The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:

- A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or
- B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.

Option:

05 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

Guidance:

06 The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Standard:

07 The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:

- A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

| Number of lanes for moving traffic on each approach | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher-volume minor-street approach (one direction only) | | | |
|---|--------------|--|------------------|------------------|------------------|---|------------------|------------------|------------------|
| Major Street | Minor Street | 100% ^a | 80% ^b | 70% ^c | 56% ^d | 100% ^a | 80% ^b | 70% ^c | 56% ^d |
| 1 | 1 | 500 | 400 | 350 | 280 | 150 | 120 | 105 | 84 |
| 2 or more | 1 | 600 | 480 | 420 | 336 | 150 | 120 | 105 | 84 |
| 2 or more | 2 or more | 600 | 480 | 420 | 336 | 200 | 160 | 140 | 112 |
| 1 | 2 or more | 500 | 400 | 350 | 280 | 200 | 160 | 140 | 112 |

Condition B—Interruption of Continuous Traffic

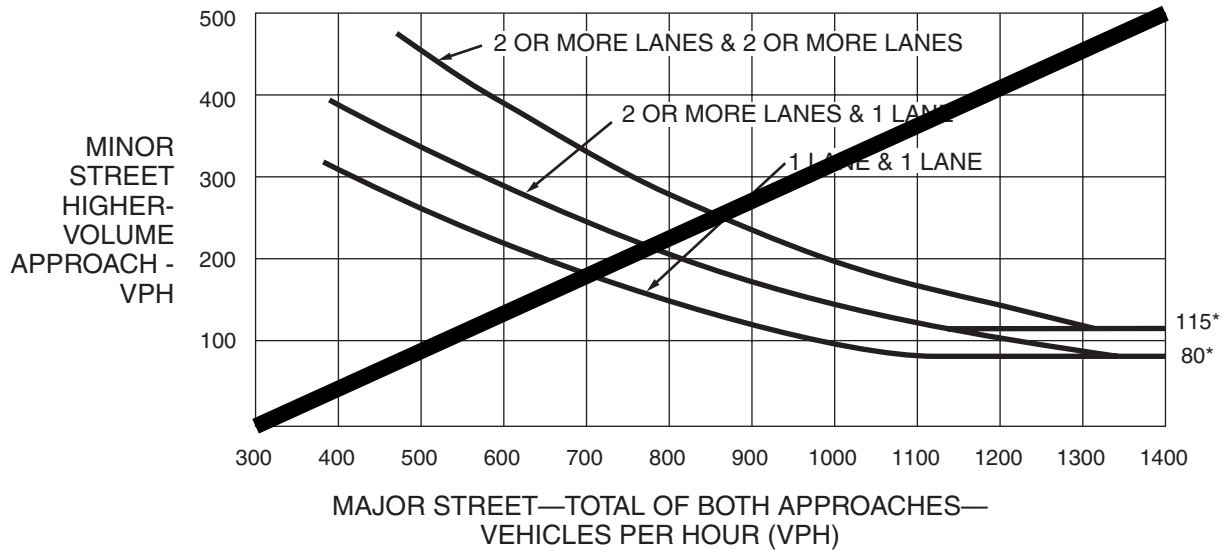
| Number of lanes for moving traffic on each approach | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher-volume minor-street approach (one direction only) | | | |
|---|--------------|--|------------------|------------------|------------------|---|------------------|------------------|------------------|
| Major Street | Minor Street | 100% ^a | 80% ^b | 70% ^c | 56% ^d | 100% ^a | 80% ^b | 70% ^c | 56% ^d |
| 1 | 1 | 750 | 600 | 525 | 420 | 75 | 60 | 53 | 42 |
| 2 or more | 1 | 900 | 720 | 630 | 504 | 75 | 60 | 53 | 42 |
| 2 or more | 2 or more | 900 | 720 | 630 | 504 | 100 | 80 | 70 | 56 |
| 1 | 2 or more | 750 | 600 | 525 | 420 | 100 | 80 | 70 | 56 |

^a Basic minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

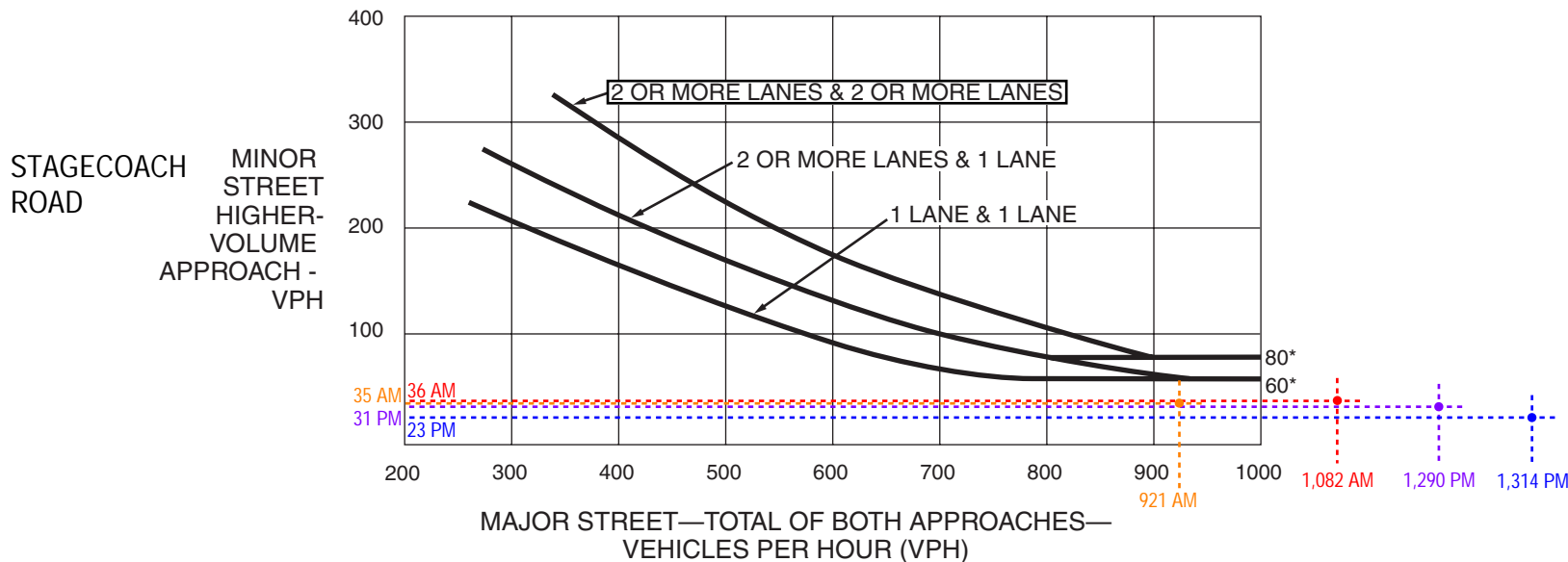
^d May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Figure 4C-1. 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 approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Key:

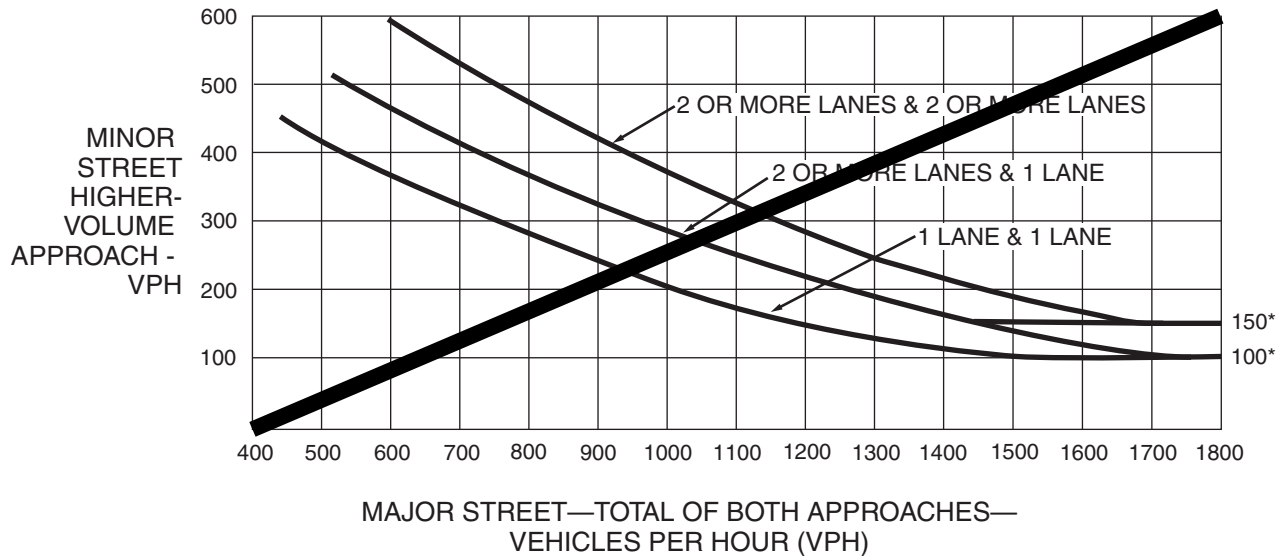
7:00 AM - 8:00 AM

8:00 AM - 9:00 AM

4:00 PM - 5:00 PM

5:00 PM - 6:00 PM

STATE HIGHWAY 83 (55 MPH)

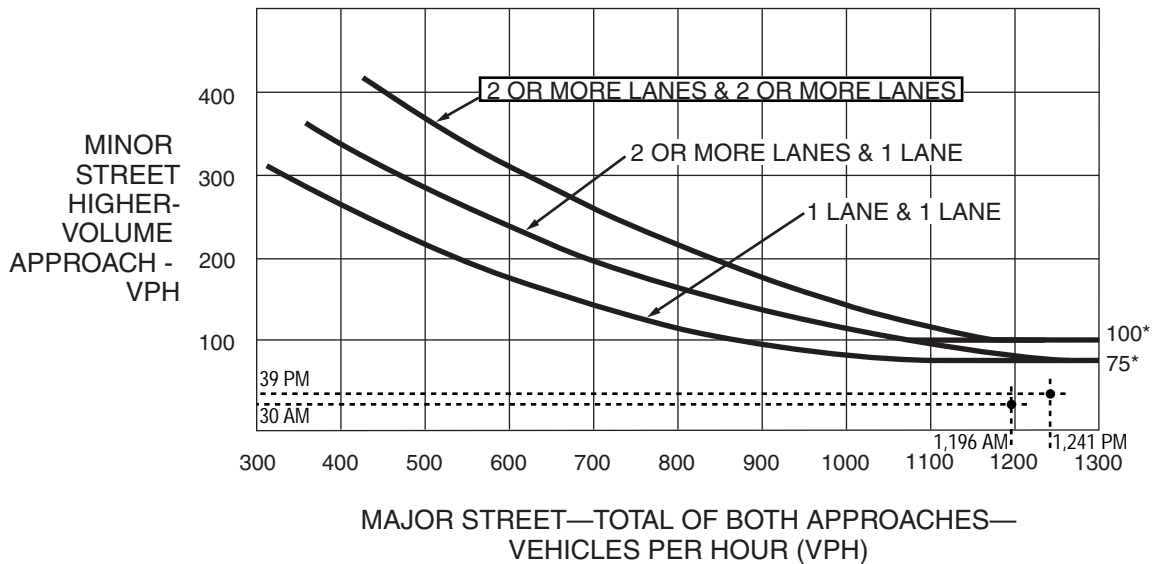
Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

