Findings of Fact, Conclusions of Law, Conditions of Approval and Order

Conditional Use Permit – CU2022-0007

Findings of Fact

1. The applicant, Borton-Lakey Law representing EW Real Estate, is requesting a conditional use permit to allow a Special Events Facility on parcel no. R33563010.
2. The proposed event facility includes an outdoor amphitheater with a seating capacity of up to 5,000 guests for concerts, events such as weddings, cidery, u-pick orchards, and other supported activities intended to support agritourism.
3. The subject property is located just southeast of 13748 Sunny Slope Rd, Caldwell; also referenced as a portion of the NW ¼ NW ¼ of Section 26, Township 3N, Range 4W; BM; Canyon County, Idaho.
4. The subject property is zoned "A" (Agricultural).
5. The 2020 Canyon County Comprehensive Plan Future Land Use Map designates the area as agricultural.
6. A special events facility is allowed with the approval of a conditional use permit in the agricultural zone (CCZO §07-10-27).
7. The subject property is not located within an Area of City Impact.
8. The subject property is located within Canyon Highway District No. 4, Marsing Fire District, Vallivue School District, and Boise Project Board of Control.
9. A neighborhood meeting was conducted in accordance with CCZO §07-01-15, on June 8, 2022.
10. Notice to agencies was sent on July 22, 2022. Notice to property owners within 1,000 feet was sent on November 10, 2022. Publication in the Idaho Press-Tribune was provided on November 13, 2022, and the property was posted by November 22, 2022.
11. All record herein consists of exhibits provided as part of the public hearing staff report, exhibits submitted during the public hearing on December 1, 2022 and all information in case file CU2022-0034.

Conclusions of Law

For this request, the Planning and Zoning Commission finds and concludes the following regarding the Standards of Review for Conditional Use Permit (§07-07-05):

1. Is the proposed use permitted in the zone by conditional use permit?

Conclusion: The proposed uses are permitted in the "A" (Agriculture) zone by Conditional Use Permit.

Finding: Canyon County Zoning Ordinance §07-10-27 allows a Special Events Facility through the approval of a Conditional Use Permit.

2. What is the nature of the request?

The applicant is requesting a conditional use permit to allow an Agritourism Oriented Special Events Facility to include an outdoor amphitheater with a seating capacity of up to 5,000 guests for concerts, events such as weddings, cidery, u-pick orchards, and other agritourism-supported activities.

3. **Is the proposed use consistent with the Comprehensive Plan?**

Conclusion: The proposed use is consistent with the comprehensive plan.

Finding: The proposed use is consistent with the following goals and policies contained within the 2020 Canyon County Comprehensive Plan:

Chapter 1. Property Rights

Policy 12. Property owners acknowledge and expect that Canyon County will preserve private property rights and values by enforcing regulations that will ensure against incompatible and detrimental neighboring land uses.

Chapter 2. Population

Goal 2. To encourage economic expansion and population growth throughout the county plus increase economic diversity for continued enhancement of our quality of life to meet citizen needs.

Chapter 4. Economic Development

Goal 1. To diversify and improve the economy of Canyon County in ways that are compatible with community values.

Goal 2. To support the agriculture industries by encouraging the maintenance of continued agricultural land uses and related agricultural activities.

Goal 3. Create new jobs that are sustainable and lasting.

Goal 4. Provide an economically viable environment that builds and maintains a diverse base of business.

Policy 2. Support existing business and industry in the county.

Policy 3. Encourage broad-based economic development programs that include:

a. Natural resources such as agriculture
b. Commercial development
c. Industrial development
d. Tourism expansion and development

Policy 4. Encourage growth of responsible business in Canyon County by recruiting businesses based on their potential job creation and their willingness to have a positive impact on the community.

Policy 5. Canyon County should not overdevelop and should retain agricultural lands/uses and control environmental impacts through conditions placed on subdivision plats and conditional use permits.

Policy 6. Encourage commercial and residential development in a controlled, planned, and constructive manner, which will enhance, not destroy, the existing lifestyle and environmental beauty of Canyon County.

****Chapter 4, Economic Development**, of the 2020 Canyon County Comprehensive Plan states: "It (the county) should actively promote tourism assets such as wineries, county fairs, outside recreation, and annual events like the Caldwell night rodeo. The county should work to actively recruit new business that supports tourism requirements."

Chapter 5. Land Use

Goal 5. Achieve a land use balance, which recognizes that existing agricultural uses and non-agricultural development may occur in the same area.

Commercial and Industrial

Policy 1. Encourage commercial and industrial development where there is adequate access to the following services, if applicable:

a. sufficient water;
b. a system to discharge used water;
c. power;
d. transportation.

Policy 3. Consider commercial and industrial development outside the impact areas, when located along major roadways or transportation infrastructure and with approval from the appropriate regulatory agencies concerning sewer and water.

Chapter 8. Public Services, Facilities and Utilities Component

Policy 3. Encourage the establishment of new development to be located within the boundaries of a rural fire protection district.

Chapter 9. Transportation

Policy 13. Ensure that all new development is accessible to regularly maintained roads for fire protection and emergency service purposes.

Policy 19. Require and accept traffic studies in accordance with highway district procedures that evaluate the impact of traffic volumes, both internal and external, on adjacent streets and preserve the integrity of residential neighborhoods where applicable.

Chapter 10. Special Areas, Sites and Recreation

Goal 1. To encourage the preservation of recreational, historical, archeological and architectural landmark areas of the county for the beneficial use of future generations.

Goal 2. Encourage the development of recreational opportunities and facilities.

Policy 1. Encourage the continuation of existing and encourage the creation of new recreational areas and the opportunity for outdoor public recreation areas and activities.

Policy 3. Recognize the special areas in the county and encourage land use patterns in and around them that promote their integrity and purposes.

Policy 6. Encourage activities and events that will celebrate the cultural heritage of Canyon County.

Chapter 12. Community Design

Policy 4. Encourage innovation and excellence in design for all development.

Policy 5. Encourage each development to address concerns regarding roads, lighting, drainage, stormwater runoff, landscaping, re-vegetation of disturbed areas, underground utilities, and weed control.

4. **Will the proposed use be injurious to other property in the immediate vicinity and/or negatively change the essential character of the area?**

Conclusion: The proposed use will be injurious to other properties in the immediate vicinity and would negatively change the essential character of the area.

Finding: The area is primarily agricultural with very limited commercial and residential zoning located in the surrounding area. The proposed special events facility will have a 5,000-capacity amphitheater which does not fit the character of the area, nor found to support the agricultural uses of the area. The Commission found the plans provided by the applicant, including noise study, to be inadequate. Therefore, the request is injurious to other properties in the immediate vicinity and will negatively change the essential character of the area due to unknown and unmitigated potential impacts.

5. **Will adequate water, sewer, irrigation, drainage and storm water drainage facilities, and utility systems be provided to accommodate the use?**

Conclusion: Adequate facilities for sewer, irrigation, drainage, stormwater, and utility systems do not exist but will be provided at the time of development to accommodate the use.

Finding: A centralized water and sewer system, surface water, gravity and pressurized irrigation are proposed to accommodate the use. Stormwater is proposed to be retained on-site by utilizing swales and ponds. Development of the site will be required to meet agency standards to ensure adequate water, sewer, irrigation, drainage, stormwater drainage, and utility systems will be provided to accommodate the use.

6. **Does legal access to the subject property for the development exist or will it exist at the time of development?**

Conclusion: Legal access exists for the subject property.

Finding: The subject property has frontage on Lowell Road and Highway 55/Sunny Slope Road. The existing access on Lowell Rd is consistent with historical agricultural practices. The applicant is proposing to utilize three (3) access points for the proposed use; one (1) will be located on Lowell Road and two (2) will be located on Highway 55.

Lowell Road is designated as a minor arterial and is maintained by Canyon Highway District No. 4. The access point on Lowell Rd is being proposed to be located at the western edge of the site frontage as requested by Canyon Highway District No. 4. Conditions have been added to ensure access requirements are met.

Highway 55 is designated as a principal arterial and is maintained by the Idaho Transportation Department (ITD). Staff has not received comments from ITD; however, the applicant has provided a traffic impact study which was determined through coordination with the highway district and ITD and was prepared in accordance with their requirements. According to the traffic impact study, the two (2) new accesses being proposed on Highway 55 meet the driveway spacing requirements and have adequate sight distance.

7. **Will there be undue interference with existing or future traffic patterns?**

Conclusion: There will be undue interference with existing or future traffic patterns.

Finding: The proposed 5,000-capacity special events facility is estimated to generate 1,316 trips during the peak arrival hour which is set as 4:00 PM – 5:00 PM on the days of events and is estimated to generate 1,967 trips during the peak departure hour which is set as 9:00 PM – 10:00 PM on the days of events.

With the increased background traffic generated in 2024, including the additional traffic being created by the proposed use, there are improvements that will be needed in the general area and to local roads to mitigate the impacts. The applicant is proposing to have a traffic control and management plan for each event to minimize traffic impacts on Lowell Rd and Highway 55 adjacent to the site.

Upon review of the staff report and public testimony received, the Commission found that the traffic impact study lacked review and comments from Idaho Transportation Department. Mitigation measures that are proposed in the traffic impact study are not adequate and found they are unable to mitigate for Level of Service F intersections without funding ability in the immediate future.

8. **Will essential services be provided to accommodate the use, including, but not limited to, school facilities, police and fire protection, emergency medical services, irrigation facilities, and will the services be negatively impacted by such use or require additional public funding in order to meet the needs created by the requested use?**

Conclusion: Adequate essential services will not be provided, and this application will negatively impact existing services or require additional public funding.

Finding: The project is located within the Marsing Fire District, Vallivue School District, Boise Project Board of Control, and Canyon County Sheriff jurisdiction. Upon public testimony received, the Commission found the essential services for this area are inadequate based on stated volunteer fire district response times. The proposed use will

increase the amount of traffic for the area which creates more opportunities for car accidents and fire hazards that the essential services in the area would not be able to handle effectively.

Order

Based upon the Findings of Fact, Conclusions of Law, and Conditions of Approval contained herein, the Planning and Zoning Commission **denies** Case CU2022-0034, a conditional use permit to operate special events facility on Parcel R33563010.

Pursuant to Idaho Code §67-6519, the following actions may be taken to obtain approval:

- Provide adequate plans, noise study, exterior lighting study, and improvement that will minimize potential impact to the area.
  - Reduce the scale of the amphitheater to fit the character of the area.
- Coordinate with local agencies (i.e. Marsing Fire District, Boise Project Board of Control, Canyon County Sheriff, Canyon Highway District, Idaho Transportation Department, etc.) to ensure adequate services and infrastructure will and can be provided including fairshare into future infrastructure improvements.

Pursuant to CCZO Section 07-05-05, the decisions of the commission may be appealed to the board by filing a written notice of appeal with DSD within fifteen (15) calendar days of the date the Findings of Fact, Conclusions of Law and Orders were signed. The notice of appeal should include a statement of the reasons for the appeal and must be accompanied by a filing fee as established by the adopted fee schedule.

DENIED this 15 day of December, 2022.

BONNIE C PULEO
COMMISSION #20215954
NOTARY PUBLIC
STATE OF IDAHO
MY COMMISSION EXPIRES 12/10/2027

PLANNING AND ZONING COMMISSION
CANYON COUNTY, IDAHO

Robert Sturgill, Chairman

State of Idaho)

SS

County of Canyon County)

On this 15th day of December, in the year 2022, before me Bonnie Puleo, a notary public, personally appeared Robert Sturgill, personally known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he(she) executed the same.

Notary: Bonnie C. Puleo

My Commission Expires: 12/10/2027

Your Safety • Your Mobility
Your Economic Opportunity

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

June 1, 2023

Chhang Ream, PE PTOE
181 E 50th St
Garden City, ID 83714
chhream@gmail.com

VIA EMAIL

RE: Sunnyslope Event Facility – Revised ITD Development Condition Memo

Dear Mr. Ream,

The Idaho Transportation Department (ITD) has completed our review of the Sunnyslope Event Facility Traffic Impact Study (TIS) dated April 28, 2023. The proposed development is located southeast corner of Lowell Road and SH-55 (Sunnyslope Road) at mile post 4.7 in Canyon County impact area. The development is proposing to construct two approaches on SH-55 and one approach on Lowell Road for site access.

The following mitigations proposed in the TIS are accepted prior to buildout:

Intersection Mitigations

- **Lowell Rd and SH-55 (Sunnyslope Road)**
  - Westbound right-turn lane on Lowell Rd
- **Access B and SH-55 (Sunnyslope Rd)**
  - Stop-controlled T-intersection
  - Northbound right-turn lane
- **Access C and SH-55 (Sunnyslope Rd)**
  - Stop-controlled T-intersection

In addition, the following conditional mitigations shall be approved prior to annual operations:

Traffic Control Mitigations

- Provide annual traffic control plans for event traffic control. These traffic control plans will be variable according to event size.
- To align with Canyon Highway District 4 required mitigations, traffic control plans shall include temporary barricades which will restrict all traffic movement to westbound only from Access A (Lowell Rd).
- Traffic control plans shall be submitted to ITD for review and approval 14 days prior to event.
  - Notice shall be provided 14 days in advance of event with event size, which traffic control plan will be used and if there are any changes to approved plans.

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

- Provide annual event schedule at the time of traffic control submittal.
- Dynamic Message Signs (DMS) shall be posted a minimum of 72 hours in advance to warn of upcoming events one mile south of Lowell Rd and one mile east of Chicken Dinner Rd.
- Additional notifications to affected residents in a five (5) mile radius of the event facility which may include notification through media, U.S. Postal Service "postcards, and/or social media.

Please submit an ITD-2109 encroachment application complete with engineered drawings and temporary traffic control plans to itdd3permits@itd.idaho.gov. My staff will work with you on reviewing and accepting these documents prior to issuance of an approved permit. No work may begin in ITD's right-of-way without an approved permit.

Be advised, ITD Development Condition Memos are valid for a period of one (1) year after issuance. After which, ITD has the right to require new trip counts to be collected and an updated TIS be submitted to ITD.

Maintaining safety and mobility for Idaho's motorists is of utmost importance to ITD. If you have any questions please contact Development Services Coordinator Niki Benyakhlef at niki.benyakhlef@itd.idaho.gov or 208-334-8337.

Sincerely,

Vincent Trimboli
ITD – District 3
Planning & Development Services Manager

Cc:
Dan Lister, Planning Official – Canyon County Development Services
Jolyn Thompson, City Clerk – City of Marsing
Chris Hopper, District Engineer – Canyon Highway District No. 4

Jenna Petroll

From: Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov>
Sent: Thursday, May 11, 2023 12:19 PM
To: Jenna Petroll
Cc: Vincent Trimboli; Brian Duran
Subject: RE: [External] Sunnyslope Event Facility Update
Attachments: Sunnyslope - ITD Development Conditions memo 051123.pdf

Hello Jenna –

Please see attached development conditions memo for the Sunnyslope facility.

As promised in an earlier email, I also wanted to present a projected timeline for the SH-55 Middleton to Farmway project:

- Complete ROW acquisition early 2024
- Construction is anticipated to begin summer of 2024
- Project is estimating to be a 2 ½ season project.
    - Construction is anticipated to be wrapping up early 2027

As a reminder, SH-55 Farmway to Pear Ln is *unfunded* at this time, however scoping and design may begin in 2024.

Please let me know if you have any other questions or concerns.

Thanks!

Niki Benyakhlef
Development Services Coordinator

District 3 Development Services
O: 208.334.8337 | C: 208.296.9750
Email: niki.benyakhlef@itd.idaho.gov
Website: itd.idaho.gov

From: Jenna Petroll <Jenna.Petroll@canyoncounty.id.gov>
Sent: Tuesday, April 11, 2023 7:49 AM
To: Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov>
Subject: RE: [External] Sunnyslope Event Facility Update

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

Thank you for the information! I will pass this along to my Director.

TRAFFIC IMPACT STUDY UPDATE

SUNNYSLOPE EVENT FACILITY

Canyon County, Idaho
September 23, 2022
Updated: April 28, 2023

Prepared For:

EW REAL ESTATE, LLC

Prepared By:

CR ENGINEERING, INC.

181 East 50th Street
Garden City, ID 83714
(208) 841-4996

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Table of Contents

EXECUTIVE SUMMARY 1
1.0 Proposed Development 2
2.0 Improvements Needed to Mitigate 2022 Existing Traffic Conditions 3
3.0 Improvements Needed to Mitigate 2024 Build-Out Year Background Traffic Conditions 3
4.0 Improvements Needed to Mitigate 2024 Build-Out Year Total Traffic Conditions 3
5.0 Improvements Needed to Mitigate 2029 Horizon Year Background Traffic Conditions 5
6.0 Improvements Needed to Mitigate 2029 Horizon Year Total Traffic Conditions 5

1.0 INTRODUCTION 6
1.1 Proposed Development 7
1.2 Study Approach 8
1.3 Study Area 8
1.4 Study Period 8
1.5 Analysis Methods and Performance Measure Thresholds 8

2.0 EXISTING CONDITIONS 9
2.1 Roadway Network, Lane Configuration, and Intersection Control 9
2.2 Existing Traffic Volumes 9
2.3 Intersection Crash Data 9
2.4 Intersection Operations 12
2.5 Intersection Mitigation 12

3.0 2024 BUILD-OUT YEAR BACKGROUND TRAFFIC CONDITIONS 13
3.1 Roadway Network 13
3.2 Background Traffic 13
3.3 Intersection Operations 15
3.4 Intersection Mitigation 15
3.5 SH 55 Roadway Segment Operations 15

4.0 2024 BUILD-OUT YEAR TOTAL TRAFFIC CONDITIONS 16
4.1 Roadway Network 16
4.2 Site Traffic 16
4.2.1 Trip Generation 16
4.2.2 Trip Capture and Pass-By Trips 16
4.2.3 Modal Split 16
4.2.4 Trip Distribution and Assignment 16
4.3 Total Traffic 16
4.4 Intersection Operations 22
4.5 Intersection Mitigation 22
4.6 SH 55 Roadway Segment Operations 26
4.7 Site Access and Circulation 27
4.8 Alternate Site Access Scenario 30

5.0 2029 HORIZON YEAR BACKGROUND TRAFFIC CONDITIONS 32
5.1 Roadway Network 32
5.2 Background Traffic 32
5.3 Intersection Operations 32
5.4 Intersection Mitigation 32

6.0 2029 HORIZON YEAR TOTAL TRAFFIC CONDITIONS 35
6.1 Site Traffic 35
6.2 Total Traffic 35

6.3 Intersection Operations 35
6.4 Intersection Mitigation 40
6.5 SH 55 Roadway Segment Operations 41
6.6 Alternate Site Access Scenario 42

APPENDIX A: SCOPE ..... A

APPENDIX B: TRAFFIC COUNTS ..... B

APPENDIX C: 2022 SYNCHRO REPORT C

APPENDIX D: 2024 BACKGROUND SYNCHRO REPORT ..... D

APPENDIX E: 2024 TOTAL SYNCHRO & SIM TRAFFIC REPORT ..... E

APPENDIX F: 2029 BACKGROUND SYNCHRO REPORT ..... F

APPENDIX G: 2029 TOTAL SYNCHRO & SIM TRAFFIC REPORT ..... G

APPENDIX H: TURN LANE WARRANT WORKSHEETS ..... H

APPENDIX I: COMPASS TRAFFIC FORECASTS I

APPENDIX J: TRIP GENERATION DATA ..... J

APPENDIX K: MUTCD SIGNAL WARRANT ANALYSIS WORKSHEETS ..... K

List of Figures

Figure 1.1 – Site Location and Vicinity 6
Figure 1.2 – Preliminary Site Plan 7
Figure 2.1 – Existing Study Area Intersection Control and Lane Configuration 10
Figure 2.2 – 2022 Existing Friday Evening Peak Hour Traffic 11
Figure 3.1 – 2024 Build-Out Year Friday Evening Peak Hour Background Traffic 14
Figure 4.1 – Estimated Site Traffic Distribution Patterns 17
Figure 4.2 – 2024 Build-Out Year Peak Arrival Hour Site Traffic 18
Figure 4.3 – 2024 Build-Out Year Peak Departure Hour Site Traffic 19
Figure 4.4 – 2024 Build-Out Year Peak Arrival Hour Total Traffic 20
Figure 4.5 – 2024 Build-Out Year Peak Departure Hour Total Traffic 21
Figure 4.6 – Site Access, Circulation, and Spacing 28
Figure 5.1 – 2029 Horizon Year Friday Evening Peak Hour Background Traffic 33
Figure 6.1 – 2029 Horizon Year Peak Arrival Hour Total Traffic 36
Figure 6.2 – 2029 Horizon Year Peak Departure Hour Total Traffic 37

List of Tables

Table 1 – Proposed Improvements Summary....1
Table 2.1 – Existing Roadway Characteristics....9
Table 2.2 – Intersection Crash Data (2017-2021)....9
Table 2.3 – Intersection Operations – 2022 Existing Traffic....12
Table 2.4 – Chicken Dinner Road and SH 55 Intersection – 2022 Existing Traffic Mitigation....12
Table 3.1 – Planned Improvements Summary....13
Table 3.2 – Intersection Operations – 2024 Build-Out Year Background Traffic....15
Table 4.1 – Build-Out Site Trip Generation Summary....16
Table 4.2 – Build-Out Site Traffic Percentage of 2024 Build-Out Year Total Traffic....17
Table 4.3 – Intersection Operations – 2024 Build-Out Year Total Traffic....22
Table 4.4 – Chicken Dinner Road and SH 55 Intersection – 2024 Build-Out Year Total Traffic Mitigation....24
Table 4.5 – Lowell Road and SH 55 Intersection – 2024 Build-Out Year Total Traffic Mitigation....25
Table 4.6 – SH 55 Segment Travel Time Comparison Summary – 2024 Build-Out Year Traffic....26
Table 4.7 – Site Access Intersection Operations – 2024 Build-Out Year Total Traffic....30
Table 4.8 – Intersection Operations – 2024 Build-Out Year Total Traffic (No Access C)....31
Table 5.1 – Intersection Operations – 2029 Horizon Year Background Traffic....34
Table 6.1 – Build-Out Site Traffic Percentage of 2029 Horizon Year Total Traffic....35
Table 6.2 – Intersection Operations – 2029 Horizon Year Total Traffic....38
Table 6.3 – Chicken Dinner Road and SH 55 Intersection – 2029 Horizon Year Total Traffic Mitigation....41
Table 6.4 – SH 55 Segment Travel Time Comparison Summary – 2029 Horizon Year Traffic....42
Table 6.5 – Intersection Operations – 2029 Horizon Year Total Traffic (No Access C)....43

EXECUTIVE SUMMARY

EW Real Estate, LLC is developing the Sunnyslope Event Facility located southeast of the Lowell Road and Sunnyslope Road (SH 55) intersection in Canyon County, Idaho, as shown in **Figure 1.1**. CR Engineering, Inc. has been retained to prepare a traffic impact study (TIS) for the proposed development. The scope of the TIS was determined through coordination with the Canyon Highway District No. 4 (CHD4) and the Idaho Transportation Department (ITD) and was prepared in accordance with their requirements.