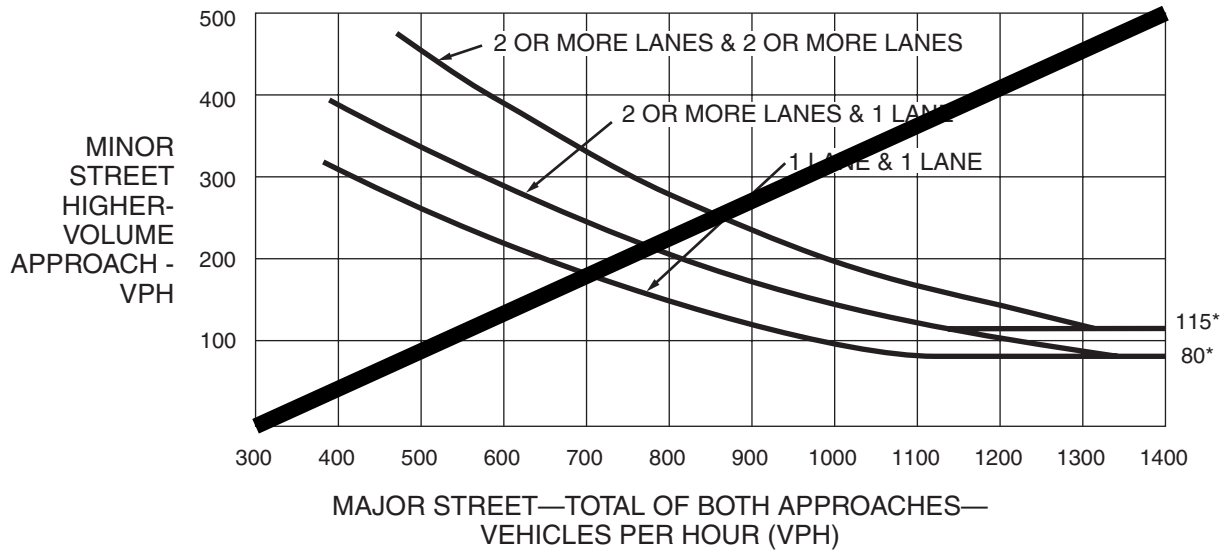
STAGECOACH ROAD



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Note: No right turn reduction applied.

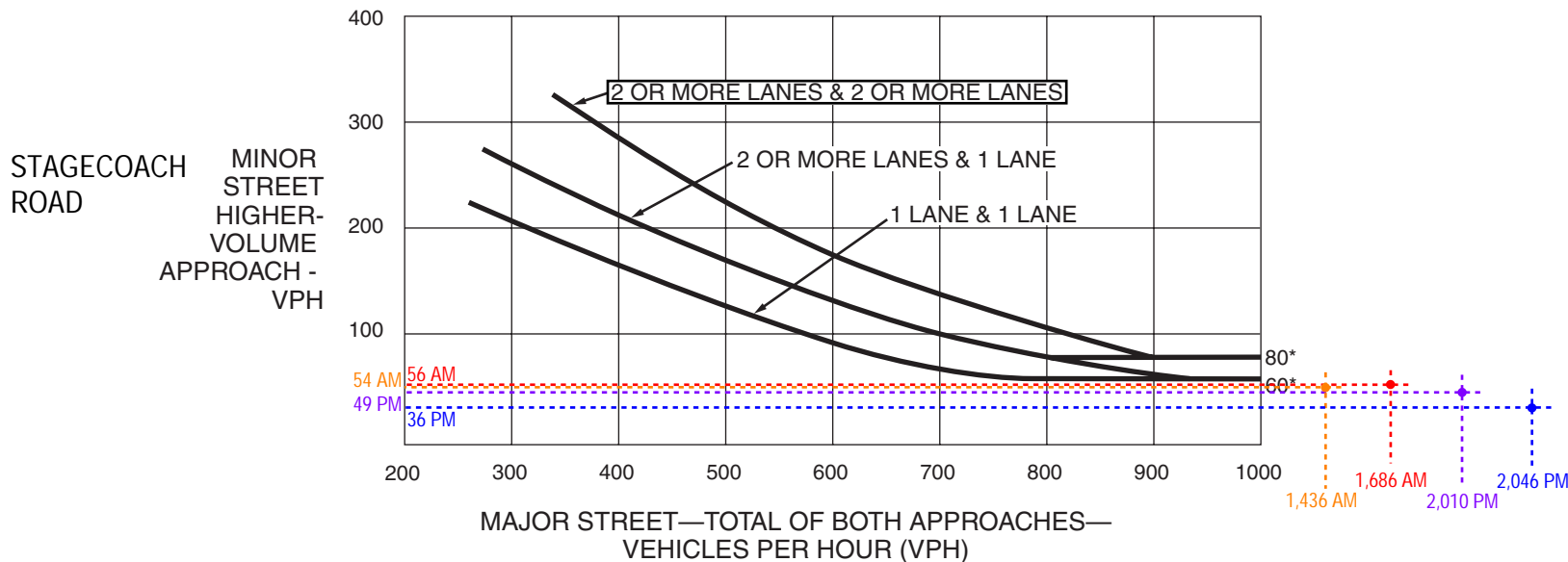
STATE HIGHWAY 83 (55 MPH)

Figure 4C-1. 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 approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Key:

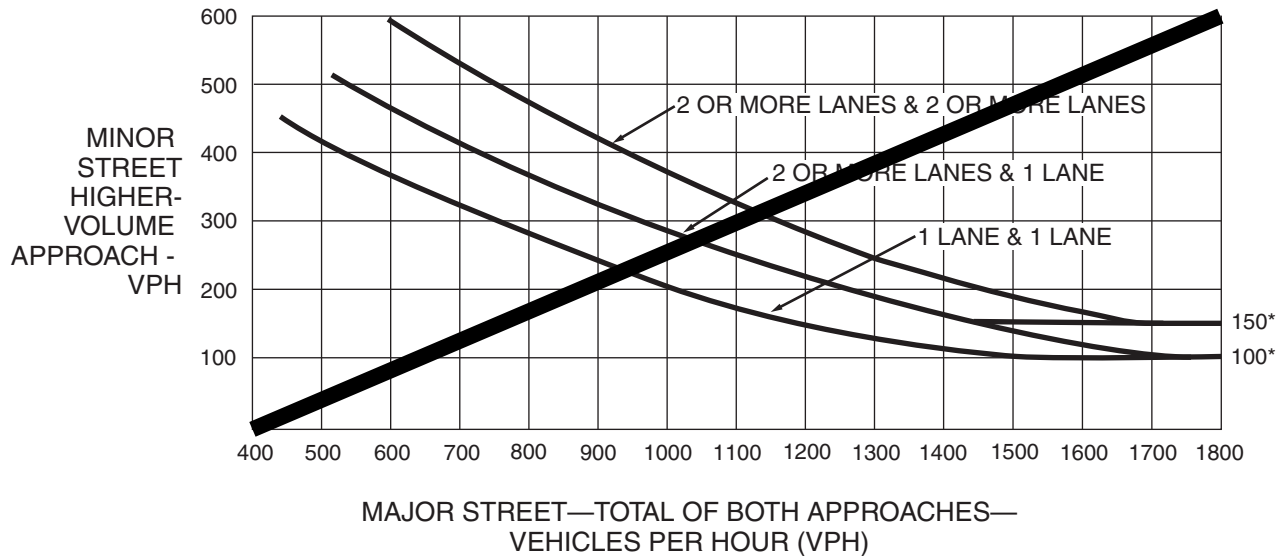
7:00 AM - 8:00 AM

8:00 AM - 9:00 AM

4:00 PM - 5:00 PM

5:00 PM - 6:00 PM

STATE HIGHWAY 83 (55 MPH)