The original TIS for the project was completed and submitted to ITD and CHD4 for review on September 23, 2022. After review, ITD would like to exclude the study area intersection of Farmway Road and SH 55, exclude off-site traffic for in-process developments that are not approved in background traffic, and verify event traffic impacts and mitigations. ITD requested a TIS update to reflect these changes.

The TIS update evaluates the potential traffic impacts resulting from background traffic growth and the proposed development and identifies improvements to mitigate the traffic impacts if needed. The traffic impacts were evaluated under the peak hour of the event traffic arrival and departure conditions. **Table 1** summarizes the improvements needed to mitigate the impacts of the following years traffic conditions:

- 2022 existing traffic
- 2024 build-out year background traffic
- 2024 build-out year total traffic
- 2029 horizon year background traffic
- 2029 horizon year total traffic

Table 1 – Proposed Improvements Summary

Intersection or Roadway		2022 Existing	2024 Build-Out Year Traffic		2029 Horizon Year Traffic	
			Background	Total	Background	Total
Prior mitigation improvements included in the analysis		NA	2022 Existing	2022 Existing 2024 Background	2022 Existing 2024 Background	2022 Existing 2024 Background 2024 Total 2029 Background
1	Chicken Dinner Rd and SH 55	**EB + WB [1] left-turn lanes**	None beyond [1] prior improvements	**Temporary traffic signal [2] with NB right-turn lane**	None beyond [1] prior improvements	None beyond [2] prior improvements
2	Lowell Rd and SH 55	None	None	**Temporary traffic signal with WB right-turn lane**	None	None beyond prior improvements
3	Access A and Lowell Rd	NA	NA	**Stop-controlled T-intersection with EB right-turn lane and WB left-turn lane [1]**	NA	None beyond [1] prior improvements
4	Access B and SH 55	NA	NA	**Stop-controlled T-intersection with NB right-turn lane [1]**	NA	None beyond [1] prior improvements
5	Access C and SH 55	NA	NA	**Stop-controlled T-intersection**	NA	None beyond prior improvements
SH 55, Between the site and Chicken Dinner Rd		None	None	None	None	None

[1] Meets minimum operational thresholds without turn lane(s)

[2] One or more lane groups are anticipated to exceed ITD minimum operational thresholds

1.0 Proposed Development

1.1 Sunnyslope Event Facility is a proposed outdoor performance venue with the anticipated build-out year of 2024 but may change depending on the market conditions:

- The venue attendance capacity is 5,000 persons
- The site is estimated to contain approximately 2,500 parking spaces
- The venue is estimated to host 60-70 events per year
- The events will be held during the summer months between May and October
- The events will be held in the evenings on both weekdays and weekends

1.2 The development is proposing to construct two driveways on SH 55 and one driveway on Lowell Road for site access:

- Access A on Lowell Road
  - Full access driveway located 930 feet east of SH 55
    - CHD4 requested the access on Lowell Road to be located at the eastern edge of the site frontage
  - Anticipated to warrant the following turn lanes based on NCHRP Report 457 turn-lane guidelines:
    - An eastbound right-turn lane
    - A westbound left-turn lane
  - Estimated to have adequate intersection sight distance exceeding the 500-foot minimum sight distance for a 45-mph roadway
    - There is an existing vertical curve on Lowell Road to the east but is not expected to impact the intersection sight distance
    - Landscape design and building offset should not obstruct intersection sight distance
- Access B on SH 55
  - Full access driveway located approximately 1,320 feet south of Lowell Road and 650 feet north of Access C
    - Meets the 1,000-feet minimum driveway spacing upstream of a public road intersection on SH 55, a 55-mph Statewide Route
  - Anticipated to warrant the following turn lane based on ITD turn-lane guidelines:
    - A northbound right-turn lane
  - Estimated to have adequate intersection sight distance exceeding the 610-foot minimum sight distance for a 55-mph roadway
    - Landscape design and building offset should not obstruct intersection sight distance
- Access C on SH 55
  - Full access driveway located approximately 650 feet south of Access B
    - Meets the 650-feet minimum driveway spacing on SH 55
    - Planned to be a shared driveway, also serving the existing eight (8) parcels to the south
  - Based on ITD turn-lane guidelines, a northbound right-turn turn lane is not warranted
  - Estimated to have adequate intersection sight distance exceeding the 610-foot minimum sight distance for a 55-mph roadway
    - Landscape design and building offset should not obstruct intersection sight distance

1.3 The Sunnyslope Event Facility is expected to have a traffic control and management plan for each event to minimize the event traffic impacts on Lowell Road and SH 55 adjacent to the site. The event coordinator should work with the local agencies to obtain the required permits and approval for the traffic control and management plan

- Temporary traffic signals could be a part of the event temporary traffic control plan

2.0 Improvements Needed to Mitigate 2022 Existing Traffic Conditions

2.1 With 2022 existing traffic, all study area intersections currently meet minimum operational thresholds analyzed with the existing intersection control and lane configuration. One study area intersection warrants turn lanes based on AASHTO left-turn lane guidelines. The intersection and warranted turn lanes are:

- **Chicken Dinner Road and SH 55 intersection**
  - Eastbound left-turn lane
  - Westbound left-turn lane

3.0 Improvements Needed to Mitigate 2024 Build-Out Year Background Traffic Conditions

3.1 With 2024 background traffic, all study area intersections are anticipated to continue to meet minimum operational thresholds analyzed with the existing intersection control and lane configuration or with the turn lanes warranted under existing conditions. No additional turn lanes are warranted based on ITD turn lane guidelines. As a result, no additional improvements are needed to mitigate 2024 background traffic operations

4.0 Improvements Needed to Mitigate 2024 Build-Out Year Total Traffic Conditions

4.1 Site trip generation is typically estimated using the procedures recommended in the latest edition of the *Trip Generation Manual (11th Edition)*, published by the Institute of Transportation Engineers (ITE). However, the proposed land use does not have trip-generating characteristics corresponding to a standard land use category as defined in the latest edition of the Trip Generation Manual. For this TIS, site trip generation was estimated based on trip generation data from an existing music venue provided by the client. Two event traffic conditions were evaluated in this TIS:

- Peak arrival hour 4:00-5:00 PM: Event traffic is expected to arrive at the site randomly within two (2) hours before the event starts. The site is estimated to generate 1,431 trips during the peak arrival hour
- Peak departure hour 9:00-10:00 PM: Event traffic is expected to exit the site within one (1) hour after the event ends. The site is estimated to generate 2,070 trips during the peak departure hour
- No internal capture trips or pass-by trips are assumed in the TIS
- All trips generated by the site were assumed to be made by personal and commercial vehicles, as well as shuttle and motorhome buses

4.2 The estimated site traffic distribution patterns based on the population areas are:

- 1% traveling on Lowell Road west of the site
- 78% traveling on SH 55 east of Farmway Road
  - 20% traveling on Lowell Road east of the site
- 1% traveling on Chicken Dinner Road north of SH 55
- 10% traveling on Farmway Road north of SH 55
- 10% traveling on SH 55 south of Lowell Road

4.3 With 2024 total traffic, the external study area intersections are anticipated to exceed minimum operational thresholds analyzed with the existing intersection control and lane configurations or with the turn lanes needed under 2022 existing traffic conditions. The intersections, operational deficiencies, and needed improvements are:

- **Chicken Dinner Road and SH 55 intersection**
  - The northbound and southbound approaches are anticipated to operate at the level of service (LOS) F with volume-to-capacity (v/c) ratios exceeding 1.00 for a short duration during the peak arrival and departure hours
  - No improvements are programmed at the intersection. According to the ITD long-term SH 55 corridor plan, SH 55 is planned to be widened to five lanes and signalized at one-mile intersection spacing
  - The following improvements are needed to mitigate 2024 build-out year total traffic operations:
    - Install a temporary traffic signal
      - Intersections satisfies MUTCD Warrant 3, Peak Hour, under 2024 total traffic conditions
    - Construct a northbound right-turn lane
    - Construct left-turn lanes on the eastbound and westbound approaches
      - Warranted under 2022 existing traffic conditions
  - With these improvements, all lane groups are anticipated to meet ITD minimum operational thresholds except for one lane group
    - The v/c ratio for the eastbound shared through/right-turn lane group is anticipated to exceed ITD 0.90 threshold for a short duration during the peak departure hour and meet minimum operational thresholds during all other times
- **Lowell Road and SH 55 intersection**
  - The westbound approach is anticipated to operate at LOS F with a v/c ratio exceeding 1.00 for a short duration during the peak departure hour
  - The are no improvements programmed at the intersection. According to the SH 55 corridor plan, the intersection is planned to be signalized in the long-term
  - The following improvements are needed to mitigate 2024 total traffic operations:
    - Install a temporary traffic signal
      - Intersections satisfies MUTCD Warrant 3, Peak Hour, under 2024 total traffic conditions
    - Construct a westbound right-turn lane

4.4 With 2024 total traffic, the study area segment of SH 55 is anticipated to operate under capacity as a two-lane highway west of Chicken Dinner Road. No roadway capacity improvements are needed beyond the intersection improvements

- The event traffic is not expected to significantly impact the travel time on the study area segment of SH 55 between the site and Chicken Dinner Road with the intersection mitigation improvements:
  - During the 4-5 PM peak arrival hour, the total travel time is estimated to increase by less than one (1) minute in the minor northbound direction and less than two (2) minutes in the major southbound direction
  - During the 9-10 PM peak departure hour, the total travel time is estimated to increase by less than four (4) minutes in the major northbound direction and less than one (1) minute in the minor southbound direction

5.0 Improvements Needed to Mitigate 2029 Horizon Year Background Traffic Conditions

5.1 With 2029 background traffic, all study area intersections are anticipated to continue to meet minimum operational thresholds analyzed with the existing intersection control and lane configuration or with the turn lanes warranted under 2022 existing traffic conditions. No additional turn lanes are warranted based on ITD turn lane guidelines. As a result, no additional improvements are needed to mitigate the 2029 horizon year background traffic operations

6.0 Improvements Needed to Mitigate 2029 Horizon Year Total Traffic Conditions

6.1 With 2029 total traffic, one study area intersection is anticipated to exceed minimum operational thresholds analyzed with the existing intersection control and lane configuration or improvements needed under prior traffic analysis conditions. The intersection, operational deficiencies, and mitigation improvements are:

- **Chicken Dinner Road and SH 55 intersection**
  - The intersection is anticipated to meet minimum operational thresholds, except for two lane groups:
    - The westbound shared through/right-turn lane group is anticipated to operate with a v/c ratio of 0.94 during the peak arrival hour for a short duration, exceeding ITD 0.90 threshold
    - The eastbound shared through/right-turn lane group is anticipated to operate with a v/c ratio exceeding 1.00 for a short duration during the peak departure hour
  - No additional improvements beyond the temporary traffic signal and turn lanes needed under 2024 total traffic conditions are needed to mitigate 2029 total traffic operations:
    - These operational deficiencies are expected to occur for only a short duration during the event peak arrival and departure hours and meet operational thresholds during all other times
    - Adding right-turn lanes on the eastbound and westbound approaches are not expected to reduce the lane group v/c ratios to below 0.90
      - The eastbound and westbound right-turn volumes are low during the event peak arrival and departure hours
    - The SH 55 segment west of Chicken Dinner Road is anticipated to operate under capacity as a two-lane highway under 2029 horizon year total traffic conditions

6.2 With 2029 total traffic, the study area segment of SH 55 is anticipated to operate under capacity as a two-lane highway west of Chicken Dinner Road. No roadway capacity improvements are needed beyond the intersection improvements

- The event traffic is not expected to significantly impact the travel time on the study area segment of SH 55 between the site and Chicken Dinner Road with the intersection mitigation improvements:
  - During the 4-5 PM peak arrival hour, the total travel time is estimated to increase by less than one (1) minute in the minor northbound direction and less than two (2) minutes in the major southbound direction
  - During the 9-10 PM peak departure hour, the total travel time is estimated to increase by less than seven (7) minutes in the major northbound direction and less than one (1) minute in the minor southbound direction

1.0 INTRODUCTION

The proposed Sunnyslope Event Facility is located southeast of the Lowell Road and Sunnyslope Road (SH 55) intersection in Canyon County, Idaho. **Figure 1.1** shows the site location and its vicinity. CR Engineering, Inc. completed the original traffic impact study (TIS) for the project and submitted it to the Idaho Transportation Department (ITD) and Canyon Highway District No. 4 (CHD4) for review. ITD and CHD4 provided review comments and the TIS was revised to address their comments and resubmitted. After further discussion and consideration, ITD requested a TIS update to reflect the following changes:

- Remove the Farmway Road and SH 55 intersection from the study area
- Exclude off-site traffic generated by the in-process Snake River Wine Estates from the background traffic, as the project application has been withdrawn
- Verify event traffic impacts and mitigations

The TIS update evaluates the potential traffic impacts resulting from background traffic growth and the proposed development and identifies improvements to mitigate the impacts if needed.

Figure 1.1 – Site Location and Vicinity

1.1 Proposed Development

Figure 1.2 shows the preliminary site layout with the proposed site access locations. Sunnyslope Event Facility is an outdoor performance venue with a maximum attendance capacity of 5,000 people with 2,500 parking spaces. The development is proposing to construct two driveways on SH 55 and one driveway on Lowell Road for site access.

Figure 1.2 – Preliminary Site Plan

1.2 Study Approach

The scope of this TIS update is similar to the original TIS as determined through coordination with ITD and CHD4 and was prepared by their requirements. The TIS update is prepared in accordance with ITD *IDAPA 39.03.42 – Rules Governing Highway Right-of-Way Encroachments on State Rights-of-Way*. The TIS scope of work correspondence is included in the appendix.

1.3 Study Area

The following study area intersections and roadway segment was identified for traffic impact analysis:

- Chicken Dinner Road and SH 55 intersection
- Lowell Road and SH 55 intersection
- Proposed site access
- SH 55 roadway segment between the site and Chicken Dinner Road

The Farmway Road and SH 55 intersection was included in the original TIS but is excluded in this TIS update as requested by ITD.

1.4 Study Period

The analysis periods are the Friday PM peak hours of operation of the event traffic. The analysis years traffic conditions are:

- 2022 existing traffic
- 2024 build-out year background traffic
- 2024 build-out year total traffic
  - 4:00-5:00 PM peak event traffic arrival hour
  - 9:00-10:00 PM peak event traffic departure hour
- 2029 horizon year background traffic
- 2029 horizon year total traffic
  - 4:00-5:00 PM peak event traffic arrival hour
  - 9:00-10:00 PM peak event traffic departure hour

The analysis peak hours were selected by ITD to coincide with the heavily traveled periods on SH 55. However, these peak hours may not directly coincide with the hours of operation of the events. The events may start later than 5:00 PM and end past 10:00 PM.

1.5 Analysis Methods and Performance Measure Thresholds

Intersection capacity analysis was performed using Synchro 11 (Version 11.1.2.9), which utilizes the HCM 6th Edition (HCM6) methodologies. All parameters used in the analysis were based on existing data when available or Synchro default values, when not available. The level of service (LOS) for intersections is based on the average delay of vehicles traveling through the intersection on a scale of A (best) to F (worst).

The study area roadways and intersections fall under the jurisdiction of CHD4 and ITD. For this study, the minimum operational thresholds for CHD4 intersections are LOS D with a maximum volume-to-capacity (v/c) ratio of 1.00 for any lane group. For ITD intersections, mitigation improvements are required for any individual movement either operating at LOS F at an unsignalized intersection or with a v/c ratio greater than 0.90 at all intersections (Memo No. 39, District 3 Operational Procedures).

The HCM6 output from Synchro does not include an overall intersection v/c ratio for signalized intersections as it is not a defined performance measure in the HCM6 methodologies for the signalized intersections. For this study, the overall intersection v/c ratio was estimated using Synchro based on HCM 2000 methodologies.

2.0 EXISTING CONDITIONS

2.1 Roadway Network, Lane Configuration, and Intersection Control

Table 2.1 summarizes the existing roadway characteristics within the study area. The roadway functional classification is based on the COMPASS 2040 Functional Classification Map. **Figure 2.1** summarizes the study area and intersection control and lane configuration. In 2007, ITD designated the Snake River Canyon Scenic Byway, with signage along the route from Idaho 45 at Waters Ferry to the Nyssa, Oregon, bridge. Lowell Road throughout the study area is part of this scenic byway.

Table 2.1 – Existing Roadway Characteristics

Roadway	Functional Classification	Number of Lanes	Posted Speed Limit (mph)	Multimodal Facilities
Lowell Rd	Local Road west / Minor Arterial east of SH 55	2	35 west / 45 east of SH 55	• No sidewalk or bicycle lanes • No bus routes or stops
Karcher Rd / Sunnyslope Rd (SH 55)	Principal Arterial (Statewide Route)	2-5	55	• No sidewalk or bicycle lanes • No bus routes or stops
Chicken Dinner Rd	Minor Arterial north / Collector south of SH 55	2	50 north	• No sidewalk or bicycle lanes • No bus routes or stops

2.2 Existing Traffic Volumes

Existing intersection turning movement traffic counts at the study area intersections were obtained on July 10, 2022. The intersection turning movement counts were collected on a Friday evening at 15-minute intervals from 4:00 to 5:00 PM and 9:00 to 10:00 PM, corresponding with the event traffic peak arrival and departure hours for the Sunnyslope Event Facility. Existing turning movement counts are included in the appendix. **Figure 2.2** summarizes the existing Friday evening peak hour traffic volumes.

2.3 Intersection Crash Data

The most current five-year crash data (2017-2021) was obtained from the Local Highway Technical Assistance Council (LHTAC) website (http://gis.lhtac.org/safety/). **Table 2.2** summarizes the crash data for the study area intersections. A review of the historical crash data shows no major crash patterns at the study area intersections. The study area intersection crash rate is less than 1.00 crashes per million entering vehicles (ACC/MEV) at the Chicken Dinner Road and SH 55 intersection. There were no reported crashes at the Lowell Road and SH 55 intersection between 2017 and 2021.

Table 2.2 – Intersection Crash Data (2017-2021)

Intersection		Total Crashes	*Crash Severity*			Notes	Crash Rate (ACC/MEV)
			PDO	*Injury*	*Fatal*		
1	Chicken Dinner Rd and SH 55	15	*8*	*7*	*0*	• 5 angle crashes • 4 rear-end crashes • 4 side swipe same direction crashes • 2 other	0.421
2	Lowell Rd and SH 55	NO REPORTED CRASHES					

Figure 2.1 – Existing Study Area Intersection Control and Lane Configuration

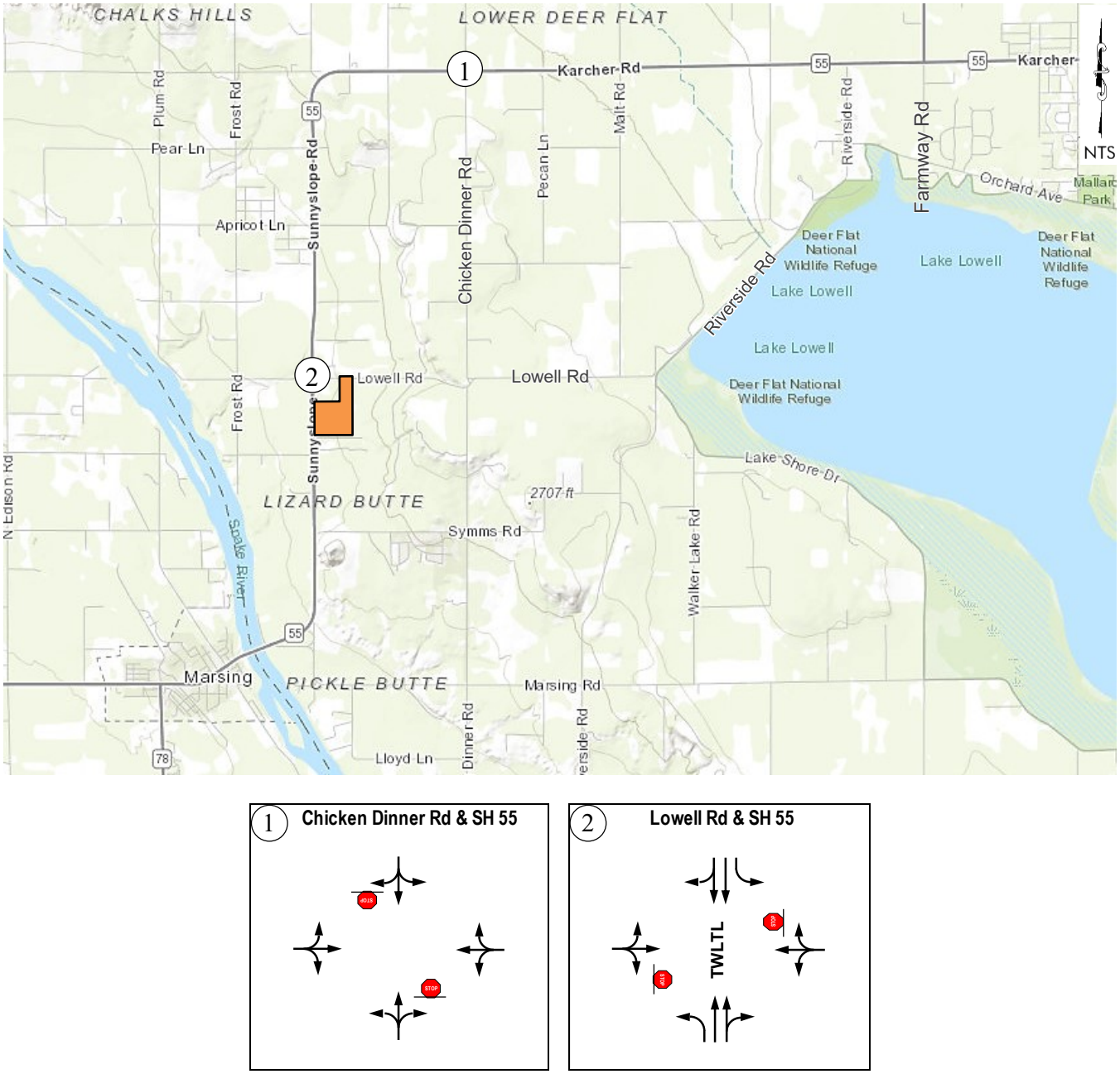
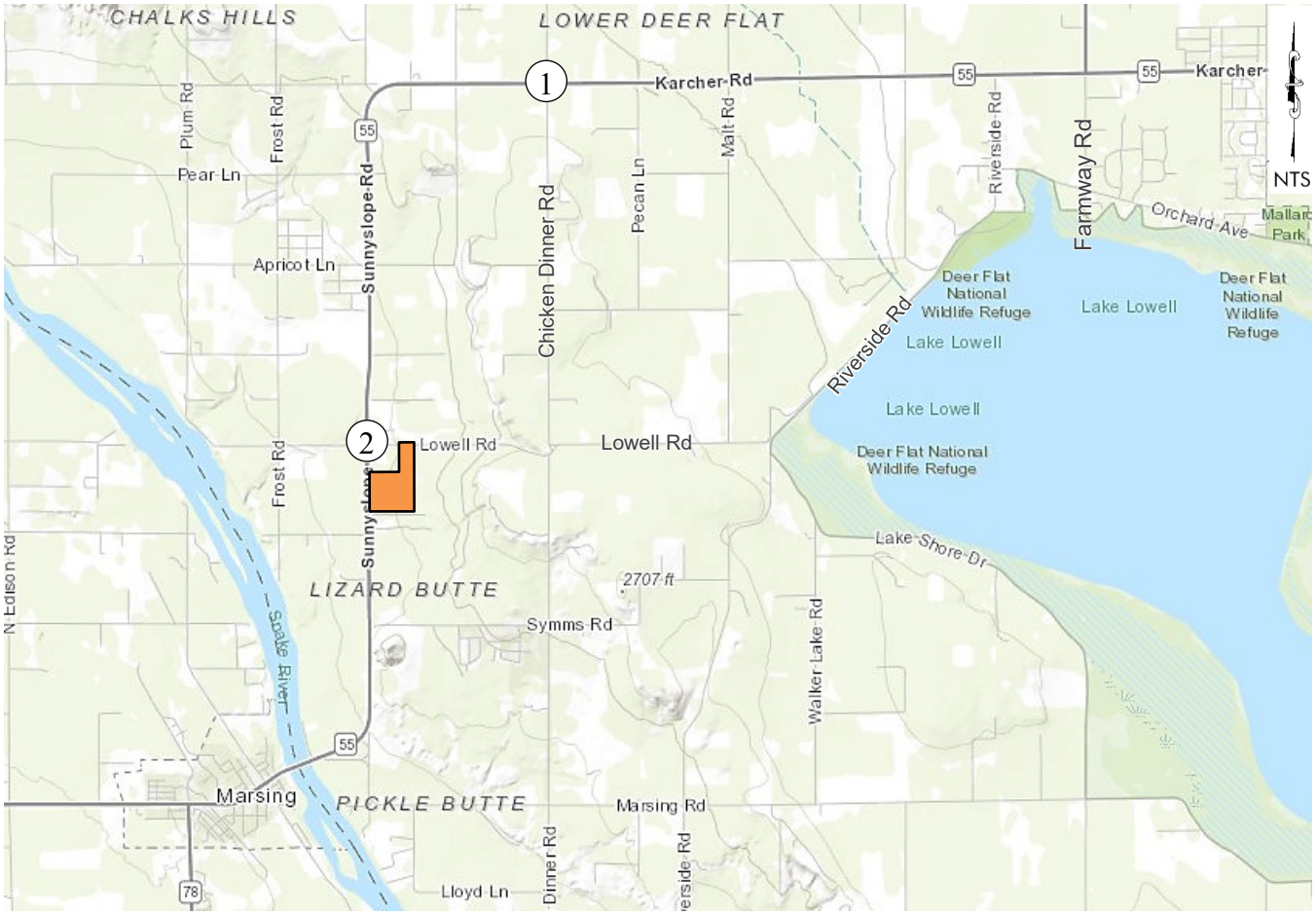
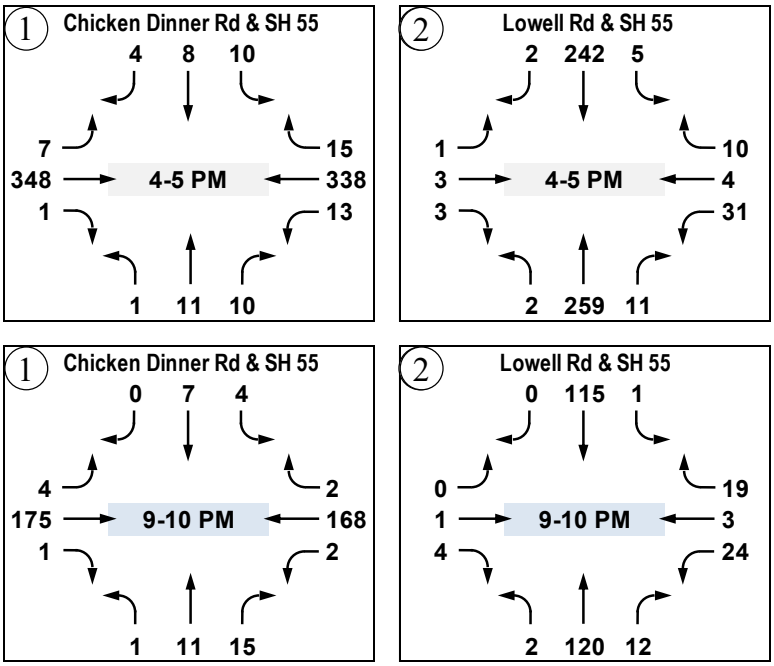


Figure 2.2 – 2022 Existing Friday Evening Peak Hour Traffic

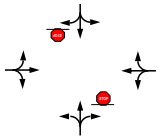
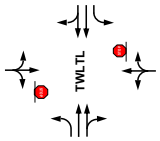




2.4 Intersection Operations

To determine the existing traffic operations, the study area intersections were analyzed with the existing intersection control and lane configuration with 2022 existing peak hour traffic volumes. Copies of the analysis reports are included in the appendix. **Table 2.3** summarizes the intersection capacity analysis results. The 95th percentile queue lengths are estimated using HCM6 methodologies in Synchro 11 software. All study area intersections currently meet minimum operational thresholds under existing traffic conditions.

Table 2.3 – Intersection Operations – 2022 Existing Traffic

Intersection		Control / Lane	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBLTR	A	8	0.01	25	A	8	< 0.01	25
			WBLTR	A	8	0.01	25	A	8	< 0.01	25
			NBLTR	C	15	0.06	25	B	11	0.05	25
			SBLTR	C	18	0.08	25	B	12	0.02	25
2	Lowell Rd and SH 55		EBLTR	B	11	0.01	25	A	9	0.01	25
			WBLTR	B	12	0.08	25	A	10	0.06	25
			NBL	A	8	< 0.01	25	A	8	< 0.01	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	8	< 0.01	25	A	8	< 0.01	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-

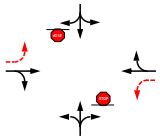
2.5 Intersection Mitigation

The study area intersections currently meet minimum operational thresholds with the existing intersection control and lane configuration. One study area intersection warrants turn lanes based on AASHTO left-turn lane guidelines. Turn lane warrant worksheets are included in the appendix. The intersection and warranted turn lanes are:

- Chicken Dinner Road and SH 55 intersection
  - Eastbound left-turn lane
  - Westbound left-turn lane

Table 2.4 summarizes the intersection capacity analysis results with the warranted turn lanes. The Chicken Dinner Road and SH 55 intersection continues to meet minimum operational thresholds with the warranted turn lanes. The left-turn lanes are expected to reduce vehicle conflicts and potential crashes on SH 55.

Table 2.4 – Chicken Dinner Road and SH 55 Intersection – 2022 Existing Traffic Mitigation

Intersection		Control / Lane Mitigation	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBL	A	8	0.01	25	A	8	< 0.01	25
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	8	0.01	25	A	8	< 0.01	25
			WBTR	-	-	-	-	-	-	-	-
			NBLTR	C	15	0.06	25	B	11	0.05	25
			SBLTR	C	18	0.08	25	B	12	0.02	25

3.0 2024 BUILD-OUT YEAR BACKGROUND TRAFFIC CONDITIONS

3.1 Roadway Network

The study area roadways and intersections are expected to remain the same as the existing conditions for the 2024 background traffic conditions. According to the ITD 2023-2029 *Idaho Transportation Investment Program* (ITIP) the SH 55 segment from Farmway Road to Middleton Road is programmed to be widened to have two travel lanes in direction with a continuous median traffic separator, Project Key No. 22715. This project will add a westbound right-turn lane at the Farmway Road and SH 55 intersection. No construction year or funding for construction is available at this time.

In April 2020, ITD completed the *Idaho 55, Pear Lane to Middleton Road Traffic Report*, detailing long-term plans for the SH 55 corridor. While Pear Lane is located 1.5 miles north of Lowell Road, the plans for SH 55 to Marsing include a four-lane divided highway with a 30-foot median to allow for U-turns at designated locations, per the 2013 *Idaho 55 South Corridor Plan*. Full-access intersections will be spaced a minimum of one-mile spacing, with signals installed once signal warrants are satisfied. No implementation timing of the SH 55 corridor south of Pear Lane is available at this time; however, the study area segment is anticipated after the 2045 plans are completed as outlined in the April 2020 report. **Table 3.1** summarizes the long-term projects envisioned within the study area.

Table 3.1 – Planned Improvements Summary

Transportation Plan	Project	Construction Year	Funding
2023-2029 ITIP	**SH, 55 Farmway Road to Middleton Road, Key No. 22715** Four-lane highway with continuous median traffic separator, signals at 1-mile intersections, and median U-turns at half-mile Westbound right-turn lane at the Farmway Road and SH 55 intersection	TBD	Unfunded
Idaho 55 South Corridor Plan, Marsing to Nampa	**SH 55 from Snake River Bridge to 10th Avenue** Four-lane divided highway with RCUTs at ¼-mile spacing as needed	Future	Unfunded
	Lowell Road and SH 55 intersection Full-access intersection with potential for a signal if warrants are satisfied	Future	Unfunded
	Chicken Dinner Road and SH 55 intersection Full-access intersection with potential for a signal if warrants are satisfied	Future	Unfunded

3.2 Background Traffic

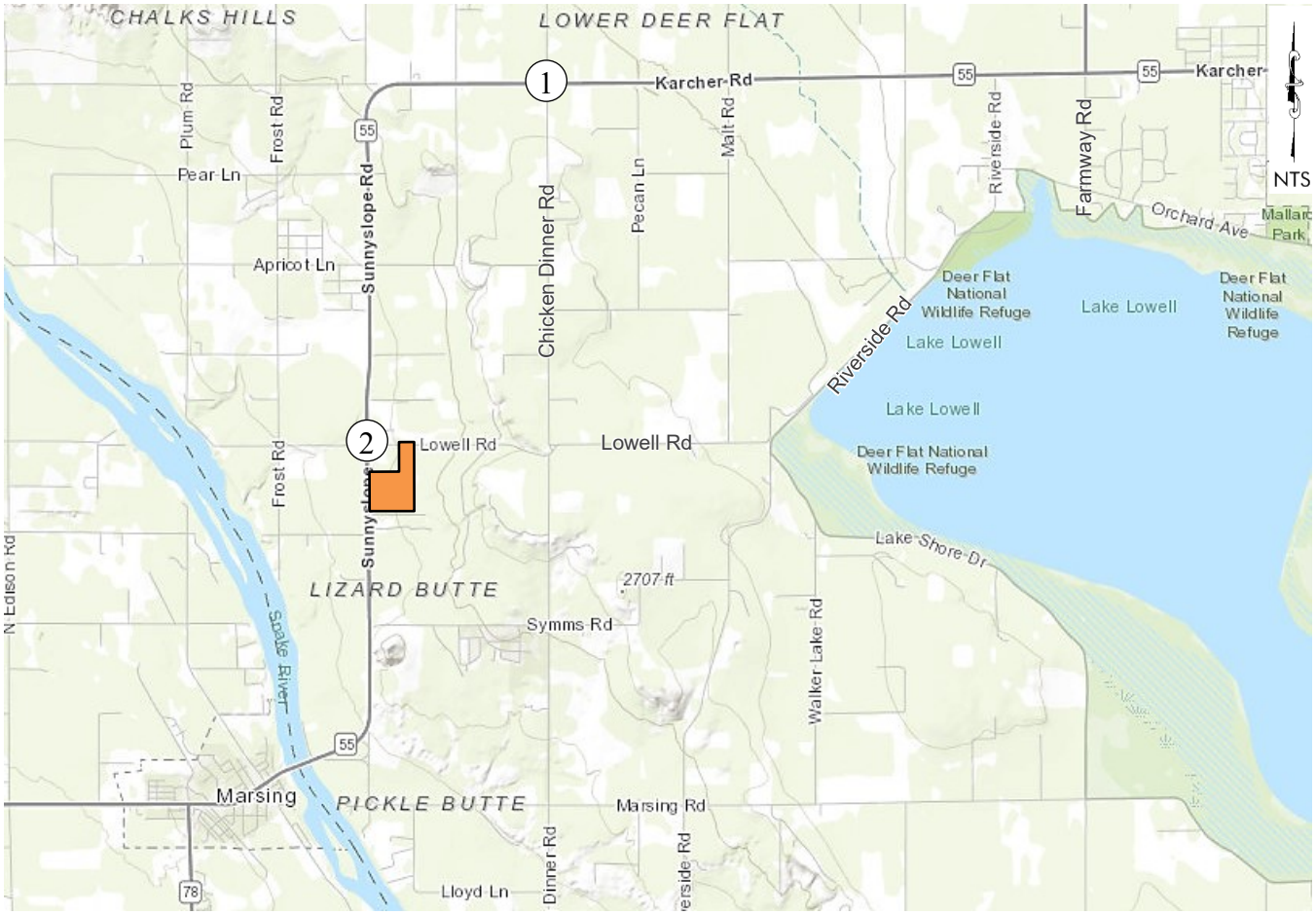
2024 background traffic was estimated by extrapolating the existing traffic counts by the following annual growth rates:

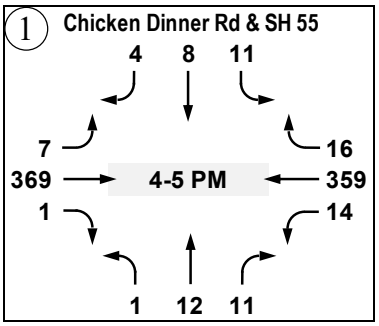
- 2.0% per year on Lowell Road
- 3.0% per year on SH 55 and Chicken Dinner Road

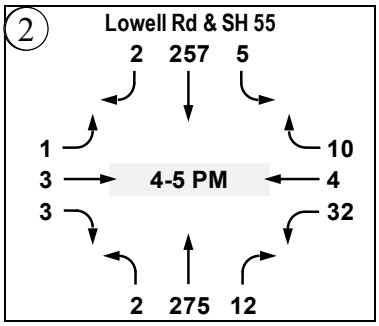
These growth rates are based on COMPASS forecasts between 2021 and 2025, as well as past TIS in the area. **Figure 3.1** summarizes the estimated 2024 build-out year Friday evening peak hour background traffic.

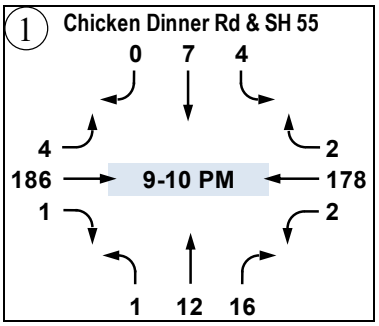
The Snake River Wine Estates was an in-process development in the vicinity of the site. However, the developer has recently pulled the project's application. As a result, no off-site traffic generated by the Snake River Wine Estates is included in background traffic.

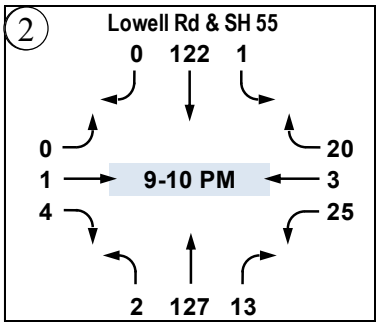
Figure 3.1 – 2024 Build-Out Year Friday Evening Peak Hour Background Traffic







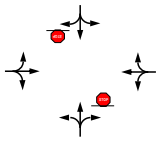
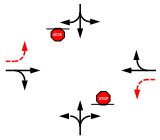
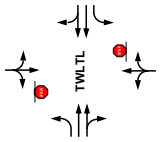




3.3 Intersection Operations

To determine the 2024 background traffic operations, the study area intersections were analyzed with the existing intersection control and lane configuration or with the turn lanes warranted under 2022 existing traffic conditions. Copies of the analysis reports are included in the appendix. **Table 3.2** summarizes the intersection capacity analysis results. The study area intersections are anticipated to continue to meet minimum operational thresholds under 2024 background traffic conditions with and without the turn lanes warranted under 2022 existing traffic conditions.

Table 3.2 – Intersection Operations – 2024 Build-Out Year Background Traffic

Intersection		Control / Lane 2022 Mitigation	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBLTR	A	8	0.01	25	A	8	< 0.01	25
			WBLTR	A	8	0.01	25	A	8	< 0.01	25
			NBLTR	C	16	0.07	25	B	11	0.05	25
			SBLTR	C	19	0.09	25	B	12	0.02	25
			EBL	A	8	0.01	25	A	8	< 0.01	25
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	8	0.01	25	A	8	< 0.01	25
			WBTR	-	-	-	-	-	-	-	-
			NBLTR	C	16	0.07	25	B	11	0.05	25
			SBLTR	C	19	0.09	25	B	12	0.02	25
2	Lowell Rd and SH 55		EBLTR	B	11	0.01	25	A	9	0.01	25
			WBLTR	B	12	0.09	25	A	10	0.07	25
			NBL	A	8	< 0.01	25	A	8	< 0.01	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	8	< 0.01	25	A	8	< 0.01	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-

3.4 Intersection Mitigation

The study area intersections are anticipated to continue to meet minimum operational thresholds under 2024 background traffic conditions with or without the turn lanes warranted under existing traffic conditions. No additional turn lanes are warranted based on ITD turn lane guidelines. Therefore, no additional improvements are needed to mitigate 2024 build-out year background traffic operations.

3.5 SH 55 Roadway Segment Operations

Based on the intersection capacity analysis results discussed in the previous sections, no roadway capacity improvements are needed on SH 55 segment within the study area. SH 55 is anticipated to operate under capacity as a two-lane highway under Friday evening hour 2024 background traffic conditions. The estimated volume on SH 55 is less than 1,200 vph in both directions and less than 600 vph in the major direction, well below the base capacity of a two-lane highway of 3,200 vph in both directions and 1,700 vph in one direction.

4.0 2024 BUILD-OUT YEAR TOTAL TRAFFIC CONDITIONS

4.1 Roadway Network

The study area roadways and intersections are expected to remain unchanged from the 2022 existing conditions. The development is planning to improve Lowell Road and SH 55 along the site frontage. The development is proposing to improve/construct two driveways on SH 55 and one driveway on Lowell Road for site access.

4.2 Site Traffic

4.2.1 Trip Generation

Site trip generation is generally estimated using the procedures recommended in the latest edition of the *Trip Generation Manual* (11th Edition), published by the Institute of Transportation Engineers (ITE). However, the proposed land use does not have trip generation characteristics corresponding to a typical ITE land use category. For this TIS, site trip generation was estimated based on data from an existing music venue provided by EW Real Estate, LLC. Trip generation data for the music venue was recently used and summarized in the Fitzhugh Music Venue Traffic Impact Analysis in Hays County, Texas, prepared by Alliance Transportation Group in February 2022. Trip generation data from the study are included in the appendix.

The proposed Sunnyslope Event Facility is similar to the Fitzhugh Music Venue, with an attendance capacity of 5,000 persons but with 300 more parking stalls. Site trip generation was adjusted for the additional parking stalls. No trip generation data was available for the peak departure event traffic. Based on the coordination with the client, the event traffic is expected to exit the site within one hour after the event ends. CR Engineering, Inc. estimated the peak departure event traffic based on the arrival traffic data. Trip generation estimated for the peak arrival and departure traffic for the site is included in the appendix. **Table 4.1** summarizes the site trip generation. At full capacity, Sunnyslope Event Facility is anticipated to generate approximately 1,431 trips during the peak arrival hour of 4:00-5:00 PM and 2,070 trips during the peak departure hour of 9:00-10:00 PM.

Table 4.1 – Build-Out Site Trip Generation Summary

Land Use	Size	Unit	Period	Total Trips	Entering	Exiting
Event Center	5,000	Attendees	4-5 PM Arrival Hour (vph)	1,431	1,316	115
			9-10 PM Departure Hour (vph)	2,070	104	1,966

4.2.2 Trip Capture and Pass-By Trips

Based on the proposed land use, the development is not expected to retain trips within the site. Based on the proposed land use, the development is not expected to generate pass-by trips.

4.2.3 Modal Split

All trips generated by the development were assumed to be made by personal and commercial vehicles, including shuttle and motorhome buses.

4.2.4 Trip Distribution and Assignment

Site traffic was distributed and assigned based on the current travel patterns, site layout, and the general location of the site within the population areas. **Figure 4.1** summarizes the estimated site traffic distribution patterns. **Figure 4.2** and **Figure 4.3** summarize the estimated peak arrival and departure event traffic at the study area intersections.

4.3 Total Traffic

The 2024 site traffic is then added to the 2024 background traffic as determined above to obtain the 2024 total traffic. **Figure 4.4** and **Figure 4.5** summarize the estimated 2024 peak arrival and departure hour total traffic at the study area intersections. **Table 4.2** summarizes the site traffic percentage at the study area intersections.