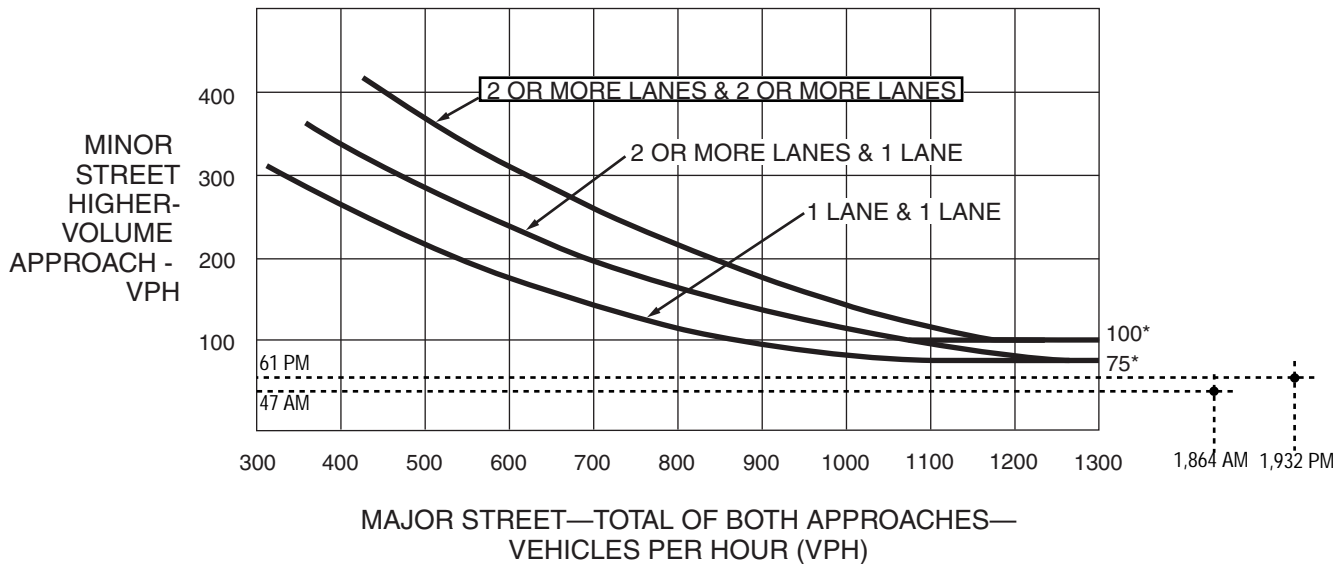
Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

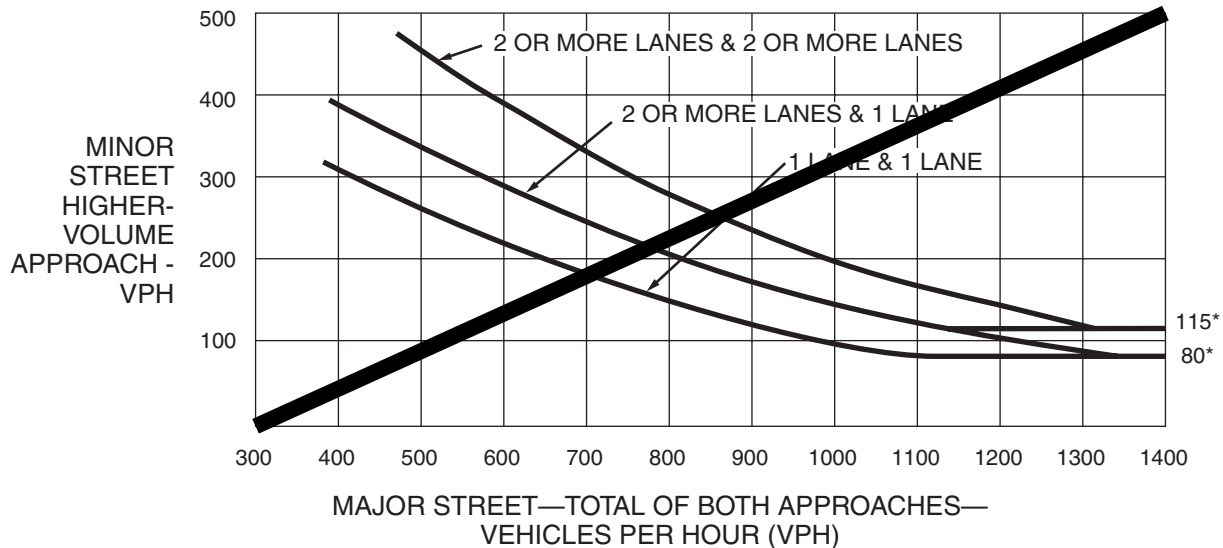
STAGECOACH ROAD



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Note: No right turn reduction applied.

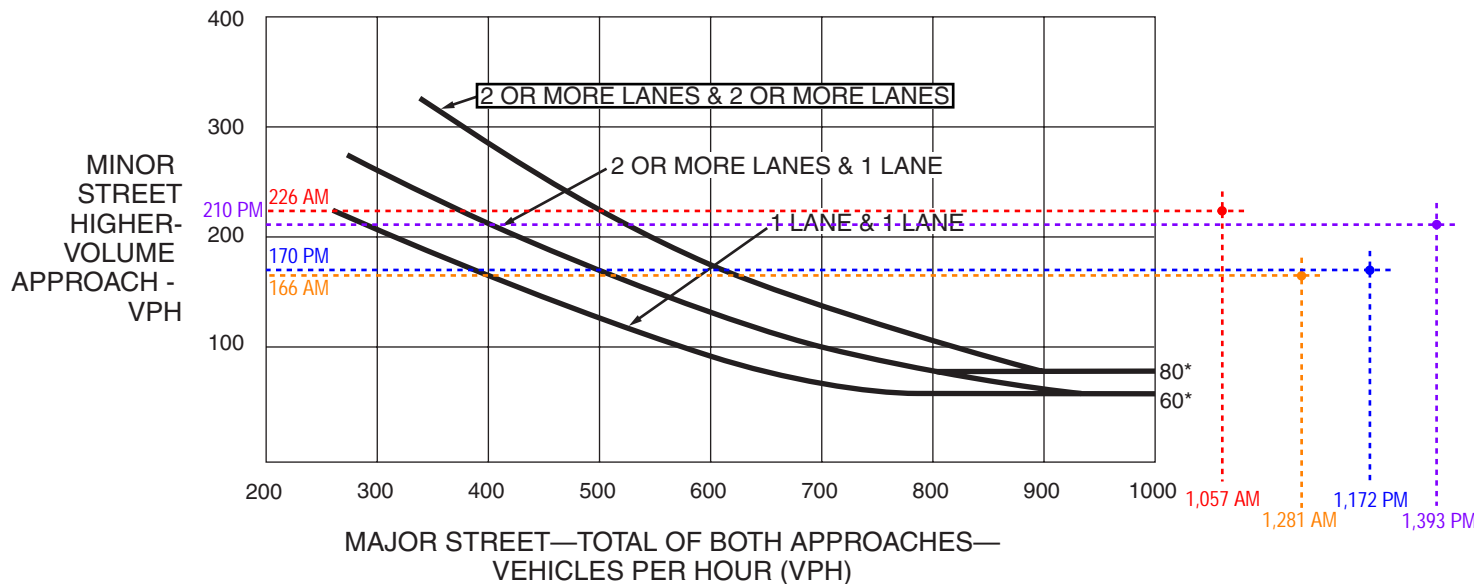
STATE HIGHWAY 83 (55 MPH)