Figure 4.1 – Estimated Site Traffic Distribution Patterns

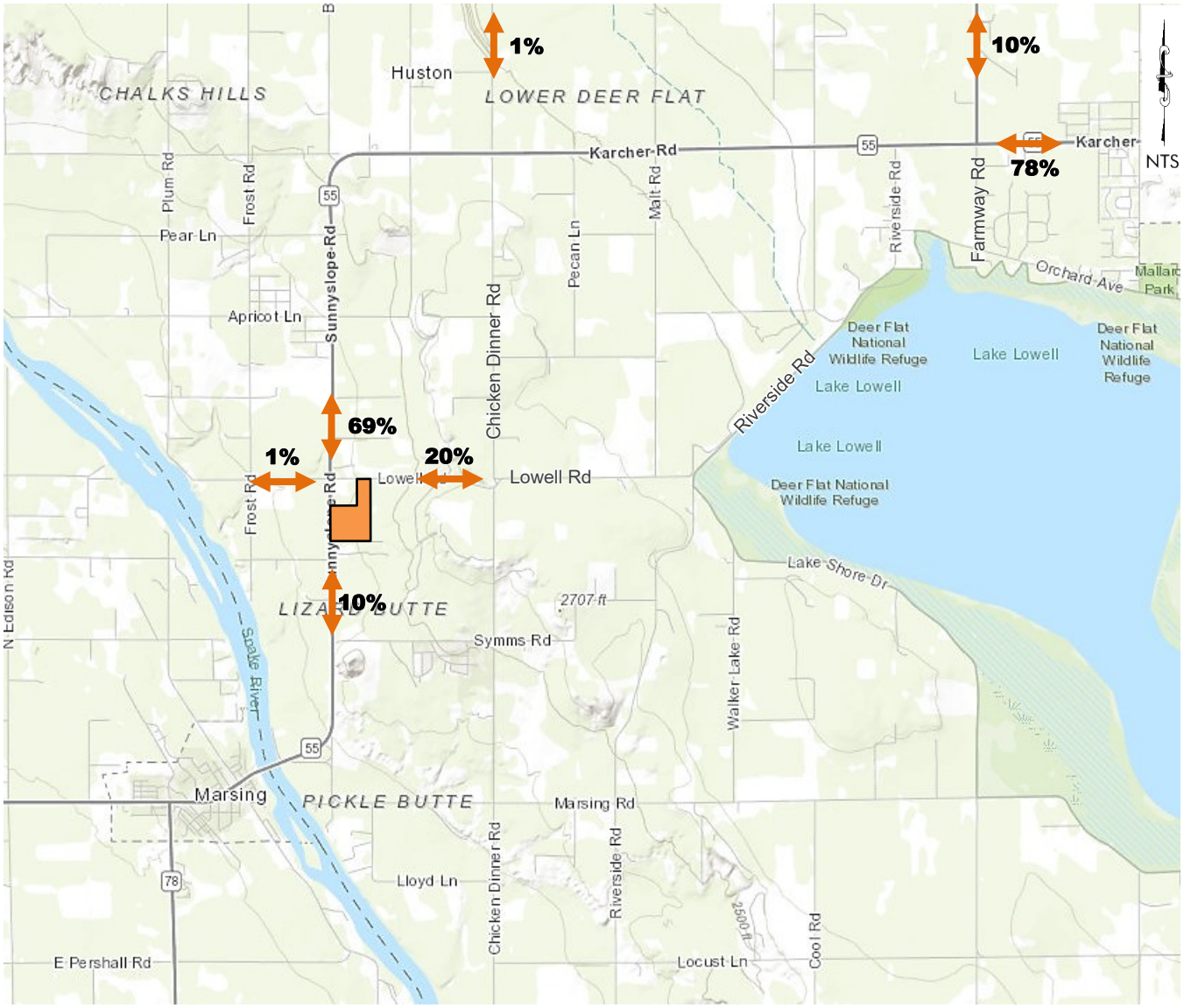
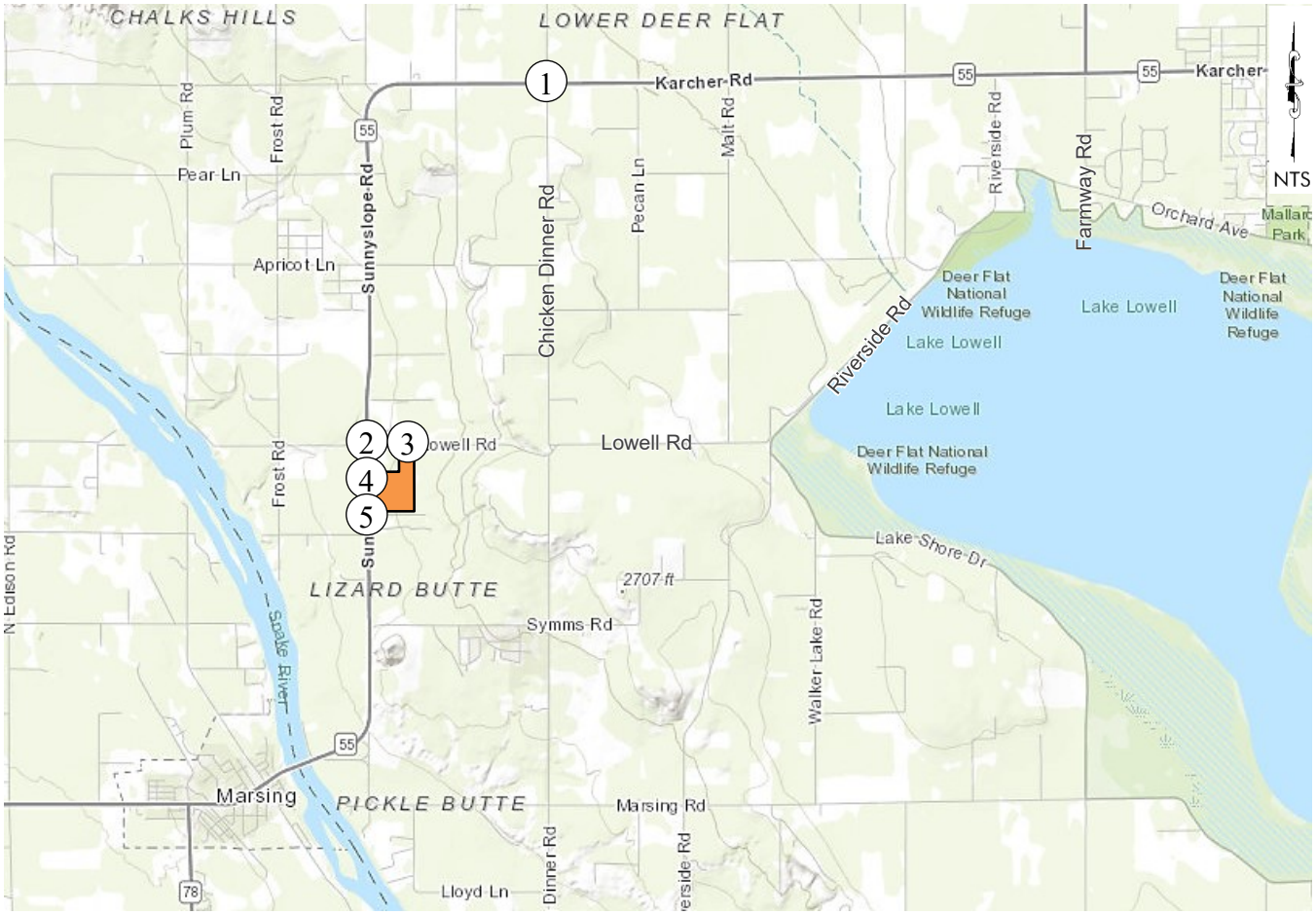


Table 4.2 – Build-Out Site Traffic Percentage of 2024 Build-Out Year Total Traffic

Intersection		% Site Traffic of 2024 Total Traffic		
		4-5 PM	9-10 PM	Average
1	Chicken Dinner Rd and SH 55	58.4%	79.4%	68.9%
2	Lowell Rd and SH 55	62.2%	81.9%	72.1%

Figure 4.2 – 2024 Build-Out Year Peak Arrival Hour Site Traffic



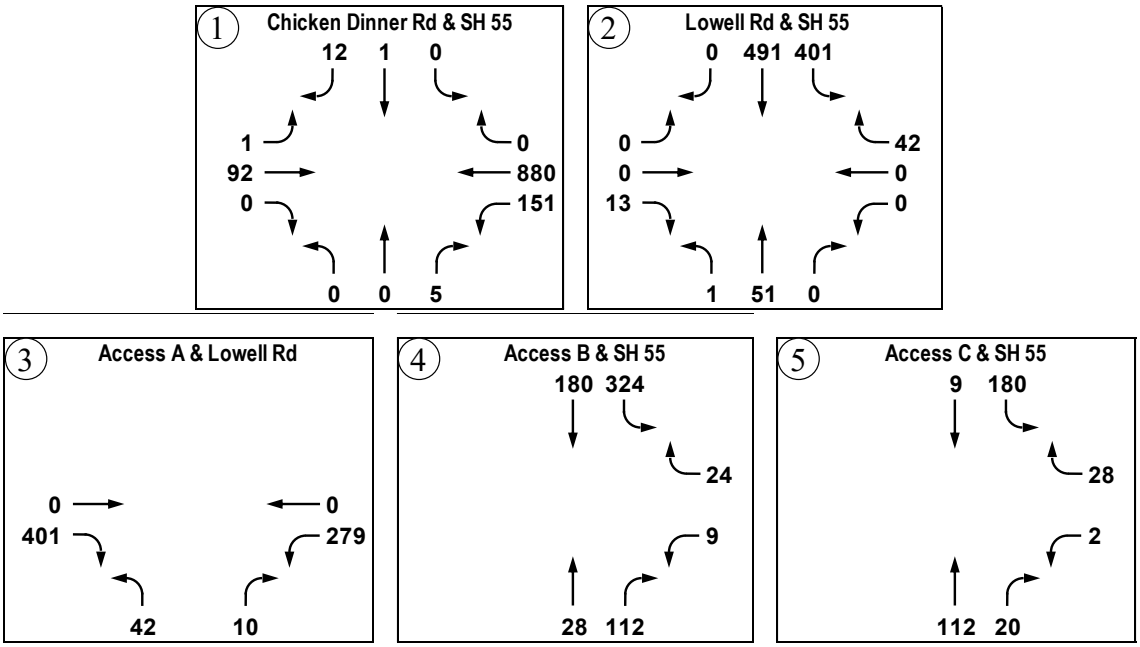
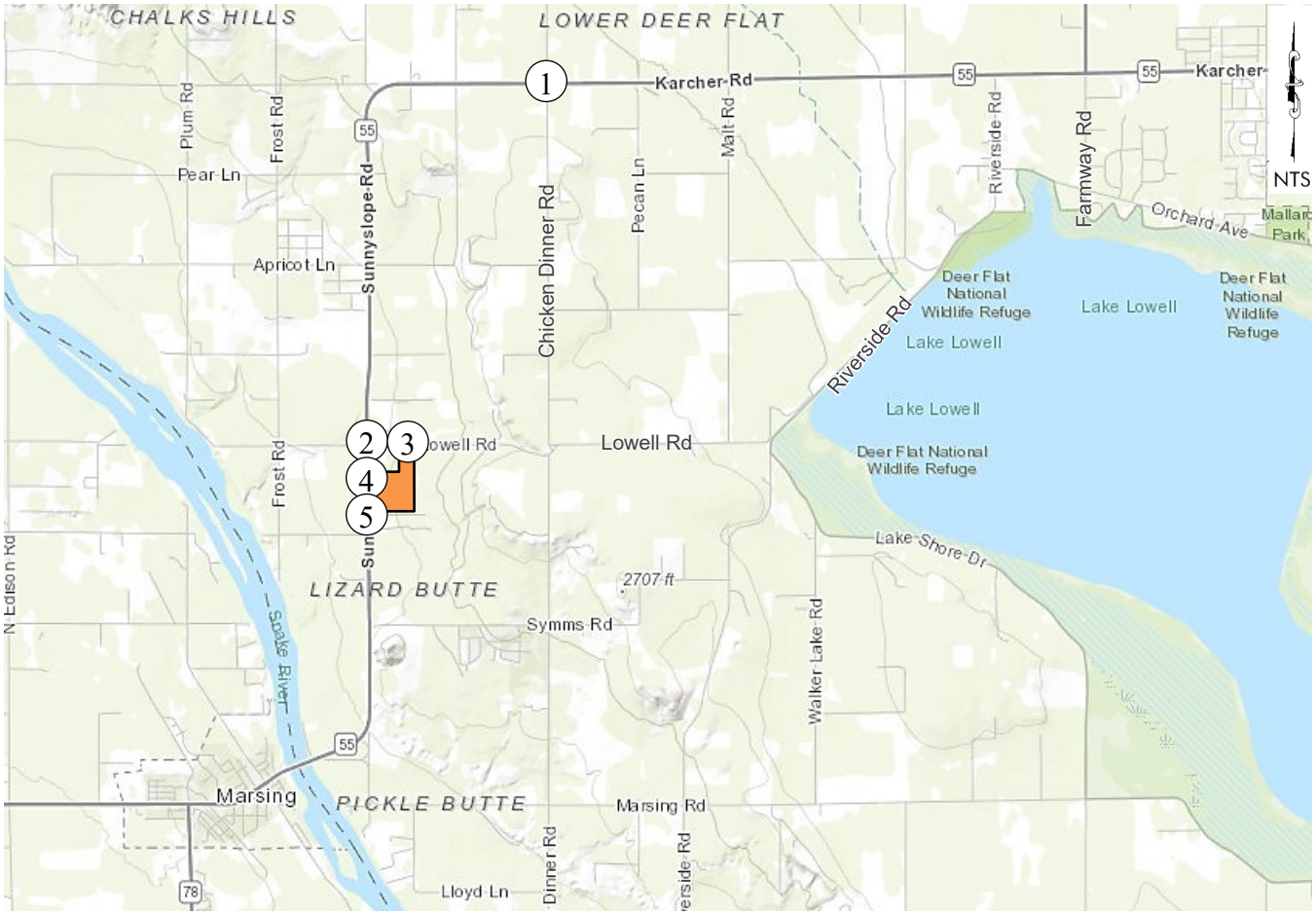


Figure 4.3 – 2024 Build-Out Year Peak Departure Hour Site Traffic



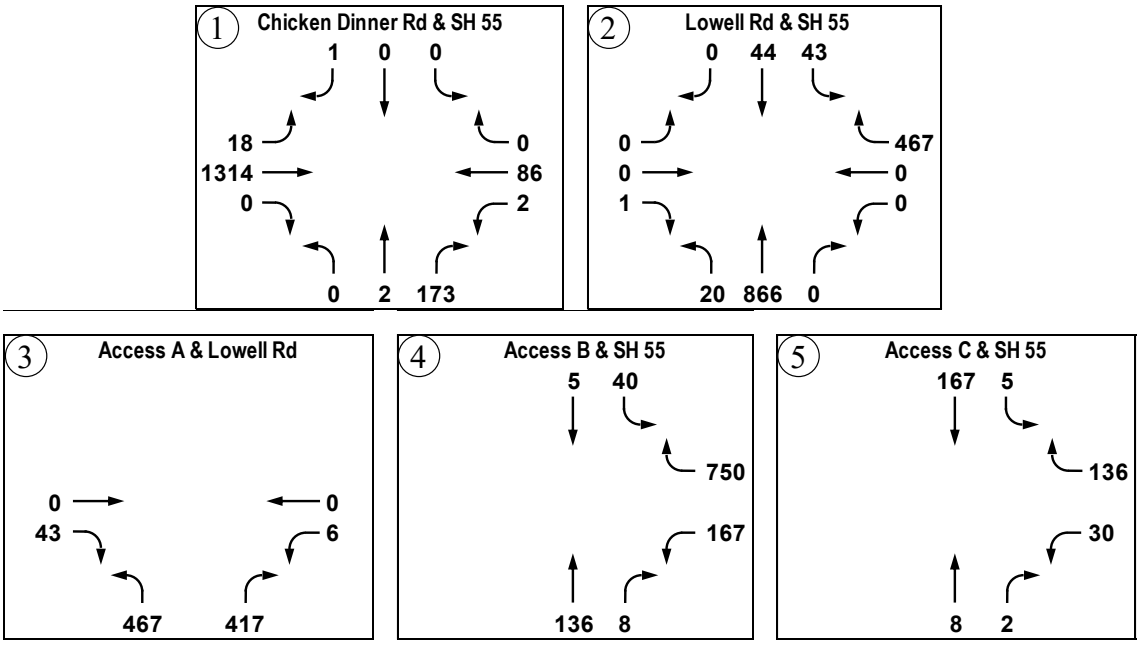
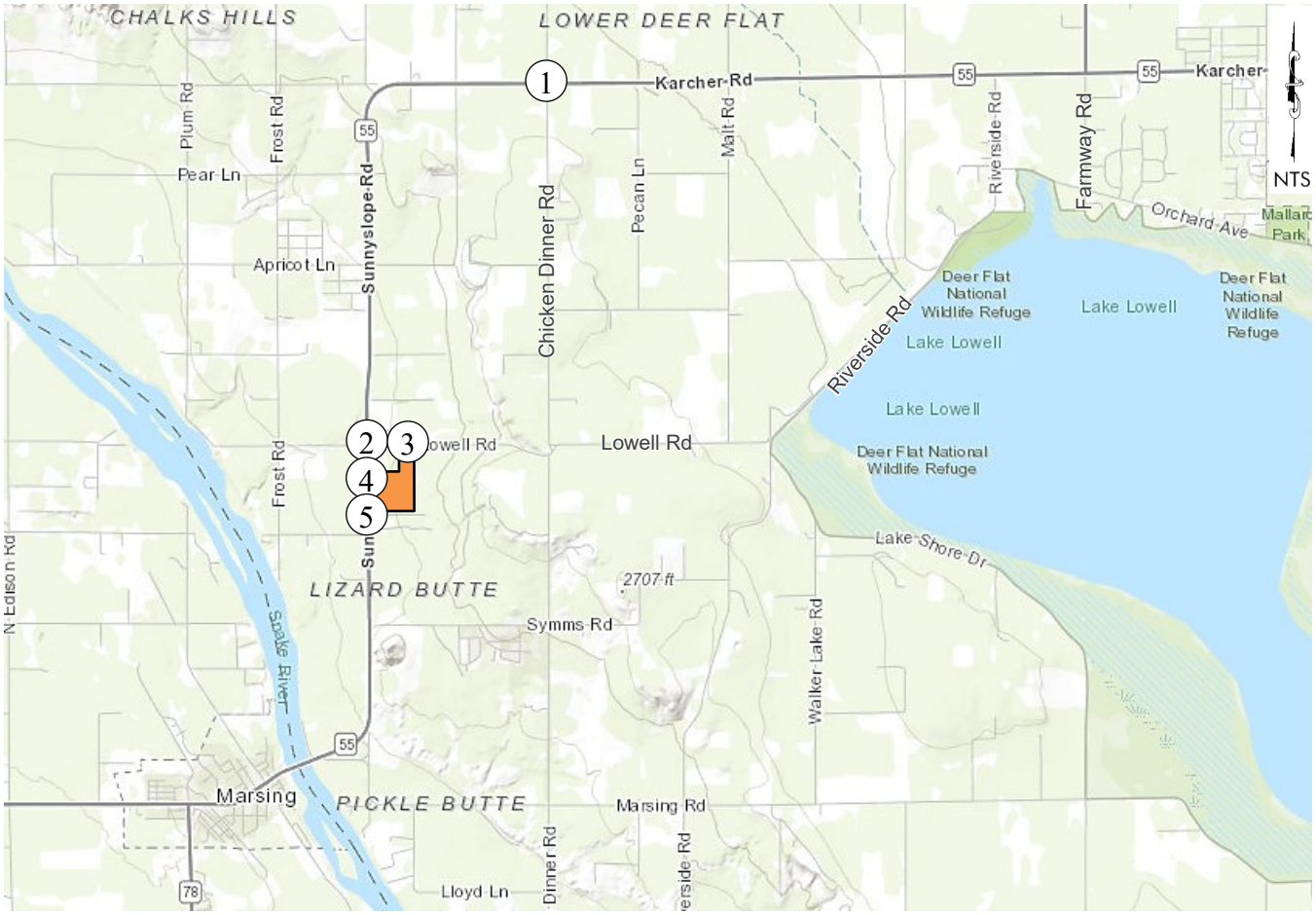
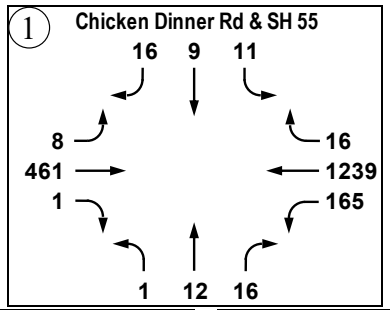
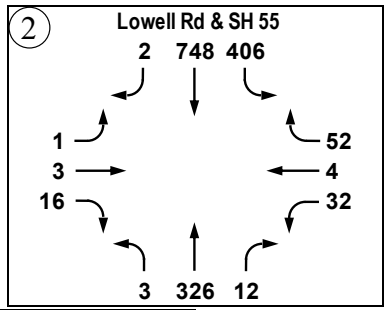
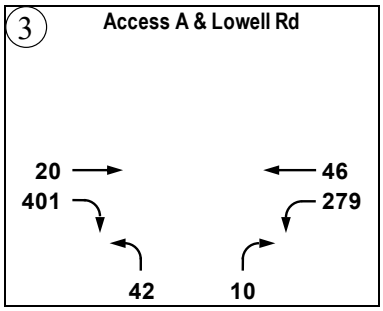


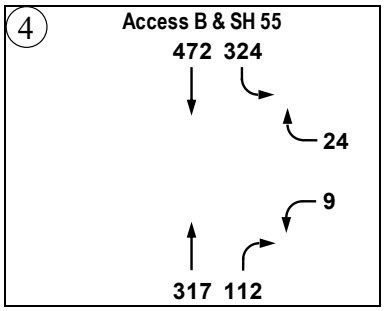
Figure 4.4 – 2024 Build-Out Year Peak Arrival Hour Total Traffic











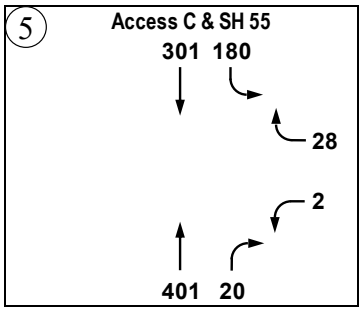
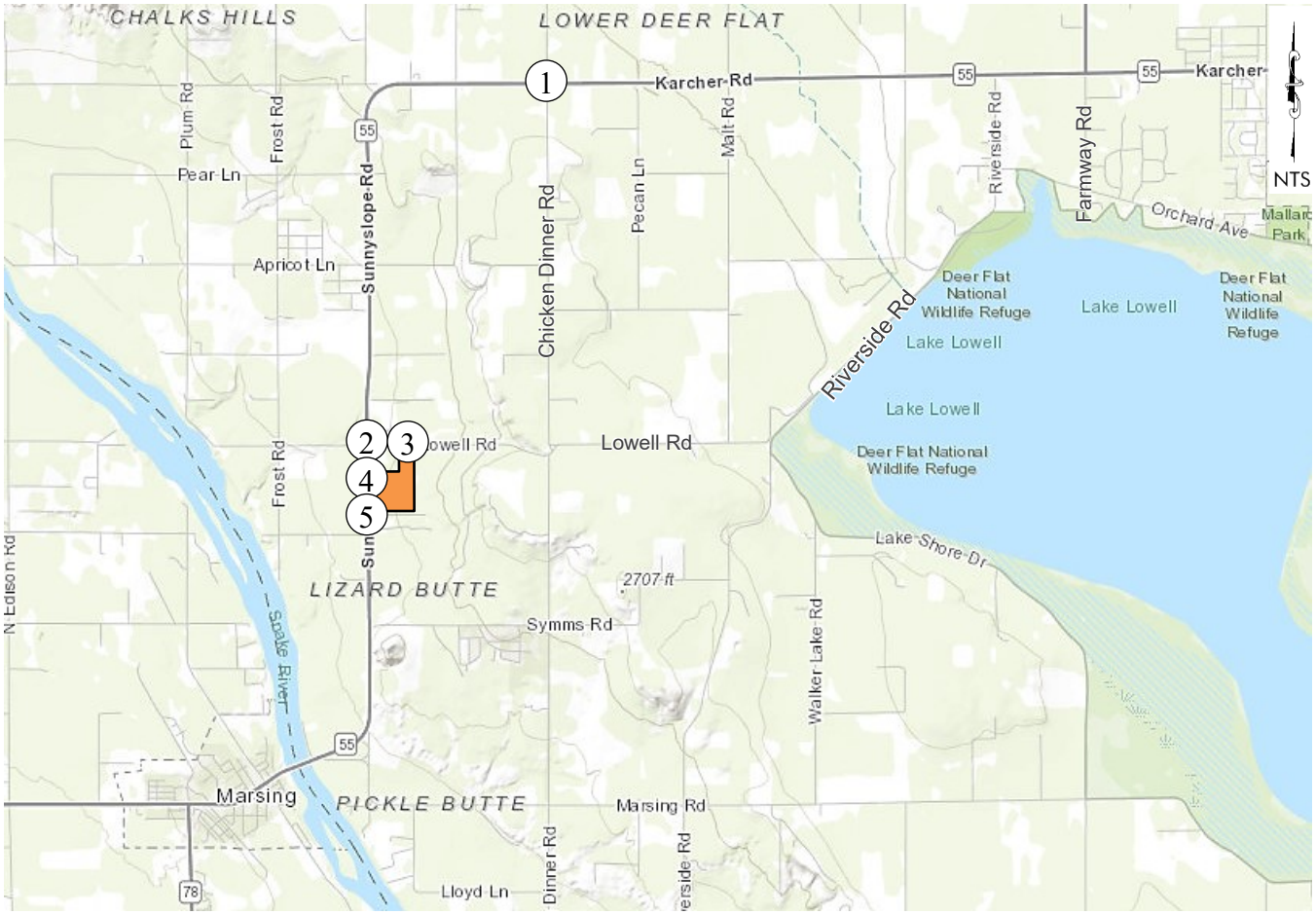
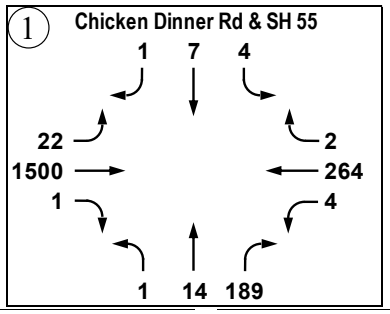
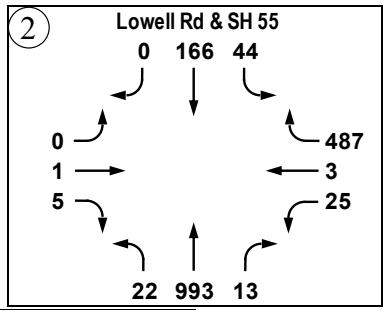
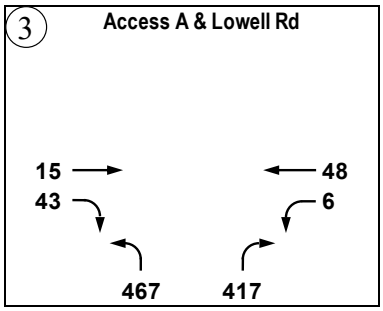


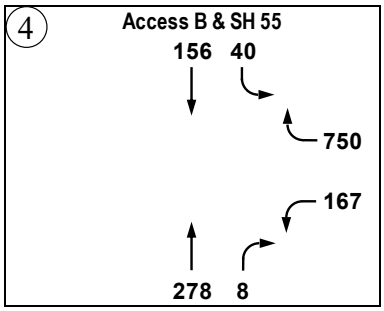
Figure 4.5 – 2024 Build-Out Year Peak Departure Hour Total Traffic

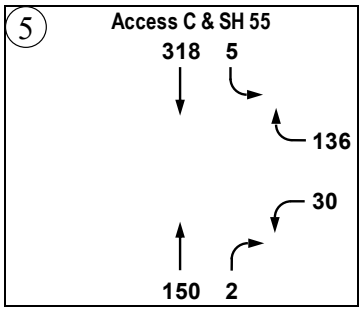








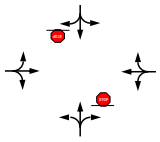
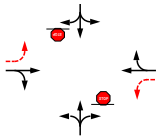
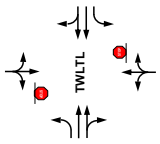




4.4 Intersection Operations

To determine the 2024 total traffic operations, the study area intersections were analyzed with the existing intersection control and lane configuration or with the turn lanes warranted under existing conditions. Due to the significant site traffic contribution as a percentage of total entering traffic, as summarized in Table 4.2, peak hour factors were recalculated under total traffic conditions. Copies of the analysis reports are included in the appendix. **Table 4.3** summarizes the intersection capacity analysis results. All external study area intersections are anticipated to exceed minimum operational thresholds under 2024 build-out year peak hour total traffic conditions.

Table 4.3 – Intersection Operations – 2024 Build-Out Year Total Traffic

Intersection		Control / Lane 2022 Mitigation	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBLTR	B	13	0.02	25	A	8	0.02	25
			WBLTR	A	9	0.16	25	B	13	0.01	25
			NBLTR	**F**	279	0.86	100	**F**	364	**1.60**	375
			SBLTR	**F**	946	**2.08**	150	**FAIL**			
			EBL	B	13	0.02	25	A	8	0.02	25
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	9	0.16	25	B	13	0.01	25
			WBTR	-	-	-	-	-	-	-	-
			NBLTR	**F**	95	0.44	50	**F**	352	**1.58**	375
			SBLTR	**F**	254	0.89	100	**FAIL**			
2	Lowell Rd and SH 55		EBLTR	D	33	0.14	25	B	13	0.01	25
			WBLTR	E	38	0.46	75	**F**	109	**1.12**	475
			NBL	A	9	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.35	50	B	11	0.07	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-

4.5 Intersection Mitigation

All external study area intersections are anticipated to exceed minimum operational thresholds under 2024 total traffic conditions with the turn lanes warranted under 2022 existing conditions. The intersections, operational deficiencies, and mitigation improvements are summarized below.

Chicken Dinner Road and SH 55 Intersection

The Chicken Dinner Road and SH 55 intersection is expected to exceed ITD minimum operational thresholds with the additional event traffic. The northbound and southbound approaches are anticipated to operate at LOS F and over capacity during the peak arrival and departure hours. The high delays for the movements on Chicken Dinner Road are due to the high volumes on SH 55 reducing the available gaps. It should be noted that the intersection is expected to only exceed ITD minimum operational thresholds during the event peak hour traffic conditions lasting one to two hours and are expected to occur 60-70 times per year. The intersection is anticipated to meet ITD minimum operational thresholds without the event traffic.

Based on the current ITD and CHD4 transportation plans, there are no improvements programmed at the intersection. In the long term, SH 55 is planned to be widened to five lanes and signalized at one-mile spacing

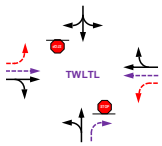
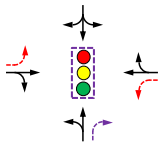
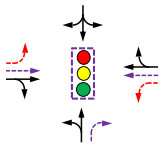
intersections. ITD is planning to signalize the Chicken Dinner Road and SH 55 intersection in the long term. Three mitigation improvements options are evaluated:

- Option 1 – Widen and reconstruct the intersection
  - Widen SH 55 to five lanes, with a center left-turn lane
  - Construct a northbound right-turn lane
    - Two minor approach lanes are warranted based on NCHRP Report 457 turn lane guidelines
- Option 2 – Install a temporary signal with a right-turn lane on the northbound approach and left-turn lanes on the eastbound and westbound approaches
  - The eastbound and westbound left-turn lanes are warranted under 2022 existing traffic conditions without the event traffic
  - The peak arrival hour volumes on Chicken Dinner Road are low and are below the MUTCD signal warrant volume thresholds. However, the peak departure hour volumes on Chicken Dinner Road are estimated to exceed 150 vph, which would meet Warrant 3, peak hour volume threshold. MUTCD Warrant 3 may be applicable as the intersection is expected to see a large volume of event traffic for a short duration, causing undue delay on the Chicken Dinner Road approaches
  - If a traffic signal is installed, signal timings should be programmed for the event traffic conditions
- Option 3 – Install a signal in addition to the intersection reconstruction in Option 1
  - The peak arrival hour volumes on Chicken Dinner Road are low and are below the MUTCD signal warrant volume thresholds. However, the peak departure hour volumes on Chicken Dinner Road are estimated to exceed 150 vph, which would meet Warrant 3, peak hour volume threshold. MUTCD Warrant 3 may be applicable as the intersection is expected to see a large volume of event traffic for a short duration, causing undue delay on the Chicken Dinner Road approaches
  - If a traffic signal is installed, signal timings should be programmed for the event traffic conditions

Table 4.4 summarizes the mitigation analysis results. Options 1 and 3 would mitigate the event traffic impacts. However, widening SH 55 to five lanes is not currently programmed and will likely not be feasible by the 2024 build-out year. With Option 2, all lane groups are anticipated to meet ITD minimum operational thresholds except for one lane group. The v/c ratio for the eastbound shared through/right-turn lane group is anticipated to exceed ITD 0.90 threshold during the peak departure hour. This operational deficiency is expected to occur for only a short duration when event traffic is departing the site and meet minimum operational thresholds during all other times. Therefore, Option 2 is recommended to mitigate the event traffic impacts.

ITD will require a traffic control plan for each event to mitigate the traffic impacts. Therefore, the temporary traffic signal could be considered as a part of the traffic control plan.

Table 4.4 – Chicken Dinner Road and SH 55 Intersection – 2024 Build-Out Year Total Traffic Mitigation

Intersection		Control / Lane 2022 Mitigation 2024 Total Mitigation	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55	Option 1 	EBL	B	13	0.02	25	A	8	0.02	25
			EBT	-	-	-	-	-	-	-	-
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	9	0.16	25	B	14	0.01	25
			WBT	-	-	-	-	-	-	-	-
			WBTR	-	-	-	-	-	-	-	-
			NBTL	**F**	58	0.17	25	E	40	0.13	25
			NBR	A	10	0.02	25	D	28	0.56	100
			SBLTR	E	44	0.29	50	D	34	0.09	25
		Option 2 	Intersection	B	14	0.86	-	E	78	**1.08**	-
			EBL	B	17	0.04	25	A	5	0.03	25
			EBTR	A	5	0.34	125	**F**	92	**1.14**	2,050
			WBL	A	3	0.22	25	D	41	0.07	25
			WBTR	B	17	0.89	575	A	7	0.21	125
			NBTL	E	60	0.14	25	D	52	0.06	25
			NBR	E	61	0.27	25	E	78	0.86	325
			SBLTR	E	63	0.41	75	D	52	0.05	25
		Option 3 	Intersection	A	7	0.50	-	B	15	0.67	-
			EBL	A	5	0.02	25	A	5	0.03	25
			EBT	A	5	0.20	50	B	12	0.64	300
			EBTR	A	5	0.20	50	B	12	0.64	325
			WBL	A	3	0.22	25	A	9	0.02	25
			WBT	A	6	0.50	150	A	7	0.12	50
			WBTR	A	6	0.50	150	A	7	0.12	50
			NBTL	D	40	0.12	25	D	37	0.05	25
			NBR	D	42	0.23	25	D	47	0.82	225
			SBLTR	D	42	0.32	50	D	36	0.04	25

<u>Lowell Road and SH 55 intersection</u>

The Lowell Road and SH 55 intersection is expected to exceed ITD minimum operational thresholds with the additional event traffic. The westbound approach is expected to operate at LOS F with a v/c ratio of 1.12 during the peak departure hour, exceeding ITD 0.90 threshold.

Currently, there are no improvements programmed at the Lowell Road and SH 55 intersection. The intersection is planned to be signalized in the long term according to the SH 55 corridor plan. Two mitigation improvements options are evaluated:

- Option 1 – Construct a westbound right-turn lane
  - Two minor approach lanes are warranted based on NCHRP Report 457 turn lane guidelines
- Option 2 – Install a temporary signal in addition to the westbound right-turn lane in Option 1
  - The peak arrival hour volumes on Lowell Road are low and are below the MUTCD signal warrant volume thresholds. However, the peak departure hour volumes on Lowell Road are estimated to exceed

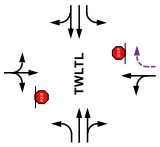
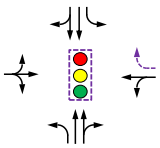
450 vph, which would meet Warrant 3, peak hour volume threshold. MUTCD Warrant 3 may be applicable as the intersection is expected to see a large volume of event traffic for a short duration, causing undue delay on the Lowell Road approaches

- If a traffic signal is installed, signal timings should be programmed for the event traffic conditions

Table 4.5 summarizes the intersection mitigation analysis results. With the additional westbound right-turn lane, the westbound shared through/left-turn lane group is anticipated to operate at LOS F during the peak arrival hour, exceeding ITD minimum operational thresholds. During the peak departure hour, the westbound right-turn lane group is anticipated to operate at LOS F with a v/c ratio of 0.98, exceeding ITD minimum operational thresholds.

Constructing a westbound right-turn lane and installing a temporary traffic signal is anticipated to mitigate the Lowell Road and SH 55 intersection during the peak event traffic arrival and departure hours, and is recommended. The temporary traffic signal is recommended as a part of the traffic control plan to mitigate the event traffic impacts.

Table 4.5 – Lowell Road and SH 55 Intersection – 2024 Build-Out Year Total Traffic Mitigation

Intersection		Control / Lane Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
2	Lowell Rd and SH 55	Option 1 	EBLTR	D	33	0.14	25	B	13	0.01	25
			WBTL	F	66	0.40	50	D	26	0.14	25
			WBR	A	10	0.07	25	F	64	0.98	350
			NBL	A	9	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.35	50	B	11	0.07	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-
		Option 2 	Intersection	A	8	0.53	-	C	29	0.73	-
			EBLTR	D	44	0.16	25	C	24	0.01	25
			WBTL	D	45	0.24	50	C	25	0.06	25
			WBR	D	52	0.63	75	D	47	0.89	475
			NBL	A	5	0.01	25	B	13	0.03	25
			NBT	A	6	0.15	50	C	23	0.60	350
			NBTR	A	6	0.15	50	C	23	0.60	350
			SBL	A	4	0.48	50	B	16	0.16	25
			SBT	A	4	0.30	75	B	15	0.10	50
			SBTR	A	4	0.30	75	B	15	0.10	50

4.6 SH 55 Roadway Segment Operations

The study area segment of SH 55 is anticipated to operate under capacity as a two-lane highway under Friday evening hour 2024 total traffic conditions. The estimated peak hour volumes in both directions on SH 55 west of Chicken Dinner Road are 1,726 vph during the peak arrival hour and approximately 1,789 vph during the peak departure hour, which are below the 3,200 vph base capacity for a two-lane highway. Additionally, the estimated directional peak hour volumes on SH 55 west of Chicken Diner Road are also below the 1,700 vph based capacity in one direction for a two-lane highway. Based on the intersection capacity analysis results discussed in the previous sections, no roadway capacity improvements are needed on SH 55 segment within the study area except for the turn lanes.

Traffic simulation was conducted for the study area segment of SH 55 between the site and Chicken Dinner Road to assess the highway operations with and without the event traffic conditions. Traffic simulations were conducted for one hour during the peak arrival and departure hours. Travel time was used as the measure of effectiveness (MOE) to assess the highway operations. Simulation results are included in the appendix. **Table 4.6** summarizes the travel time comparison with and without the event traffic. The key findings from the traffic simulation results are:

- The event traffic is not expected to significantly impact travel time on the study area segment of SH 55 with intersection mitigation improvements constructed:
  - Install temporary traffic signals at the Chicken Dinner Road and Lowell Road intersections on SH 55
- The travel time on the study area segment of SH 55 will increase as follows:
  - During the 4-5 PM peak arrival hour, the total travel time in the minor northbound direction is estimated to increase by less than one (1) minute with and without the temporary signals
  - During the 4-5 PM peak arrival hour, the total travel time in the major southbound direction is estimated to increase by less than one (1) minute without the temporary signals and less than two (2) minutes with the temporary signals
  - During the 9-10 PM peak departure hour, the total travel time in the major northbound direction is estimated to increase by less than one (1) minute without the temporary signals and less than four (4) minutes with the temporary signals
  - During the 9-10 PM peak departure hour, the total travel time in the minor southbound direction is estimated to increase by less than one (1) minute with and without the temporary signals

Table 4.6 – SH 55 Segment Travel Time Comparison Summary – 2024 Build-Out Year Traffic

Traffic Conditions	SH 55 Lane Configuration	Average Travel Time (s)			
		Friday 4-5 PM		Friday 9-10 PM	
		NB	SB	NB	SB
2024 Background	5/2 Existing lanes [1]	245	260	242	254
2024 Total	5/2 Existing lanes [1]	253	313	271	283
	5/2 Existing lanes [2]	263	327	467	284

[1] Existing intersection control

[2] Temporary traffic signals at Chicken Dinner Road and Lowell Road intersections on SH 55

4.7 Site Access and Circulation

Lowell Road is classified as a minor arterial along the site frontage. According to *Section 3061* of the *Highway Standards and Development Procedures Manual,* no direct access for driveways, local roads, or private roads is permitted on minor arterial roadways. The minimum spacing for a collector road on a minor arterial is ¼ mile (1,320 feet) in either direction for the same or opposite side of the roadway.

Access spacing on SH 55 is governed by ITD *IDAPA 39.03.42 – Rules Governing Highway Right-of-Way Encroachments on State Rights-of-Way*. The access management plan for the SH 55 corridor will also determine access locations and restrictions. SH 55 along the site frontage is a 55-mph state highway classified as a Statewide Route. The minimum driveway spacing upstream of a public road on a Statewide Route is 1,000 feet in a rural area. The minimum driveway spacing on a Statewide Route is 650 feet.

Based on the preliminary site plan, Sunnyslope Event Facility is proposing one driveway on Lowell Road and two driveways on SH 55 for site access. **Figure 4.6** summarizes the proposed site access, spacing, and circulation. The proposed site access locations and spacings are as follows:

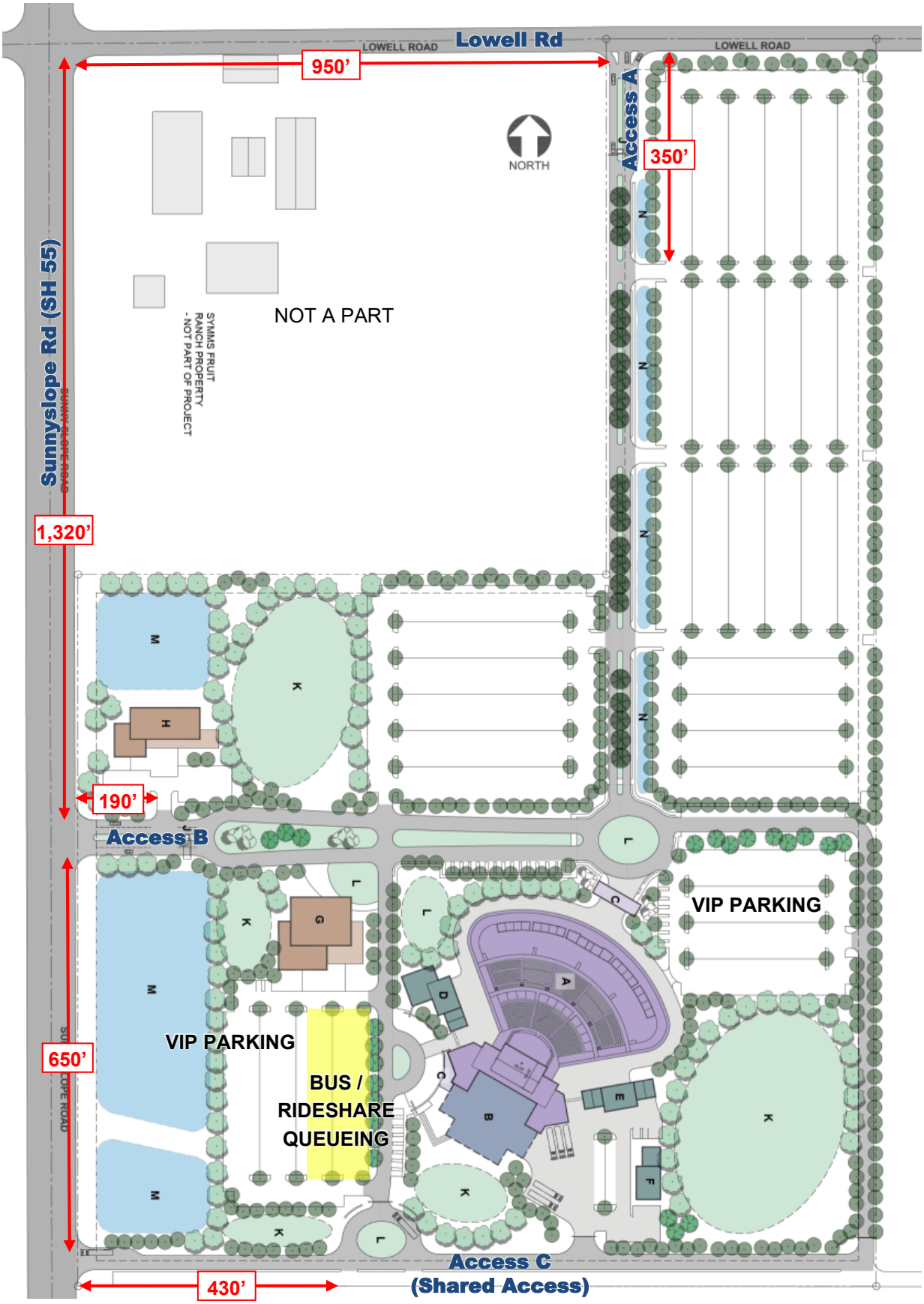
- Access A on Lowell Road
  - Located approximately 950 feet east of SH 55
    - CHD4 has requested the site access on Lowell Road to be located at the easterly boundary of the site
- Access B on SH 55
  - Located approximately 1,320 feet south of Lowell Road and 650 feet north of Access C
    - Meets the 1,000-feet minimum driveway spacing upstream of the Lowell Road intersection and 650-feet minimum driveway spacing
- Access C on SH 55
  - Located approximately 650 feet south of Access B and 590 feet north of True Road
    - Meets the 650-feet minimum driveway spacing
    - Planned to be a shared driveway serving eight (8) existing parcels to the south

The estimated intersection sight distance is adequate at the Access A location for the 45-mph posted speed limit on Lowell Road, as well as the Access B and Access C locations for the 55-mph posted speed limit on SH 55. Lowell Road and SH 55 are generally flat and straight along the site frontages. The proposed building setback and landscape design should not obstruct the intersection sight distance.