Figure 4C-1. 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 approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Key:

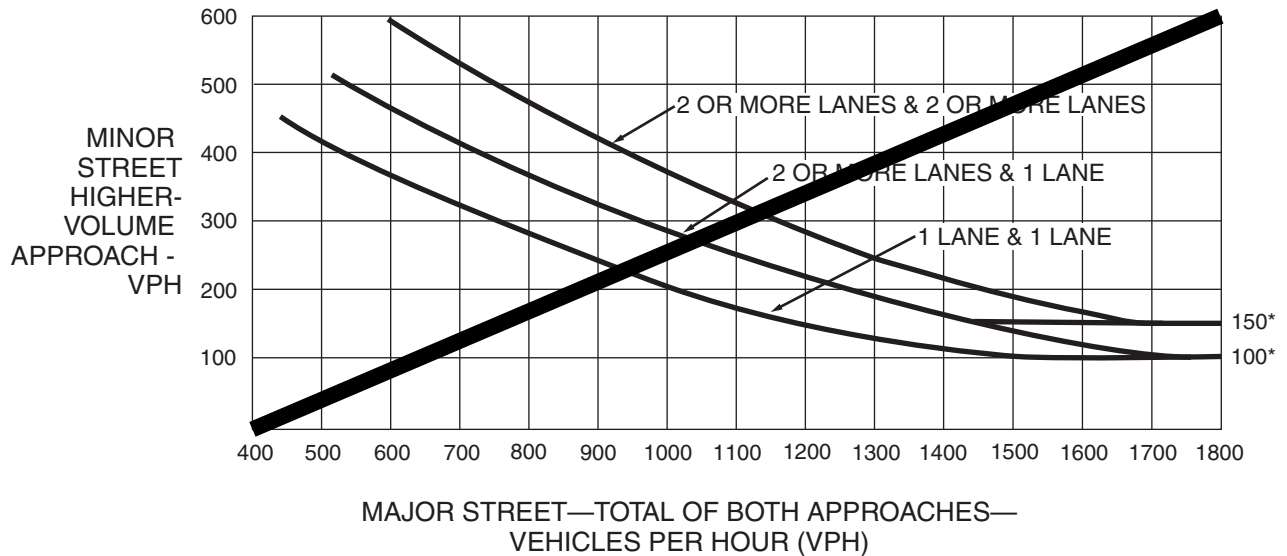
7:00 AM - 8:00 AM

8:00 AM - 9:00 AM

4:00 PM - 5:00 PM

5:00 PM - 6:00 PM

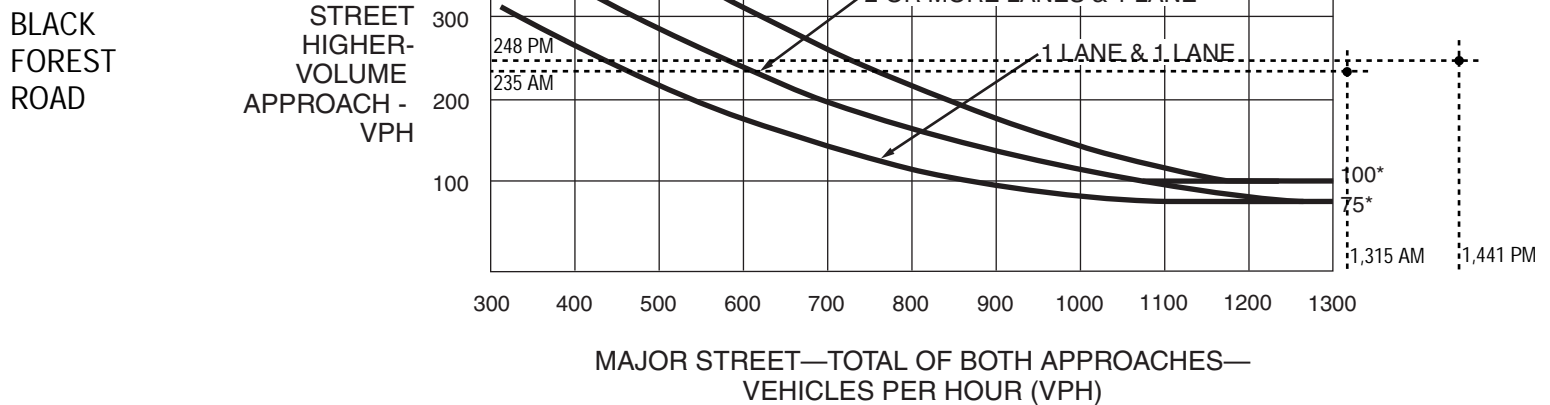
HODGEN ROAD (55 MPH)

Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

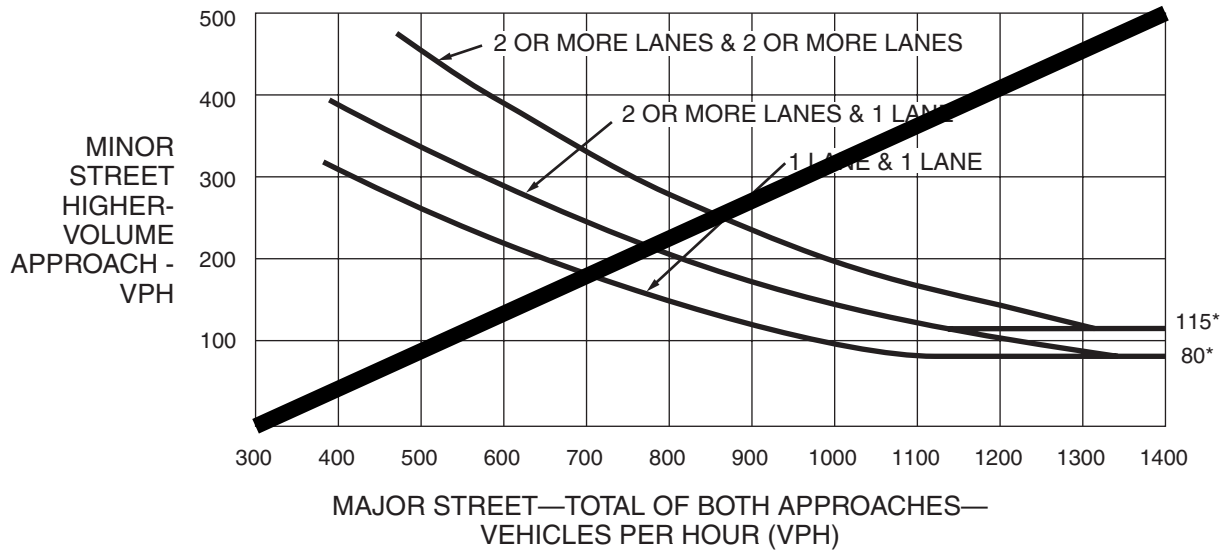
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Note: No right turn reduction applied.

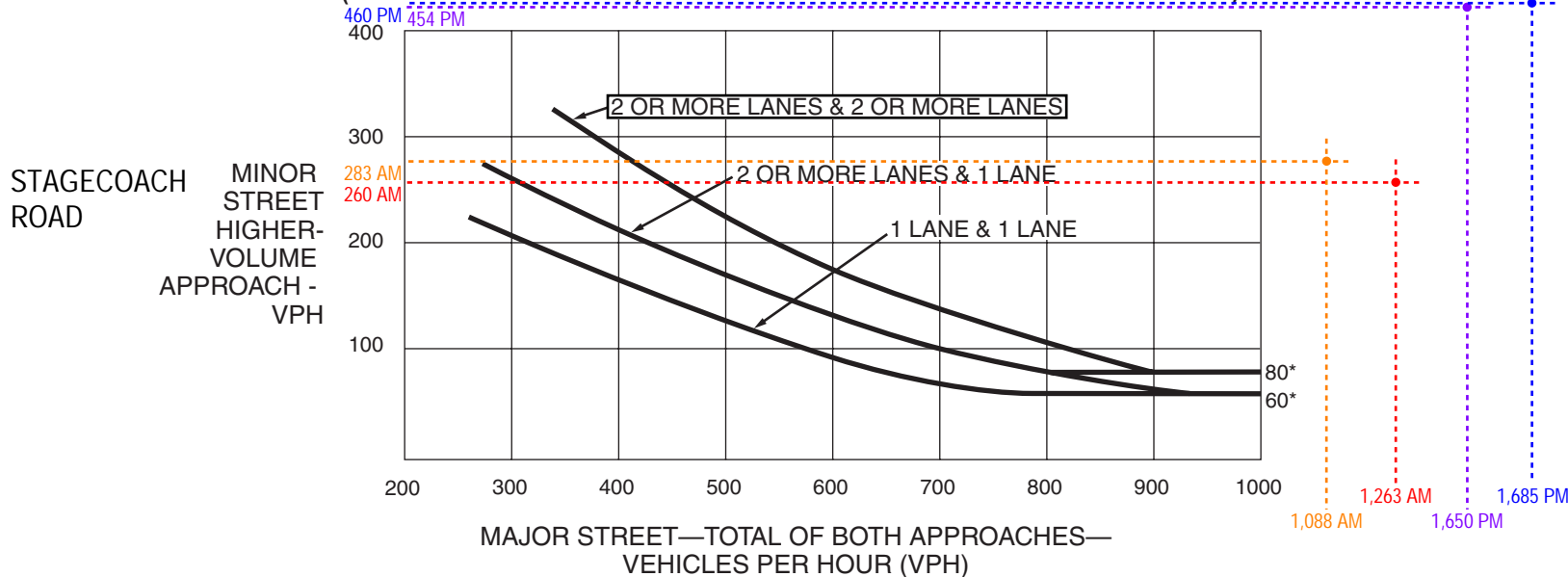
HODGEN ROAD (55 MPH)

Figure 4C-1. 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 approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Key:

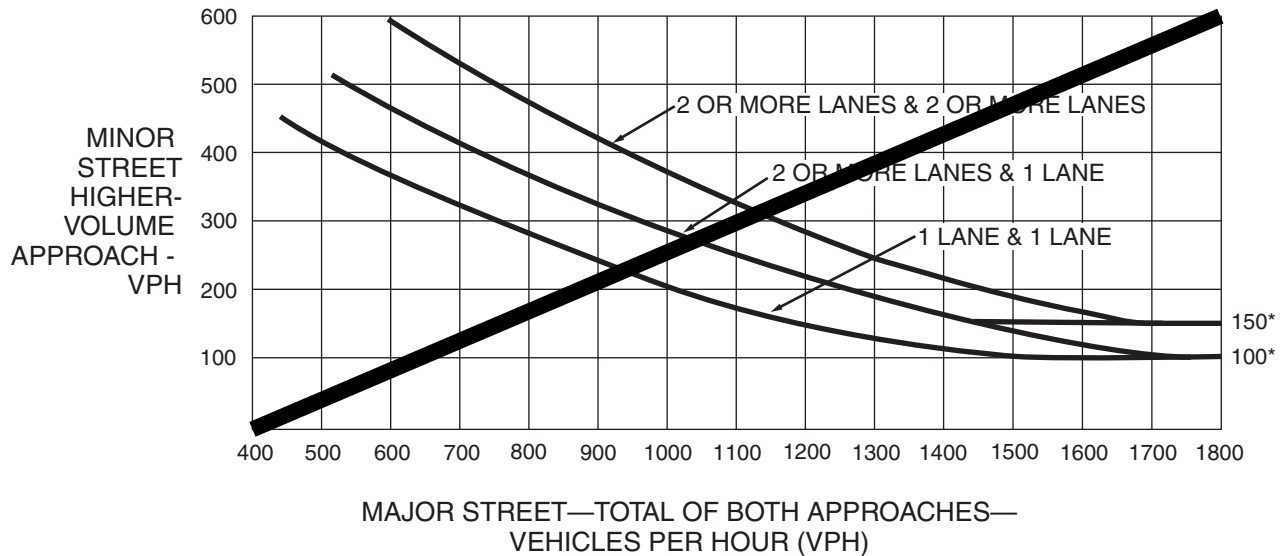
7:00 AM - 8:00 AM

8:00 AM - 9:00 AM

4:00 PM - 5:00 PM

5:00 PM - 6:00 PM

STATE HIGHWAY 83 (55 MPH)