Turn lane warrant analysis at the site access intersections was evaluated using NCHRP Report 457 turn lane guidelines at Access A and ITD right-turn lane guidelines at Accesses B and C. SH 55 along the site frontage has a center turn lane, which will serve left-turn traffic entering and exiting the site. Turn lane warrant analysis reports are included in the appendix. The following turn lanes are warranted under 2024 build-out conditions:

- Access A and Lowell Road intersection
  - Eastbound right-turn lane
  - Westbound left-turn lane
    - Left-turn lane should be constructed as a center left-turn lane to accommodate northbound left-turning traffic exiting the site
- Access B and SH 55 intersection
  - Northbound right-turn lane

Figure 4.6 – Site Access, Circulation, and Spacing

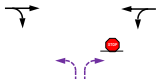
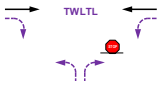
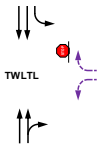
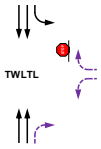
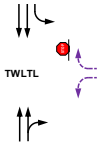


The site plan provided shows two outbound lanes at Access A and Access B. Access C is proposed to be 36 feet wide, not including additional width from the access to the south, and was evaluated as two outbound lanes based on the design. **Table 4.7** summarizes the site access intersection capacity analysis results under the 2024 build-out year total traffic conditions with and without the warrant turn lanes. Key findings are:

- Access A on Lowell Road will provide direct access to the event's main parking lot. The majority of the site traffic is expected to utilize Access A to enter and exit the site:
  - During the peak arrival hour, all lane groups are anticipated to operate at LOS C or better with and without the warranted turn lanes, meeting CHD4 thresholds
  - During the peak departure hour, all lane groups are anticipated to meet the CHD4 level of service threshold with and without the warranted turn lanes
  - The first drive aisle within the parking lot is located approximately 350 feet south of Lowell Road, which will provide storage for entering site traffic
    - This drive aisle should be managed during the arrival hours to ensure it is not blocked to minimize the potential queue spillback onto Lowell Road
- Access B will provide direct access to the event's main parking lot and various minor parking areas within the site. A significant portion of the site traffic is expected to utilize Access B to enter and exit the site:
  - Access B is anticipated to meet ITD minimum operational thresholds during the peak arrival and departure hours with and without the warrant turn lane
  - The first driveway on Access B roadway is located approximately 190 feet east of SH 55
    - This driveway will serve the cidery and will be closed during event operations to external vehicular trips
  - For queueing purposes, the first driveway in operation during events is located approximately 480 feet east of SH 55, which will provide storage for entering and exiting site traffic
    - This drive aisle should be managed by on-site staff during the arrival hours to ensure it is not blocked and minimize the potential queue spillback onto SH 55
- Access C on SH 55 will provide access to the VIP parking and music staff within the site. Access C is expected to serve event staff, employees, some rideshare pick-up and drop-off, and VIP parking zones south of Access B roadway
  - Access C will be a shared access to serve the eight (8) existing dwelling units south of the access
  - Access C is anticipated to meet ITD minimum operational thresholds during the peak arrival and departure hours

The Sunnyslope Event Facility is expected to have a traffic control and management plan for each event to minimize the event traffic impacts on Lowell Road and SH 55 to the site. The event coordinator should work with the local agencies to obtain the required permits and approval of the traffic control and management plan. The event coordinator should have on-site staff to manage internal intersections within the site.

Table 4.7 – Site Access Intersection Operations – 2024 Build-Out Year Total Traffic

Intersection		Control / Lane 2024 Total Mitigation	Lane Group	Friday 4-5 PM LOS	Friday 4-5 PM Delay [s/veh]	Friday 4-5 PM v/c Ratio	Friday 4-5 PM 95th % Q (ft)	Friday 9-10 PM LOS	Friday 9-10 PM Delay [s/veh]	Friday 9-10 PM v/c Ratio	Friday 9-10 PM 95th % Q (ft)
3	Access A and Lowell Rd		EBTR	-	-	-	-	-	-	-	-
			WBLT	A	9	0.26	25	A	7	< 0.01	25
			NBL	C	23	0.18	25	B	14	0.53	100
			NBR	A	10	0.01	25	B	11	0.41	50
			EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	A	9	0.26	25	A	7	< 0.01	25
			WBT	-	-	-	-	-	-	-	-
			NBL	C	17	0.12	25	B	14	0.55	100
			NBR	A	8	0.01	25	B	11	0.40	50
4	Access B and SH 55		WBL	C	24	0.05	25	B	14	0.29	50
			WBR	A	10	0.03	25	D	30	0.88	300
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.30	50	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
			WBL	C	24	0.05	25	B	14	0.29	50
			WBR	A	9	0.03	25	D	29	0.87	300
			NBT	-	-	-	-	-	-	-	-
			NBR	-	-	-	-	-	-	-	-
			SBL	A	10	0.30	50	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
5	Access C and SH 55		WBL	C	16	0.01	25	B	11	0.05	25
			WBR	A	10	0.04	25	A	9	0.14	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	9	0.17	25	A	8	< 0.01	25
			SBT	-	-	-	-	-	-	-	-

4.8 Alternate Site Access Scenario

During the scoping process, ITD requested an alternate site access scenario where only one driveway on SH 55 is constructed. For conservative analysis purposes, Access B is assumed to be constructed and Access C is omitted. While ITD expressed interest in shared access at the Access C location, the cidery at Access B will require an access for operations outside of event days. Access B is the proposed main access on SH 55.

Table 4.8 summarizes the alternate site access scenario results with the mitigation improvements needed under 2024 total traffic operations. The Chicken Dinner Road intersection on SH 55 is not expected to be impacted by this site access scenario and was not evaluated. Based on the analysis results, no additional mitigation improvements beyond the improvements needed under the proposed site access shown in the preliminary site plan are needed. Access A and Access B are anticipated to continue to meet minimum operational thresholds.

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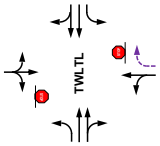
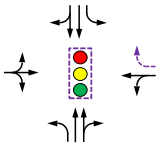
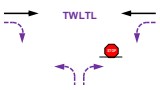
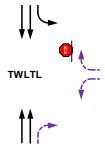
Table 4.8 – Intersection Operations – 2024 Build-Out Year Total Traffic (No Access C)

Intersection		Control / Lane 2024 Total Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
2	Lowell Rd and SH 55		EBLTR	D	33	0.14	25	FAIL			
			WBTL	F	66	0.40	50	C	24	0.13	25
			WBR	A	10	0.08	25	F	83	1.06	425
			NBL	A	9	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.35	50	B	10	0.06	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-
			Intersection	B	10	0.55	-	C	31	0.77	-
			EBLTR	B	16	0.08	25	C	23	0.01	25
			WBTL	B	16	0.11	25	C	23	0.05	25
			WBR	B	18	0.42	25	D	46	0.90	550
			NBL	B	12	0.01	25	B	16	0.04	25
			NBT	B	15	0.52	50	C	27	0.60	375
			NBTR	B	15	0.52	50	C	27	0.60	375
			SBL	A	8	0.59	50	B	18	0.17	25
			SBT	A	9	0.53	50	B	18	0.10	75
			SBTR	A	9	0.53	75	B	18	0.10	75
3	Access A and Lowell Rd		EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	A	9	0.26	25	A	7	< 0.01	25
			WBT	-	-	-	-	-	-	-	-
			NBL	C	17	0.15	25	C	16	0.63	125
			NBR	A	8	0.01	25	B	11	0.40	50
4	Access B and SH 55		WBL	D	33	0.08	25	B	13	0.30	50
			WBR	A	9	0.04	25	D	26	0.86	300
			NBT	-	-	-	-	-	-	-	-
			NBR	-	-	-	-	-	-	-	-
			SBL	A	9	0.37	50	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
5	Access C and SH 55	NO ACCESS C									

5.0 2029 HORIZON YEAR BACKGROUND TRAFFIC CONDITIONS

5.1 Roadway Network

The study area roadways and intersections are expected to remain the same as in 2024 background conditions. There are no funded projects programmed within the study area according to CHD4 or ITD transportation plans as discussed in Section 3.1. SH 55 widening east of Farmway Road is planned for design but not funded for construction by 2029.

5.2 Background Traffic

2029 background traffic was estimated using the same growth rates as discussed under 2024 background traffic conditions. **Figure 5.1** summarizes the 2029 horizon year background traffic for the Friday evening peak hours at the study area intersections.

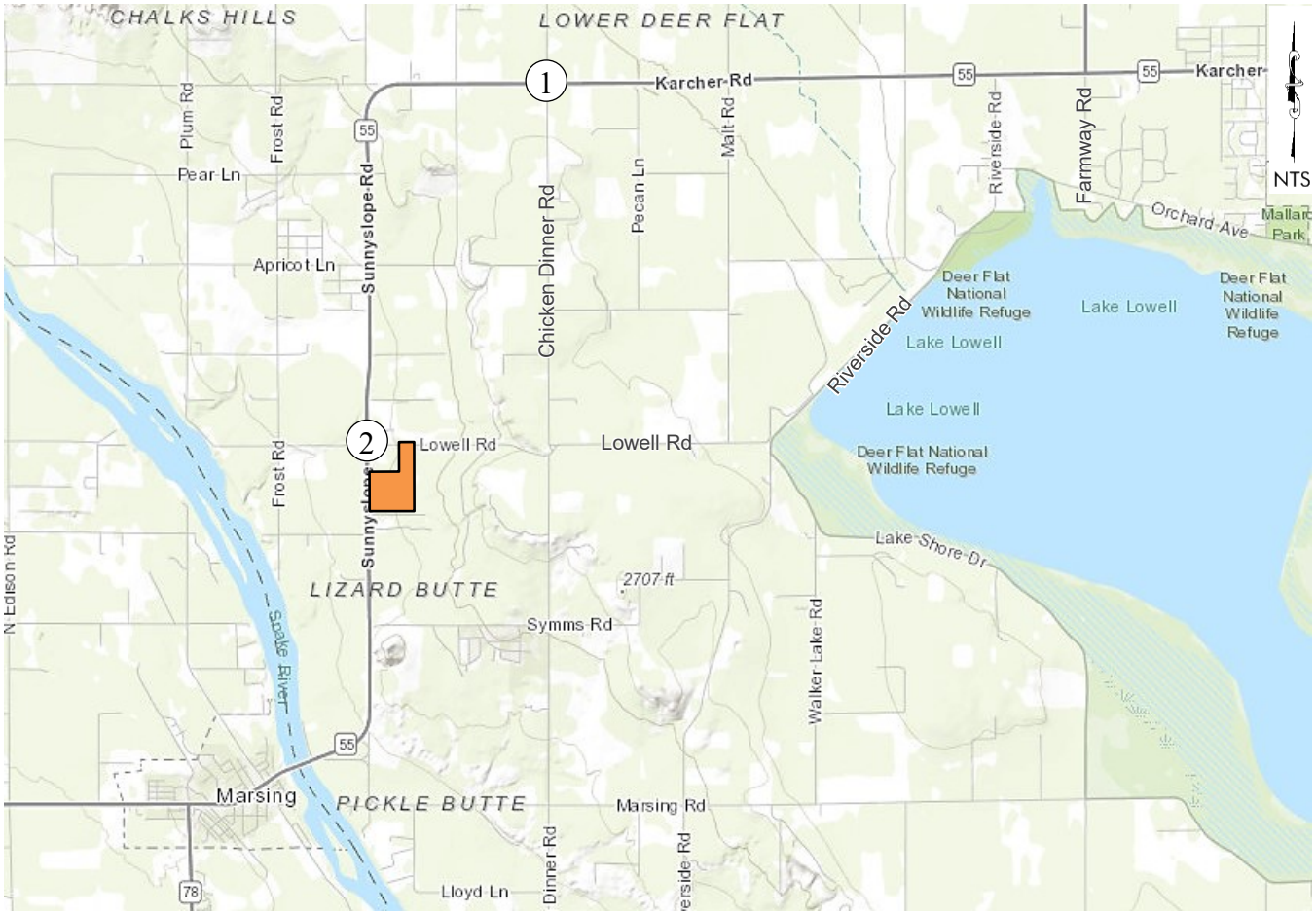
5.3 Intersection Operations

To determine the 2029 background traffic operations, the study area intersections were analyzed with the existing intersection control and lane configuration or with the turn lanes warranted under 2022 existing traffic conditions. Copies of the analysis reports are included in the appendix. **Table 5.1** summarizes the intersection capacity analysis results. All study area intersections are anticipated to meet minimum operational thresholds under 2029 background traffic conditions.

5.4 Intersection Mitigation

The study area intersections are anticipated to meet minimum operational thresholds under 2029 background traffic conditions. No study area intersection is anticipated to warrant additional turn lanes based on ITD turn lane guidelines. As a result, no additional improvements are needed to mitigate 2029 background traffic operations.

Figure 5.1 – 2029 Horizon Year Friday Evening Peak Hour Background Traffic



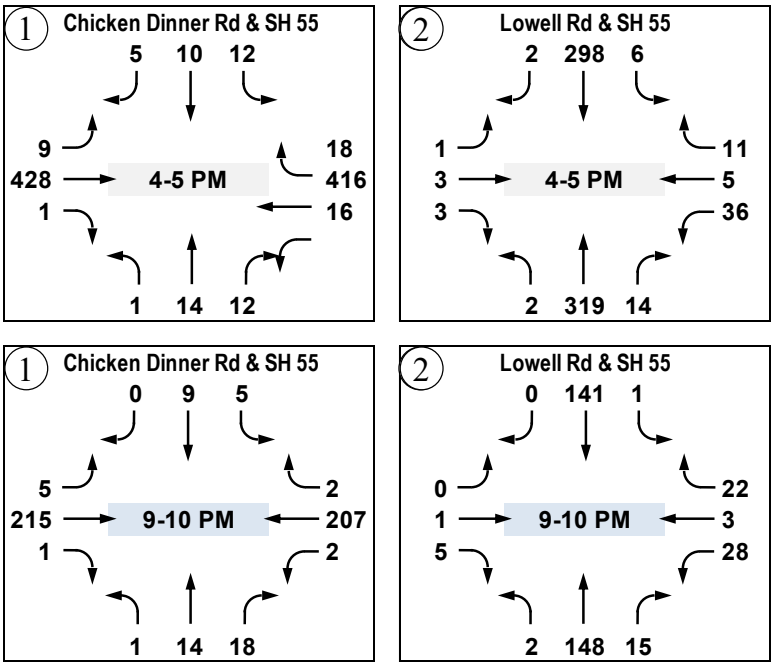
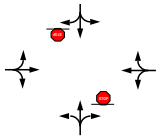
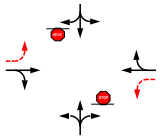
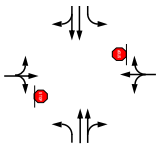


Table 5.1 – Intersection Operations – 2029 Horizon Year Background Traffic

Intersection		Control / Lane 2022 Mitigation	Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBLTR	A	9	0.01	25	A	8	< 0.01	25
			WBLTR	A	8	0.02	25	A	8	< 0.01	25
			NBLTR	C	19	0.10	25	B	11	0.06	25
			SBLTR	C	23	0.13	25	B	13	0.03	25
			EBL	A	9	0.01	25	A	8	< 0.01	25
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	8	0.02	25	A	8	< 0.01	25
			WBTR	-	-	-	-	-	-	-	-
			NBLTR	C	19	0.10	25	B	11	0.06	25
			SBLTR	C	23	0.13	25	B	13	0.03	25
2	Lowell Rd and SH 55		EBLTR	B	11	0.01	25	A	9	0.01	25
			WBLTR	B	12	0.11	25	B	10	0.08	25
			NBL	A	8	< 0.01	25	A	8	< 0.01	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	8	0.01	25	A	8	< 0.01	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-

6.0 2029 HORIZON YEAR TOTAL TRAFFIC CONDITIONS

6.1 Site Traffic

Site traffic under 2029 horizon year conditions is expected to remain the same as discussed in Section 4.2 and summarized in Figure 4.2 and Figure 4.3.

6.2 Total Traffic

The build-out site traffic is added to the 2029 background traffic as determined above to obtain the 2029 horizon year total traffic. **Figure 6.1** and **Figure 6.2** summarize the estimated 2029 peak arrival hour and peak departure hour total traffic at the study area intersections. **Table 6.1** summarizes the site traffic percentage at the study area intersections.

Table 6.1 – Build-Out Site Traffic Percentage of 2029 Horizon Year Total Traffic

Intersection		% Site Traffic of 2029 Total Traffic		
		4-5 PM	9-10 PM	Average
1	Chicken Dinner Rd and SH 55	54.8%	76.9%	65.9%
2	Lowell Rd and SH 55	58.8%	79.7%	69.3%

6.3 Intersection Operations

To determine the 2029 horizon year total traffic operations, the study area intersections were analyzed with and without the improvements needed under prior traffic analysis conditions. Copies of the analysis reports are included in the appendix. **Table 6.2** summarizes the intersection capacity analysis results. Two study area intersections are anticipated to exceed minimum operational thresholds under 2029 horizon year total traffic conditions:

- Chicken Dinner Road and SH 55 intersection
- Lowell Road and SH 55 intersection

Figure 6.1 – 2029 Horizon Year Peak Arrival Hour Total Traffic

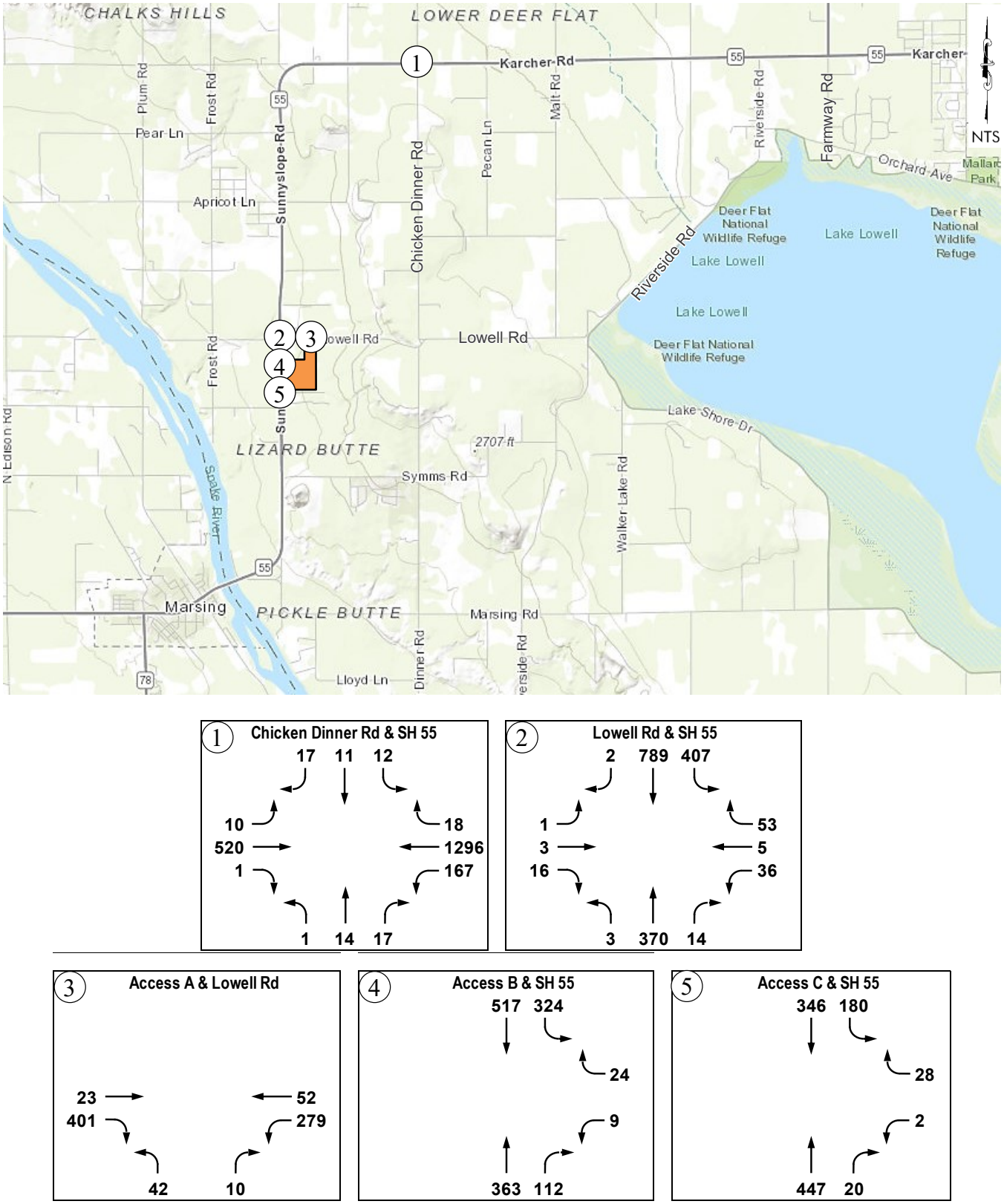


Figure 6.2 – 2029 Horizon Year Peak Departure Hour Total Traffic

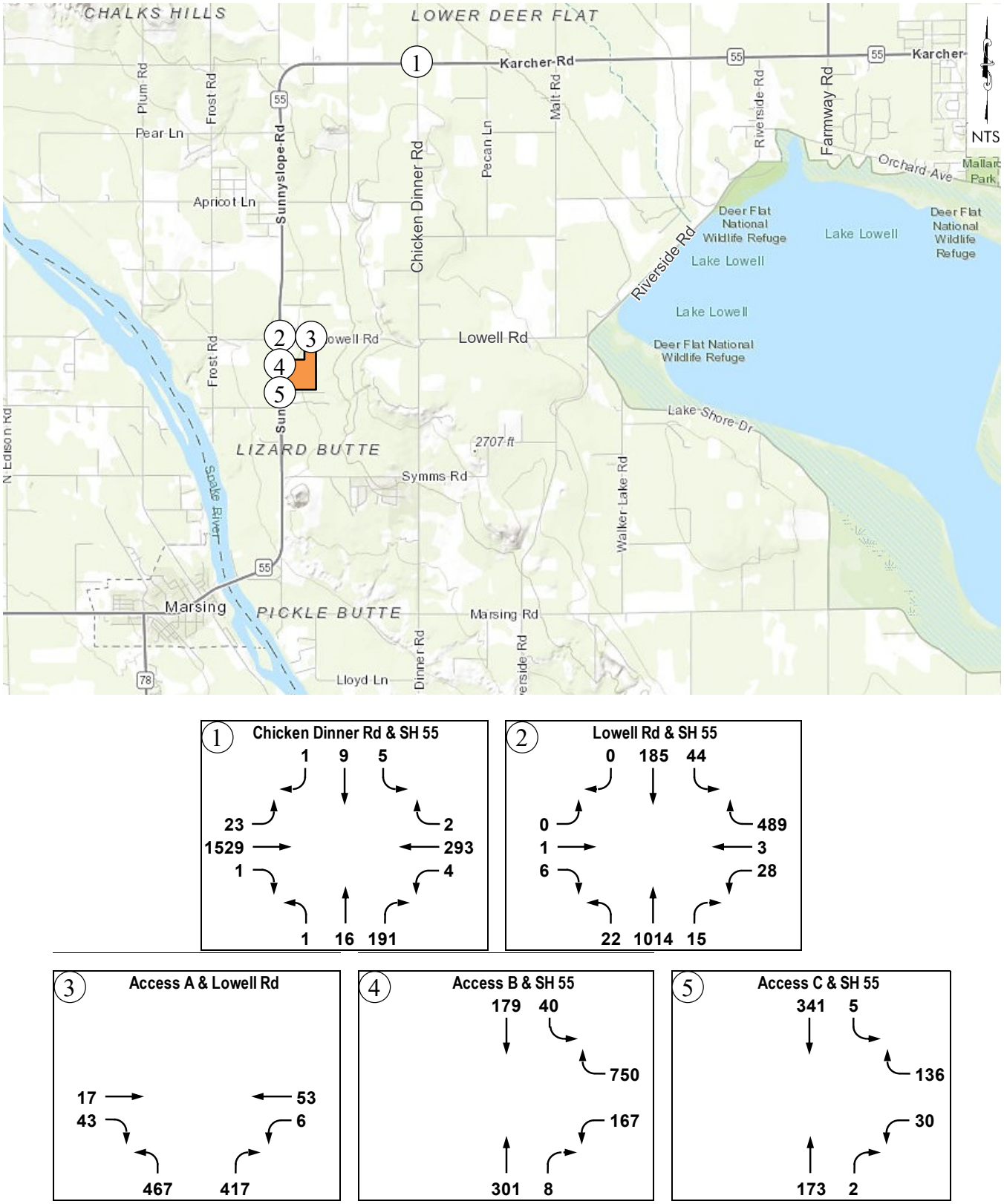


Table 6.2 – Intersection Operations – 2029 Horizon Year Total Traffic

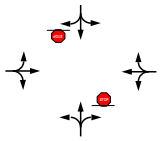
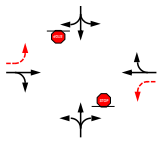
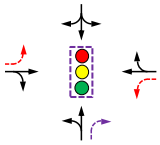
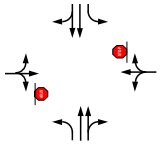
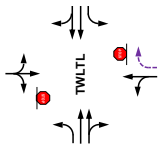
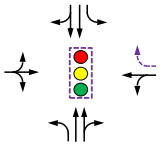
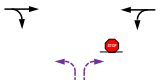
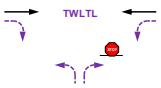
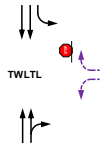
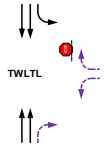
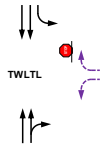
Intersection		Control / Lane 2022 Mitigation 2024 Total Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55		EBLTR	B	13	0.02	25	A	8	0.02	25
			WBLTR	A	9	0.17	25	B	14	0.01	25
			NBLTR	FAIL				F	433	1.75	425
			SBLTR	FAIL				FAIL			
			EBL	B	13	0.02	25	A	8	0.02	25
			EBTR	-	-	-	-	-	-	-	-
			WBL	A	9	0.17	25	B	14	0.01	25
			WBTR	-	-	-	-	-	-	-	-
			NBLTR	F	151	0.63	75	F	413	1.71	400
			SBLTR	F	500	1.39	125	FAIL			
			Intersection	B	18	0.90	-	F	84	1.09	-
			EBL	C	24	0.07	25	A	5	0.03	25
			EBTR	A	5	0.39	150	F	101	1.16	2,175
			WBL	A	3	0.24	25	D	41	0.07	25
			WBTR	C	22	0.94	725	A	7	0.24	125
			NBTL	E	60	0.17	25	D	52	0.07	25
			NBR	E	61	0.26	50	E	78	0.87	325
			SBLTR	E	63	0.43	75	D	52	0.06	25
2	Lowell Rd and SH 55		EBLTR	E	38	0.16	25	FAIL			
			WBLTR	E	49	0.56	75	F	125	1.17	500
			NBL	A	10	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.37	50	B	11	0.07	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-
			EBLTR	E	36	0.15	25	FAIL			
			WBTL	F	75	0.46	50	D	27	0.16	25
			WBR	A	10	0.07	25	F	70	1.00	350
			NBL	A	10	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.36	50	B	11	0.07	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-