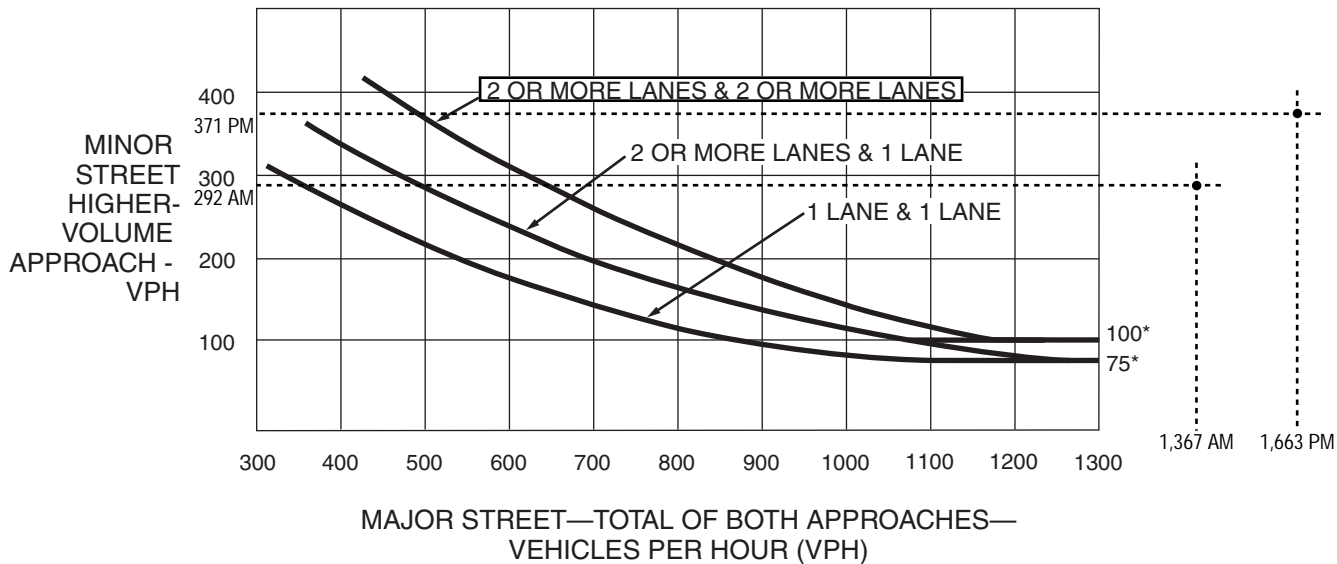
Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

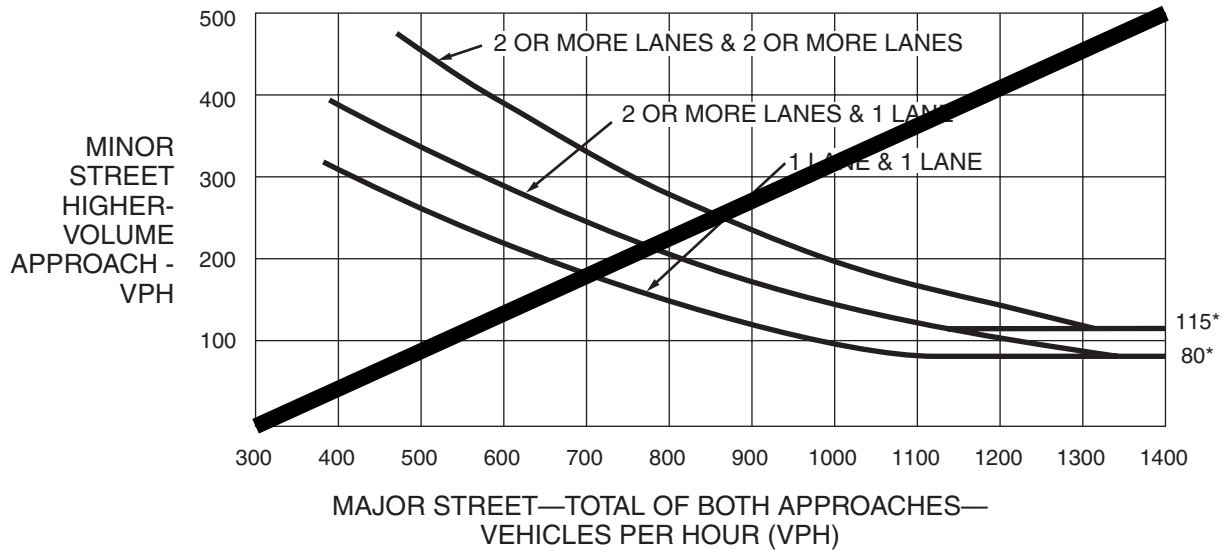
STAGECOACH ROAD



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Note: No right turn reduction applied.