Table 6.2 – Intersection Operations – 2029 Horizon Year Total Traffic (Continued)

Intersection		Control / Lane 2022 Mitigation 2024 Total Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
2	Lowell Rd and SH 55		Intersection	A	7	0.54	-	C	29	0.73	-
			EBLTR	D	42	0.16	25	C	26	0.01	25
			WBTL	D	43	0.28	50	C	26	0.06	50
			WBR	C	34	0.23	50	D	48	0.89	500
			NBL	A	6	0.01	25	B	14	0.03	25
			NBT	A	7	0.17	75	C	24	0.60	375
			NBTR	A	7	0.17	75	C	24	0.60	375
			SBL	A	4	0.50	50	B	16	0.17	25
			SBT	A	5	0.32	75	B	15	0.11	75
			SBTR	A	5	0.32	75	B	15	0.11	75
3	Access A and Lowell Rd		EBTR	-	-	-	-	-	-	-	-
			WBLT	A	9	0.26	25	A	7	< 0.01	25
			NBL	C	24	0.19	25	B	14	0.54	100
			NBR	A	10	0.01	25	B	11	0.41	50
			EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	A	9	0.26	25	A	7	< 0.01	25
			WBT	-	-	-	-	-	-	-	-
			NBL	C	17	0.12	25	B	14	0.55	100
			NBR	A	9	0.01	25	B	11	0.40	50
4	Access B and SH 55		WBL	D	27	0.05	25	B	14	0.30	50
			WBR	B	10	0.03	25	D	32	0.89	325
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.32	50	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
			WBL	C	25	0.05	25	B	14	0.30	50
			WBR	A	10	0.03	25	D	32	0.89	300
			NBT								
			NBR	-	-	-	-	-	-	-	-
			SBL	A	10	0.31	50	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
5	Access C and SH 55		WBL	C	17	0.01	25	B	11	0.05	25
			WBR	A	10	0.04	25	A	9	0.15	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	9	0.18	25	A	8	< 0.01	25
			SBT	-	-	-	-	-	-	-	-

6.4 Intersection Mitigation

Two study area intersections are expected to exceed minimum operational thresholds under 2029 horizon year total traffic conditions. The intersections, operational deficiencies, and mitigation improvements are summarized below.

Chicken Dinner Road and SH 55 Intersection

As shown in Table 6.2, the Chicken Dinner Road and SH 55 intersection is anticipated to exceed ITD minimum operational thresholds with and without the intersection improvements needed under prior traffic conditions. Without a temporary signal, the northbound and southbound approaches are anticipated to operate at LOS F with v/c ratios exceeding 1.00 during the event peak arrival and departure hours, exceeding ITD minimum operational thresholds. With a temporary traffic signal, all lane groups are anticipated to meet ITD minimum operational thresholds except for two lane groups. The eastbound shared through/right-turn and westbound shared through/right-turn lane groups are anticipated to exceed ITD minimum operation thresholds. These operational deficiencies are expected to occur for only a short duration during the event peak arrival and departure hours and meet operational thresholds during all other times.

Two mitigation improvements options are evaluated:

- Option 1 – Construct right-turn lanes on the eastbound and westbound approaches beyond prior improvements
- Option 2 – Construct one additional through lane on the eastbound and westbound approaches beyond prior improvements

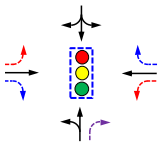
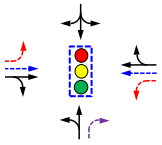
Table 6.3 summarizes the mitigation analysis results. With low eastbound and westbound right-turn volumes, adding right-turn lanes are not expected to reduce the v/c ratios to below 0.90; therefore, not recommended. Constructing one addition through lane on SH 55 would mitigate the intersection to meet ITD minimum operational thresholds. However, widening SH 55 to five lanes is not currently programmed or funded. Additionally, the SH 55 segment west of Chicken Dinner Road is anticipated to operate under capacity as a two-lane highway under 2029 horizon year total traffic conditions as discussed in Section 6.5 below.

Based on the mitigation analysis results, no additional intersection improvements beyond the prior improvements needed under 2024 build-out year total traffic conditions are recommended to mitigate 2029 horizon year total traffic conditions. With the prior improvements, all lane groups are anticipated to meet ITD minimum operational thresholds except for two lane groups. The v/c ratios for the westbound shared through/right-turn lane group is anticipated to exceed ITD 0.90 threshold during the peak arrival hour. The v/c ratio for the eastbound shared through/right-turn lane group is anticipated to exceed ITD 0.90 threshold during the peak departure hour. These operational deficiencies are expected to occur for only a short duration during the event peak arrival and departure hours and meet operational thresholds during all other times.

Lowell Road and SH 55 Intersection

As shown in Table 6.2, the Lowell Road and SH 55 intersection is anticipated to exceed ITD minimum operational thresholds without the temporary signal needed under 2024 total traffic conditions. With the improvements recommended to mitigate 2024 total traffic conditions, the intersection is anticipated to meet ITD minimum operational thresholds. Therefore, no additional improvements beyond the temporary traffic signal and westbound right-turn lane needed under 2024 total traffic conditions are needed to mitigate 2029 total traffic operations.

Table 6.3 – Chicken Dinner Road and SH 55 Intersection – 2029 Horizon Year Total Traffic Mitigation

Intersection		Control / Lane 2022 Mitigation 2024 Total Mitigation 2029 Total Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
1	Chicken Dinner Rd and SH 55	Option 1 	Intersection	B	17	0.89	-	**F**	84	**1.09**	-
			EBL	C	21	0.06	25	A	5	0.03	25
			EBT	A	5	0.39	150	**F**	101	**1.16**	2,175
			EBR	A	3	< 0.01	25	A	5	< 0.01	25
			WBL	A	3	0.24	25	D	41	0.07	25
			WBT	C	20	**0.92**	675	A	7	0.24	125
			WBR	A	3	0.02	25	A	6	< 0.01	25
			NBTL	E	60	0.17	25	D	52	0.07	25
			NBR	E	61	0.26	50	E	78	0.87	325
			SBLTR	E	63	0.43	75	D	52	0.06	25
		Option 2 	Intersection	A	7	0.52	-	B	15	0.68	-
			EBL	A	5	0.03	25	A	6	0.03	25
			EBT	A	5	0.22	75	B	13	0.65	325
			EBTR	A	5	0.22	75	B	12	0.65	325
			WBL	A	4	0.24	25	A	9	0.02	25
			WBT	A	7	0.53	150	A	7	0.13	50
			WBTR	A	6	0.53	150	A	7	0.13	50
			NBTL	D	41	0.14	25	C	37	0.06	25
			NBR	D	42	0.24	25	D	47	0.82	225
			SBLTR	D	43	0.35	50	C	36	0.05	25

6.5 SH 55 Roadway Segment Operations

The study area segment of SH 55 is anticipated to operate under capacity as a two-lane highway under Friday evening hour 2029 total traffic conditions. The estimated peak hour volumes in both directions on SH 55 west of Chicken Dinner Road is 1,850 vph during the peak arrival and departure hours, which are below the 3,200 vph base capacity for a two-lane highway. Additionally, the estimated directional peak hour volumes on SH 55 west of Chicken Diner Road are also below the 1,700 vph based capacity in one direction for a two-lane highway. Therefore, no roadway capacity improvements are needed on SH 55 segment within the study area except for the intersection improvements.

Table 6.4 summarizes the travel time comparison with and without the event traffic. The key findings from the traffic simulation results are:

- The event traffic is not expected to significantly impacted travel time on the study area segment of SH 55 if intersection mitigation improvements are constructed:
  - Install temporary traffic signals at the Chicken Dinner Road and Lowell Road intersections on SH 55
- The travel time on the study area segment of SH 55 will increase as follows:
  - During the 4-5 PM peak arrival hour, the total travel time in the minor northbound direction is estimated to remain the same without the temporary signals and increase by less than one (1) minute with the temporary signals

- During the 4-5 PM peak arrival hour, the total travel time in the major southbound direction is estimated to increase by approximately one (1) minute without the temporary signals and less than two (2) minutes with the temporary signals
- During the 9-10 PM peak departure hour, the total travel time in the major northbound direction is estimated to increase by less than one (1) minute without the temporary signals and less than seven (7) minutes with the temporary signals
- During the 9-10 PM peak departure hour, the total travel time in the minor southbound direction is estimated to increase by less than one (1) minute with and without the temporary signals

Table 6.4 – SH 55 Segment Travel Time Comparison Summary – 2029 Horizon Year Traffic

Traffic Conditions	SH 55 Lane Configuration	Average Travel Time (s)			
		Friday 4-5 PM		Friday 9-10 PM	
		NB	SB	NB	SB
2029 Background	5/2 Existing lanes[1]	250	260	243	254
2029 Total	5/2 Existing lanes[1]	249	322	274	283
	5/2 Existing lanes[2]	264	367	648	286

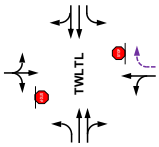
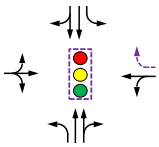
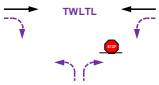
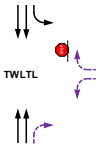
[1] Existing intersection control

[2] Temporary traffic signals at Chicken Dinner Road and Lowell Road intersections on SH 55

6.6 Alternate Site Access Scenario

Table 6.5 summarizes the analysis results without Access C with the mitigation improvements needed under 2024 total traffic operations. Based on the analysis results, no additional mitigation improvements beyond the improvements needed under the proposed site access as shown in the preliminary site plan are needed. Access A and Access B are anticipated to continue to meet minimum operational thresholds.

Table 6.5 – Intersection Operations – 2029 Horizon Year Total Traffic (No Access C)

Intersection		Control / Lane 2024 Total Mitigation	Intersection or Lane Group	Friday 4-5 PM				Friday 9-10 PM			
				LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)	LOS	Delay [s/veh]	v/c Ratio	95th % Q (ft)
2	Lowell Rd and SH 55		EBLTR	E	37	0.16	25	FAIL			
			WBTL	F	78	0.48	50	C	25	0.15	25
			WBR	A	10	0.08	25	F	91	1.08	450
			NBL	A	10	< 0.01	25	A	8	0.02	25
			NBT	-	-	-	-	-	-	-	-
			NBTR	-	-	-	-	-	-	-	-
			SBL	A	10	0.36	50	B	11	0.06	25
			SBT	-	-	-	-	-	-	-	-
			SBTR	-	-	-	-	-	-	-	-
			Intersection	A	8	0.53	-	C	32	0.78	-
			EBLTR	D	40	0.14	25	C	23	0.01	25
			WBTL	D	40	0.25	50	C	23	0.05	25
			WBR	D	47	0.64	75	D	46	0.90	550
			NBL	A	6	0.01	25	B	16	0.04	25
			NBT	A	8	0.18	75	C	27	0.61	375
			NBTR	A	8	0.18	75	C	27	0.61	375
			SBL	A	4	0.50	75	B	19	0.17	50
			SBT	A	5	0.32	75	B	18	0.12	75
			SBTR	A	5	0.32	100	B	18	0.12	75
3	Access A and Lowell Rd		EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	A	9	0.26	25	A	7	< 0.01	25
			WBT	-	-	-	-	-	-	-	-
			NBL	C	17	0.15	25	C	16	0.63	125
			NBR	A	9	0.01	25	B	11	0.40	50
4	Access B and SH 55		WBL	E	43	0.11	25	B	13	0.31	50
			WBR	A	10	0.05	25	D	28	0.87	300
			NBT	-	-	-	-	-	-	-	-
			NBR	-	-	-	-	-	-	-	-
			SBL	B	12	0.49	75	A	8	0.03	25
			SBT	-	-	-	-	-	-	-	-
5	Access C and SH 55	NO ACCESS C									

APPENDIX A: SCOPE

We verified with Salaber Associates, Inc., and the project application has been pulled. We'll exclude off-site traff generated by Snake River Wine Estates from the background traffic.

Thank you,

Chhang

On Wed, Apr 5, 2023 at 11:21 AM Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov> wrote:

Hi Chhang,

Please verify that Snake River Wine Estates is still part of the background information. Last I heard from Canyon County is that they pulled their application.

Thank you for your clarifications on the other points.

Niki Benyakhlef
Development Services Coordinator

District 3 Development Services
O: 208.334.8337 | C: 208.296.9750
Email: niki.benyakhlef@itd.idaho.gov

Website: itd.idaho.gov

From: Chhang Ream <chhream@gmail.com>
Sent: Wednesday, April 5, 2023 11:14 AM
To: Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov>

Cc: wleclerc@lexorbuilders.com; Brian Duran <Brian.Duran@itd.idaho.gov>; Vincent Trimboli <Vincent.Trimboli@itd.idaho.gov>
Subject: Re: CU2022-0034 Sunnyslope Event Venue

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

Hi Niki,

We will update the TIS per ITD's requests below. Please, see our initial responses below.

Thank you,

Chhang

On Mon, Apr 3, 2023 at 1:40 PM Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov> wrote:

> Hi Chhang. I hope you are doing well.
>
> ITD is considering not imposing mitigations at both Lowell/SH55 and SH55/Chicken Dinner. However, this decision will be based on a TIS showing a scenario in *current* road conditions. Instead of signalized intersections, we will condition the development with annual traffic control certifications which will require traffic control plans designed and stamped by a licensed professional engineer. Another option we are discussing is the potential for temporary lights if a TIS shows that would be an improvement necessary for safe traveling along that corridor during events. Sections 1.3 and 4.7 of the TIS discussed event traffic control and management plan. Temporary traffic light could be a part of the event traffic control plan.
>
> We would also ask that you provide a TIS that has no *assumed* development. Please only include developments that are currently being developed or that have already been approved by the local land use agency. The TIS assumed traffic growth and in-process development as discussed in Section 3.2. The Snake River Wine Estates was include in the background traffic as it is approved and under construction.
>
> When we met with local land users, they were unclear on "PEAK" hours. Were you using the standard Weekday PM Peak hours, or the peak hours of the event facility? Please see Sections 4.1 in the Executive Summary and Section 1.4 in the Introduction. We use the peak hours of the event.

Based on a previous conversation, we notified you that we were removing the intersection of SH55 & Farmway. Could you please update the TIS with this intersection removed. We will remove this intersection in the TIS update.

We are asking for these changes and clarifications so that way when the Board of Commissioners review the TIS, they will have the latest information provided to them in one document. If you could please provide feedback and update the TIS accordingly, that would be great.

Thank you.

Niki Benyakhlef
Development Services Coordinator

District 3 Development Services
O: 208.334.8337 | C: 208.296.9750
Email: niki.benyakhlef@itd.idaho. o

Website: itd.idaho.gov

Fwd: Lowell Road / SH55 CUP - TIS Scope

wleclerc@lexorbuilders.com <wleclerc@lexorbuilders.com> Fri, Apr 22, 2022 at 3:09 PM
To: Brandon Atchley <creng.brandonatchley@gmail.com>, Regan Hansen <Regan.Hansen@itd.idaho.gov>
Cc: Chhang Ream <chhream@gmail.com>, Chris Hopper <CHopper@canyonhd4.org>

Hi Regan – we do not plan to have Saturday afternoon events, our events will be in the evening as we discussed.

Please let us know if there is anything else that you need from us.

Best,

Bill

From: Brandon Atchley <creng.brandonatchley@gmail.com>
Sent: Friday, April 22, 2022 12:28 PM
To: Regan Hansen <Regan.Hansen@itd.idaho.gov>
Cc: Chhang Ream <chhream@gmail.com>; wleclerc@lexorbuilders.com; Chris Hopper <CHopper@canyonhd4.org>
Subject: Re: [EXTERNAL] Re: Lowell Road / SH55 CUP - TIS Scope

Understood, thanks Regan. As discussed on the call, we will need to be in coordination throughout the study. We will coordinate more with the client on operational times.

Brandon Atchley - CR Engineering, Inc.

On Thu, Apr 21, 2022 at 4:53 PM Regan Hansen <Regan.Hansen@itd.idaho.gov> wrote:

> Brandon,
>
> I would also like to add 55/Farmway as a study intersection—this is the last intersection between I-84 and the project site with control on the SH-55 approaches and will be the only one that is not widened with the upcoming Karcher widening project. That's getting pretty far removed from the project site so it might be pretty hard to predict what kind of traffic patterns would be observed there. However, since SH-55 will be the primary route to/from I-84, I would expect it to approach capacity for the upstream two-lane segment for event-departing traffic (which will also have some implications for the Farmway signal) and likely use up most/all of the existing excess WB PM peak capacity for the event-arriving traffic.
>
> For peak periods, our primary interest is in the ~4-5PM Friday peak period (which appears to be within 5-10% of just about every other evening and has fairly similar directional split). Obviously even though for the most part it is off peak for the background traffic, we do need to see analysis for the departing traffic at appropriate times for when the events would end (since the event volume will be the new NB/EB peak volume for most of Karcher Rd). Also, does the venue ever do earlier large events (e.g. a mid-day Saturday rather than ~7PM-10PM+)? If, for example, large volumes would depart the venue in periods that would more closely resemble midday traffic we would need to see analysis for that too. Likely that would be a fairly uncommon event which would probably require event permitting and TTC to make the departures work.

Thank you,

Regan Hansen, P.E.

Traffic Signal Engineer

District 3 Traffic Section

Idaho Transportation Department

P: 208-332-7170 | E: Regan.Hansen@itd.idaho.gov

YOUR *Safety* • • • ▶ YOUR *Mobility* • • • ▶ YOUR *Economic Opportunity*

From: Brandon Atchley <creng.brandonatchley@gmail.com>
Sent: Thursday, April 21, 2022 1:22 PM
To: Regan Hansen <Regan.Hansen@itd.idaho.gov>; Chris Hopper <CHopper@canyonhd4.org>
Cc: Chhang Ream <chhream@gmail.com>; wleclerc@lexorbuilders.com
Subject: [EXTERNAL] Re: Lowell Road / SH55 CUP - TIS Scope

--- This email is from an external sender. Be cautious and DO NOT open links or attachments if the sender is unknown. ---

Hello Regan,

I also added Chris Hopper on this email chain. Here are the July 2021 counts for Thursday and Saturday at the Lowell Road and SH 55 intersection.

From the Teams call, ITD stated that analysis at the Lowell Road and Chicken Dinner Road intersections on SH 55 is desired, as well as segment analysis on SH 55 west of Chicken Dinner Road. Alternate access scenario depending on site design and layout will also be included (one access versus two accesses on SH 55). Site volumes, time frames, trip distribution, and vehicle occupancy will be discussed further once more information is provided from and discussed with the client.

In addition, partially discussed on the call was event circulation recommendations for a proposed event site back in 2020 for a separate client/project. Recommendations included access control to prevent accesses conflicting with each other during peak arrival/departure times, as well as potential on-site and off-site wayfinding. We will discuss more options as new project information is available and the TIS progresses.

Thanks,

Brandon Atchley - CR Engineering, Inc.

On Thu, Apr 21, 2022 at 9:19 AM Chhang Ream <chhream@gmail.com> wrote:

> Can you attend this scoping meeting?
>
> ---------- Forwarded message ---------
> From: **William LeClerc** <wleclerc@lexorbuilders.com>
> Date: Wed, Apr 20, 2022 at 10:35 PM
> Subject: Re: Lowell Road / SH55 CUP - TIS Scope

To: Chhang Ream <chhream@gmail.com>

Can you join the meeting? 1pm mt tomorrow

Sent from my iPhone

On Apr 20, 2022, at 9:18 PM, Chhang Ream <chhream@gmail.com> wrote:

Hi Bill,

Please confirm the scope of the TIS with ITD. We would like to know which intersections and what site access scenarios to evaluate.

Thanks,

Chhang

On Tue, Apr 19, 2022 at 3:08 PM <wleclerc@lexorbuilders.com> wrote:

> Hi Chhang – I'm meeting with Shona and her team on Thursday afternoon, I'll let you know what comes out of the meeting so that we can work on a proposal and get in line for a traffic impact study.
>
> Best,
>
> Bill
>
> ---
>
> **From:** William LeClerc <wleclerc@lexorbuilders.com>
> **Sent:** Friday, April 8, 2022 7:40 AM
> **To:** Chhang Ream <chhream@gmail.com>
> **Subject:** Re: Lowell Road / SH55 CUP - TIS Scope
>
> Ok thanks Chhang, I'll reach out to Shona
>
> Sent from my iPhone
>
> On Apr 8, 2022, at 5:53 AM, Chhang Ream <chhream@gmail.com> wrote:
>
> Bill,
>
> Regan Hansen is the person who will be reviewing the traffic study. He is the person who will be providing the inputs. Shona would be able to provide access information.