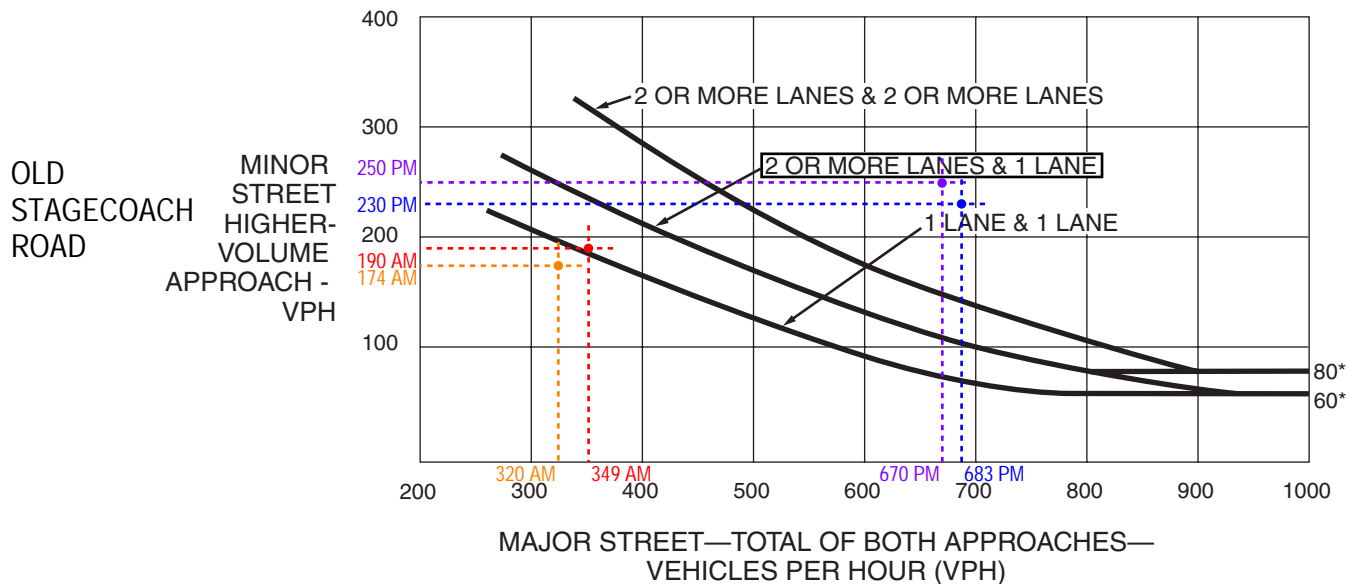
STATE HIGHWAY 83 (55 MPH)

Figure 4C-1. 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 approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Key:

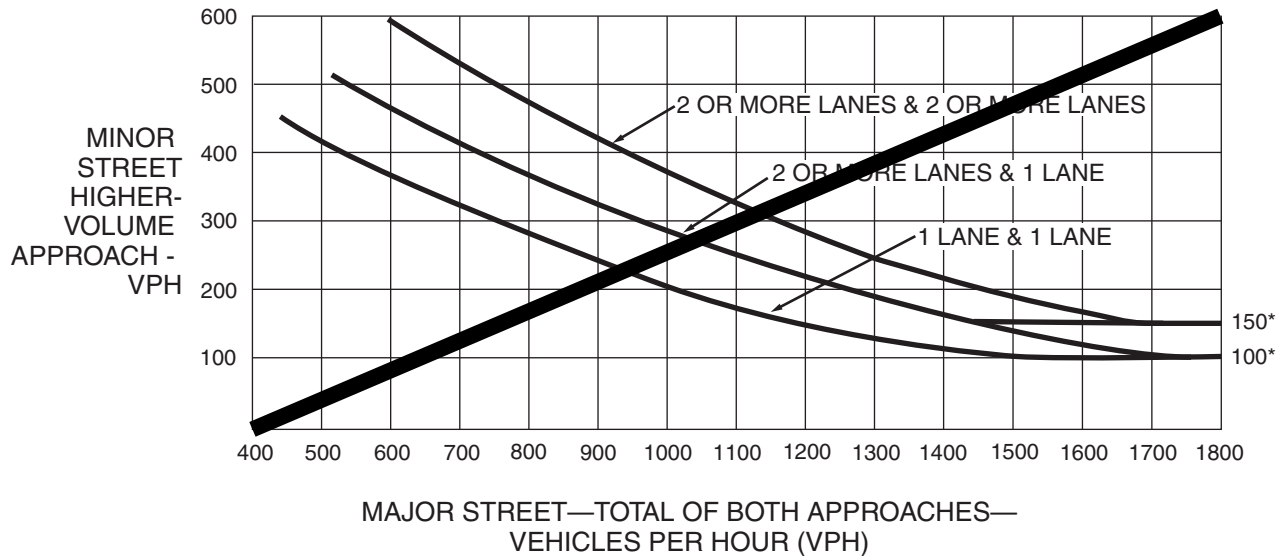
7:00 AM - 8:00 AM

8:00 AM - 9:00 AM

4:00 PM - 5:00 PM

5:00 PM - 6:00 PM

BLACK FOREST ROAD (45 MPH)

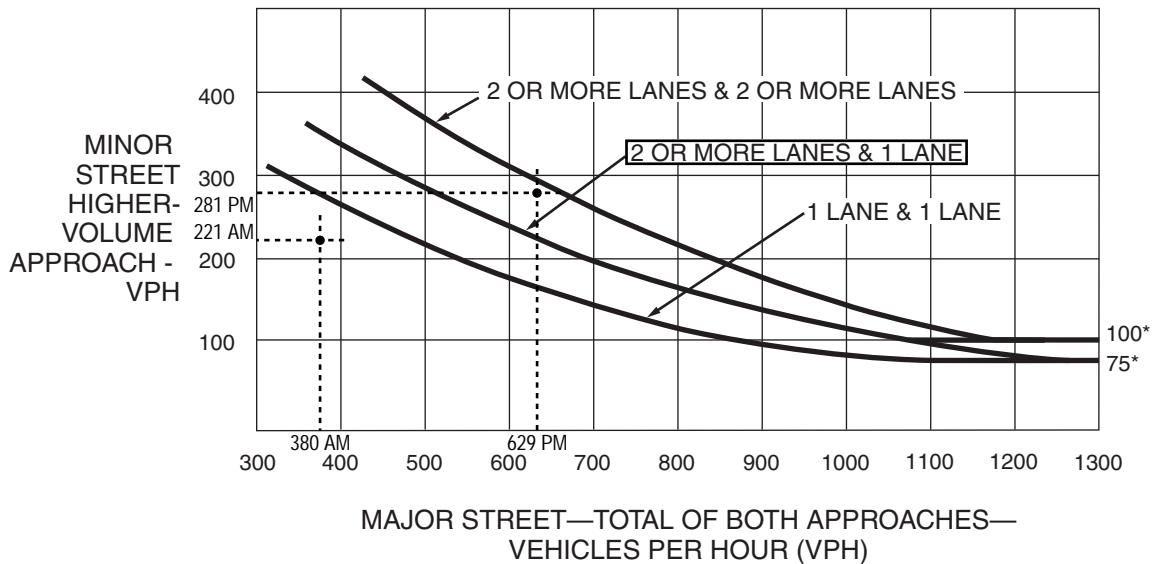
Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

OLD STAGECOACH ROAD



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Note: No right turn reduction applied.

BLACK FOREST ROAD (45 MPH)