Thanks,

Chhang

On Thu, Apr 7, 2022 at 1:32 PM <wleclerc@lexorbuilders.com> wrote:

> Ok, should I give her a call or is she typically fairly responsive?
>
> ---
>
> **From:** Chhang Ream <chhream@gmail.com>
> **Sent:** Thursday, April 7, 2022 12:00 PM
> **To:** wleclerc@lexorbuilders.com
> **Subject:** Re: Lowell Road / SH55 CUP - TIS Scope
>
> Bill - yes we need inputs from ITD as well.
>
> On Thu, Apr 7, 2022 at 10:12 AM <wleclerc@lexorbuilders.com> wrote:
>
> > Hi Chhang – we need Shona's input as well?
> >
> > ---
> >
> > **From:** Chhang Ream <chhream@gmail.com>
> > **Sent:** Thursday, April 7, 2022 8:21 AM
> > **To:** Chris Hopper <CHopper@canyonhd4.org>
> > **Cc:** Regan Hansen <Regan.Hansen@itd.idaho.gov>; Sarah Arjona <Sarah.Arjona@itd.idaho.gov>; Shona Tonkin <Shona.Tonkin@itd.idaho.gov>; wleclerc@lexorbuilders.com; Brandon Atchley <creng.brandonatchley@gmail.com>
> > **Subject:** Re: Lowell Road / SH55 CUP - TIS Scope
> >
> > Thanks Chris.
> >
> > Chhang
> >
> > On Wed, Apr 6, 2022 at 7:52 AM Chris Hopper <CHopper@canyonhd4.org> wrote:
> >
> > > Chhang-
> > >
> > > From our discussions with the applicant about the project, that is a good summary of our needs for this TIS.
> > >
> > > Approach to Lowell Rd should be located at either east or west side of site frontage to meet our access spacing policy; east side would need to function as a shared approach with the existing residence immediately east of the site.
> > >
> > > Evaluation of auxiliary turn lanes and queues on Lowell Rd should be included.
> > >
> > > Respectfully,
> > >
> > > **Chris Hopper, P.E.**

District Engineer

Canyon Highway District No. 4

15435 Hwy 44

Caldwell, Idaho 83607

208-454-8135

From: Chhang Ream <chhream@gmail.com>
Sent: Tuesday, April 5, 2022 6:50 PM
To: Chris Hopper <CHopper@canyonhd4.org>; Regan Hansen <Regan.Hansen@itd.idaho.gov>
Cc: Sarah Arjona <Sarah.Arjona@itd.idaho.gov>; Shona Tonkin <Shona.Tonkin@itd.idaho.gov>; wleclerc@lexorbuilders.com; Brandon Atchley <creng.brandonatchley@gmail.com>
Subject: Lowell Road / SH55 CUP - TIS Scope

Hi Chris and Regan,

We would like to get your inputs on the scope of work for the traffic impact study (TIS) for the referenced project located within the southeast area of the Lowell Road and SH 55 intersection in Canyon County, Idaho. No site plan is available for the project yet. The attached exhibit shows the project boundary. Here is what we know about this project:

- The developer is planning to apply for a CUP with the county
- The proposed land use will be an outdoor event facility hosting 60-70 events per year during the summer/warm months (May-October)
- The events will be held during weekday and weekend accommodating up to 2,300 cars
- Event traffic arrival (traffic entering the site) will be random
- Event traffic departure (traffic exiting the site) will be concentrated within a short period after the event ends
- The development will be reconfiguring two existing approaches on SH 55 for site access
- One site access will be proposed on Lowell Road

We are anticipating the TIS scope to include:

1. The study area to include the Lowell Road and SH 55 intersection and the proposed site access intersections
2. We may need to look at multiple site access scenarios on SH 55
3. Evaluate traffic impacts under weekday and weekend traffic conditions
4. Review site access, circulation, and temporary traffic control plan

We will prepare a memo summarizing the TIS scope for your review once we receive your inputs/comments.

Thank you,

Chhang Ream

CR Engineering, Inc.

181 E 50th St

APPENDIX B: TRAFFIC COUNTS

Chicken Dinner Road & SH 55
Caldwell Idaho
Friday, June 10, 2022

	Southbound Chicken Dinner Road						Westbound Karcher Road (SH 55)						Northbound Chicken Dinner Road						Eastbound Karcher Road (SH 55)						
Time	**U Turns**	**Left Turns**	**Straight Through**	**Right Turns**	**Crosswalk Crossings**	***Vehicle Approach Total***	**U Turns**	**Left Turns**	**Straight Through**	**Right Turns**	**Crosswalk Crossings**	***Vehicle Approach Total***	**U Turns**	**Left Turns**	**Straight Through**	**Right Turns**	**Crosswalk Crossings**	***Vehicle Approach Total***	**U Turns**	**Left Turns**	**Straight Through**	**Right Turns**	**Crosswalk Crossings**	***Vehicle Approach Total***	**VEHICLE TOTAL**
4:00 PM	0	2	3	1	0	*6*	0	3	65	6	0	*74*	0	0	0	2	0	*2*	0	1	85	1	0	*87*	**169**
4:15 PM	0	2	2	2	0	*6*	0	5	87	5	0	*97*	0	0	5	0	0	*5*	0	5	98	0	0	*103*	**211**
4:30 PM	0	2	1	1	0	*4*	0	0	97	1	0	*98*	0	1	3	4	0	*8*	0	0	90	0	0	*90*	**200**
4:45 PM	0	4	2	0	0	*6*	0	5	89	3	0	*97*	0	0	3	4	0	*7*	0	1	75	0	0	*76*	**186**
Hourly Total	0	10	8	4	0	*22*	0	13	338	15	0	*366*	0	1	11	10	0	*22*	0	7	348	1	0	*356*	**766**
5:00 PM	0	4	1	0	0	*5*	0	0	83	1	0	*84*	0	1	2	4	0	*7*	0	1	85	0	0	*86*	**182**
5:15 PM	0	7	5	3	0	*15*	0	1	87	1	0	*89*	0	1	1	5	0	*7*	1	1	75	0	0	*77*	**188**
5:30 PM	0	2	2	0	0	*4*	0	2	102	2	0	*106*	0	0	2	3	0	*5*	0	1	79	1	0	*81*	**196**
5:45 PM	0	3	2	3	0	*8*	0	3	84	0	0	*87*	0	0	3	1	0	*4*	0	0	90	0	0	*90*	**189**
Hourly Total	0	16	10	6	0	*32*	0	6	356	4	0	*366*	0	2	8	13	0	*23*	1	3	329	1	0	*334*	**755**
6:00 PM	1	1	4	1	0	*7*	0	3	107	5	0	*115*	0	1	1	4	0	*6*	0	0	80	0	0	*80*	**208**
6:15 PM	0	3	1	2	0	*6*	0	4	77	2	1	*83*	0	0	3	2	0	*5*	0	2	86	0	0	*88*	**182**
6:30 PM	0	2	3	1	0	*6*	0	1	74	4	0	*79*	0	1	3	3	0	*7*	0	1	79	0	0	*80*	**172**
6:45 PM	0	1	0	2	0	*3*	0	3	79	3	0	*85*	0	1	3	2	0	*6*	0	2	63	0	0	*65*	**159**
Hourly Total	1	7	8	6	0	*22*	0	11	337	14	1	*362*	0	3	10	11	0	*24*	0	5	308	0	0	*313*	**721**
7:00 PM	0	1	1	1	0	*3*	0	1	71	2	0	*74*	0	0	2	2	0	*4*	0	1	37	0	0	*38*	**119**
7:15 PM	0	1	2	3	0	*6*	0	0	60	3	0	*63*	0	0	2	1	0	*3*	0	0	61	1	0	*62*	**134**
7:30 PM	0	0	2	0	0	*2*	0	0	60	2	0	*62*	0	1	1	2	0	*4*	0	1	69	1	0	*71*	**139**
7:45 PM	0	1	1	1	0	*3*	0	4	43	1	0	*48*	0	0	3	2	0	*5*	0	1	39	0	0	*40*	**96**
Hourly Total	0	3	6	5	0	*14*	0	5	234	8	0	*247*	0	1	8	7	0	*16*	0	3	206	2	0	*211*	**488**
8:00 PM	0	1	2	1	0	*4*	0	0	45	1	0	*46*	0	0	4	2	0	*6*	0	1	53	0	0	*54*	**110**
8:15 PM	0	1	4	1	0	*6*	0	0	40	3	0	*43*	0	0	1	0	0	*1*	0	3	44	1	0	*48*	**98**
8:30 PM	0	2	1	0	0	*3*	0	0	45	2	0	*47*	0	0	0	2	0	*2*	0	0	42	0	0	*42*	**94**
8:45 PM	0	1	2	2	0	*5*	0	2	60	3	0	*65*	0	0	2	3	0	*5*	0	0	39	1	0	*40*	**115**
Hourly Total	0	5	9	4	0	*18*	0	2	190	9	0	*201*	0	0	7	7	0	*14*	0	4	178	2	0	*184*	**417**
9:00 PM	0	3	0	0	0	*3*	0	2	32	1	0	*35*	0	0	0	5	0	*5*	0	0	48	0	0	*48*	**91**
9:15 PM	0	0	1	0	0	*1*	0	0	55	1	0	*56*	0	1	5	6	0	*12*	0	0	41	0	0	*41*	**110**
9:30 PM	0	1	0	0	0	*1*	0	0	38	0	0	*38*	0	0	4	4	0	*8*	0	3	52	0	0	*55*	**102**
9:45 PM	0	0	6	0	0	*6*	0	0	43	0	0	*43*	0	0	2	0	0	*2*	0	1	34	1	0	*36*	**87**
Hourly Total	0	4	7	0	0	*11*	0	2	168	2	0	*172*	0	1	11	15	0	*27*	0	4	175	1	0	*180*	**390**
10:00 PM	0	0	1	0	0	*1*	0	1	41	0	0	*42*	0	0	3	1	0	*4*	0	0	26	0	0	*26*	**73**
10:15 PM	0	0	2	0	0	*2*	0	1	37	1	0	*39*	0	0	0	0	0	*0*	0	1	31	0	0	*32*	**73**
10:30 PM	0	0	0	0	0	*0*	0	1	38	0	0	*39*	0	0	0	0	0	*0*	0	0	26	0	0	*26*	**65**
10:45 PM	0	0	1	0	0	*1*	0	0	26	1	0	*27*	0	0	0	1	0	*1*	0	0	23	0	0	*23*	**52**
Hourly Total	0	0	4	0	0	*4*	0	3	142	2	0	*147*	0	0	3	2	0	*5*	0	1	106	0	0	*107*	**263**
11:00 PM	0	1	0	0	0	*1*	0	1	20	1	0	*22*	0	0	0	1	0	*1*	0	1	11	0	0	*12*	**36**
11:15 PM	0	0	0	0	0	*0*	0	0	14	0	0	*14*	0	0	1	0	0	*1*	0	2	14	0	0	*16*	**31**
11:30 PM	0	1	1	2	0	*4*	0	0	1	0	0	*1*	0	0	0	0	0	*0*	0	0	10	0	0	*10*	**15**
11:45 PM	0	0	1	1	0	*2*	0	0	3	0	0	*3*	0	0	0	1	0	*1*	0	1	8	0	0	*9*	**15**
Hourly Total	0	2	2	3	0	*7*	0	1	38	1	0	*40*	0	0	1	2	0	*3*	0	4	43	0	0	*47*	**97**
DAILY TOTAL	**1**	**47**	**54**	**28**	**0**	***130***	**0**	**43**	**1803**	**55**	**1**	***1901***	**0**	**8**	**59**	**67**	**0**	***134***	**1**	**31**	**1693**	**7**	**0**	***1732***	**3897**
Cars	1	42	50	25	0	*118*	0	43	1723	54	0	*1820*	0	8	53	67	0	*128*	1	30	1613	7	0	*1651*	**3717**
Heavy Vehicles	0	5	4	3	0	*12*	0	0	80	1	1	*81*	0	0	6	0	0	*6*	0	1	80	0	0	*81*	**180**
Heavy Vehicle %	0.00%	10.64%	7.41%	10.71%	0.00%	*9.23%*	0.00%	0.00%	4.44%	1.82%	100.00%	*4.26%*	0.00%	0.00%	10.17%	0.00%	0.00%	*4.48%*	0.00%	3.23%	4.73%	0.00%	0.00%	*4.68%*	**4.62%**

Chicken Dinner Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
AM Peak Hour

Time	Chicken Dinner Road Southbound						Karcher Road (SH 55) Westbound						Chicken Dinner Road Northbound						Karcher Road (SH 55) Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	2	3	1	0	*6*	0	3	65	6	0	*74*	0	0	0	2	0	*2*	0	1	85	1	0	*87*	**169**
4:15 PM	0	2	2	2	0	*6*	0	5	87	5	0	*97*	0	0	5	0	0	*5*	0	5	98	0	0	*103*	**211**
4:30 PM	0	2	1	1	0	*4*	0	0	97	1	0	*98*	0	1	3	4	0	*8*	0	0	90	0	0	*90*	**200**
4:45 PM	0	4	2	0	0	*6*	0	5	89	3	0	*97*	0	0	3	4	0	*7*	0	1	75	0	0	*76*	**186**
Peak Hour Total	0	10	8	4	0	*22*	0	13	338	15	0	*366*	0	1	11	10	0	*22*	0	7	348	1	0	*356*	**766**
PHF	0.000	0.625	0.667	0.500	0.000	*0.917*	0.000	0.650	0.871	0.625	0.000	*0.934*	0.000	0.250	0.550	0.625	0.000	*0.688*	0.000	0.350	0.888	0.250	0.000	*0.864*	**0.908**
Heavy Vehicle %	0.00%	0.00%	25.00%	0.00%	0.00%	**9.09%**	0.00%	0.00%	5.33%	6.67%	0.00%	**5.19%**	0.00%	0.00%	27.27%	0.00%	0.00%	**13.64%**	0.00%	14.29%	6.03%	0.00%	0.00%	**6.18%**	**6.0%**

Total Vehicles On Leg			55		
Vehicles Entering Intersection	22		Vehicles Exiting Intersection	33	
Southbound					
Cars	4	6	10	0	0
Heavy	0	2	0	0	0
Total	**4**	**8**	**10**	**0**	**0**

Total Vehicles on Leg 699		**Eastbound**	Cars	Heavy	**Total**
	Vehicles Entering Intersection 356		0	0	**0**
			0	0	**0**
	Vehicles Exiting Intersection 343		6	1	**7**
			327	21	**348**
			1	0	**1**

4-5 PM Arrival Hour Volumes

Cars	Heavy	**Total**	**Westbound**		Total Vehicles on Leg 734
14	1	**15**		Vehicles Entering Intersection 366	
320	18	**338**			
13	0	**13**		Vehicles Exiting Intersection 368	
0	0	**0**			
0	0	**0**			

Cars	0	0	1	8	10
Heavy	0	0	0	3	0
Total	**0**	**0**	**1**	**11**	**10**
Northbound					
Vehicles Entering Intersection	22		Vehicles Exiting Intersection	22	
Total Vehicles On Leg			44		

Chicken Dinner Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
PM Peak Hour

Time	Chicken Dinner Road Southbound						Karcher Road (SH 55) Westbound						Chicken Dinner Road Northbound						Karcher Road (SH 55) Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
9:00 PM	0	3	0	0	0	*3*	0	2	32	1	0	*35*	0	0	0	5	0	*5*	0	0	48	0	0	*48*	**91**
9:15 PM	0	0	1	0	0	*1*	0	0	55	1	0	*56*	0	1	5	6	0	*12*	0	0	41	0	0	*41*	**110**
9:30 PM	0	1	0	0	0	*1*	0	0	38	0	0	*38*	0	0	4	4	0	*8*	0	3	52	0	0	*55*	**102**
9:45 PM	0	0	6	0	0	*6*	0	0	43	0	0	*43*	0	0	2	0	0	*2*	0	1	34	1	0	*36*	**87**
Peak Hour Total	0	4	7	0	0	*11*	0	2	168	2	0	*172*	0	1	11	15	0	*27*	0	4	175	1	0	*180*	**390**
PHF	0.000	0.333	0.292	0.000	0.000	*0.458*	0.000	0.250	0.764	0.500	0.000	*0.768*	0.000	0.250	0.550	0.625	0.000	*0.563*	0.000	0.333	0.841	0.250	0.000	*0.818*	**0.886**
Heavy Vehicle %	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	8.33%	0.00%	0.00%	**8.14%**	0.00%	0.00%	18.18%	0.00%	0.00%	**7.41%**	0.00%	0.00%	4.00%	0.00%	0.00%	**3.89%**	**5.9%**

9-10 PM Departure Hour Volumes

Southbound

Total Vehicles On Leg			28		
Vehicles Entering Intersection	11		Vehicles Exiting Intersection	17	
Cars	0	7	4	0	0
Heavy	0	0	0	0	0
Total	**0**	**7**	**4**	**0**	**0**

Eastbound

Total Vehicles on Leg 349	Vehicles Entering Intersection 180	Cars	Heavy	**Total**
		0	0	**0**
		0	0	**0**
	Vehicles Exiting Intersection 169	4	0	**4**
		168	7	**175**
		1	0	**1**

Westbound

Cars	Heavy	**Total**	Vehicles Entering Intersection 172	Total Vehicles on Leg 366
2	0	**2**		
154	14	**168**		
2	0	**2**	Vehicles Exiting Intersection 194	
0	0	**0**		
0	0	**0**		

Northbound

Cars	0	0	1	9	15
Heavy	0	0	0	2	0
Total	**0**	**0**	**1**	**11**	**15**
Vehicles Entering Intersection	27		Vehicles Exiting Intersection	10	
Total Vehicles On Leg			37		

Farmway Road & SH 55
Caldwell Idaho
Friday, June 10, 2022

Time	Southbound Farmway Road						Westbound Karcher Road (SH 55)						Northbound Farmway Road						Eastbound Karcher Road (SH 55)						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	14	15	28	0	*57*	0	5	73	21	0	*99*	0	0	11	2	0	*13*	0	31	104	2	0	*137*	**306**
4:15 PM	0	14	24	39	0	*77*	0	2	86	16	0	*104*	0	1	22	3	0	*26*	0	33	93	2	0	*128*	**335**
4:30 PM	0	22	18	34	0	*74*	0	4	101	18	0	*123*	0	4	11	1	0	*16*	0	39	110	1	0	*150*	**363**
4:45 PM	0	24	25	40	0	*89*	0	1	100	25	0	*126*	0	4	10	2	0	*16*	0	22	106	0	0	*128*	**359**
Hourly Total	0	74	82	141	0	*297*	0	12	360	80	0	*452*	0	9	54	8	0	*71*	0	125	413	5	0	*543*	**1363**
5:00 PM	0	19	17	37	0	*73*	0	5	85	21	0	*111*	0	0	19	4	0	*23*	0	36	99	0	0	*135*	**342**
5:15 PM	0	20	12	48	0	*80*	0	3	112	29	0	*144*	0	0	23	1	0	*24*	0	25	114	3	0	*142*	**390**
5:30 PM	0	22	23	50	0	*95*	0	2	88	27	0	*117*	0	4	28	0	0	*32*	0	35	86	1	0	*122*	**366**
5:45 PM	0	16	10	29	0	*55*	0	3	109	26	0	*138*	0	1	12	2	0	*15*	0	30	105	1	0	*136*	**344**
Hourly Total	0	77	62	164	0	*303*	0	13	394	103	0	*510*	0	5	82	7	0	*94*	0	126	404	5	0	*535*	**1442**
6:00 PM	0	14	15	43	0	*72*	0	5	103	17	0	*125*	0	3	9	2	0	*14*	0	38	94	4	0	*136*	**347**
6:15 PM	0	18	11	22	0	*51*	0	3	97	16	0	*116*	0	2	4	4	0	*10*	0	33	93	2	0	*128*	**305**
6:30 PM	0	19	12	29	0	*60*	0	2	95	19	0	*116*	0	0	13	5	0	*18*	0	18	96	3	0	*117*	**311**
6:45 PM	0	15	9	29	0	*53*	0	6	96	20	0	*122*	0	3	10	2	0	*15*	0	27	80	2	0	*109*	**299**
Hourly Total	0	66	47	123	0	*236*	0	16	391	72	0	*479*	0	8	36	13	0	*57*	0	116	363	11	0	*490*	**1262**
7:00 PM	0	11	5	33	0	*49*	0	2	81	21	0	*104*	0	1	8	2	0	*11*	0	23	60	0	0	*83*	**247**
7:15 PM	0	9	24	14	0	*47*	0	5	81	14	0	*100*	0	1	7	2	0	*10*	0	26	89	0	0	*115*	**272**
7:30 PM	0	3	6	13	0	*22*	0	1	77	10	0	*88*	0	0	8	2	0	*10*	0	19	81	1	0	*101*	**221**
7:45 PM	0	6	12	20	0	*38*	0	4	52	18	0	*74*	0	0	6	1	0	*7*	0	19	71	0	0	*90*	**209**
Hourly Total	0	29	47	80	0	*156*	0	12	291	63	0	*366*	0	2	29	7	0	*38*	0	87	301	1	0	*389*	**949**
8:00 PM	0	7	3	13	0	*23*	0	0	56	13	0	*69*	0	0	5	5	0	*10*	0	20	70	1	0	*91*	**193**
8:15 PM	0	5	11	20	0	*36*	0	1	54	15	0	*70*	0	1	9	1	0	*11*	0	17	60	3	0	*80*	**197**
8:30 PM	0	6	4	11	0	*21*	0	3	62	12	0	*77*	0	1	7	2	0	*10*	0	15	70	1	0	*86*	**194**
8:45 PM	0	11	9	15	0	*35*	0	1	68	7	0	*76*	0	1	9	0	0	*10*	0	23	60	0	0	*83*	**204**
Hourly Total	0	29	27	59	0	*115*	0	5	240	47	0	*292*	0	3	30	8	0	*41*	0	75	260	5	0	*340*	**788**
9:00 PM	0	13	7	11	0	*31*	0	1	50	4	0	*55*	0	0	4	3	0	*7*	0	17	77	1	0	*95*	**188**
9:15 PM	0	6	8	15	0	*29*	0	1	55	7	0	*63*	0	2	4	1	0	*7*	0	21	88	1	0	*110*	**209**
9:30 PM	0	5	5	19	0	*29*	0	2	42	8	0	*52*	0	1	6	1	0	*8*	0	24	78	1	0	*103*	**192**
9:45 PM	0	6	1	10	0	*17*	0	2	40	6	0	*48*	0	1	4	2	0	*7*	0	16	66	1	0	*83*	**155**
Hourly Total	0	30	21	55	0	*106*	0	6	187	25	0	*218*	0	4	18	7	0	*29*	0	78	309	4	0	*391*	**744**
10:00 PM	0	3	3	8	0	*14*	0	2	50	6	0	*58*	0	0	4	1	0	*5*	0	17	45	0	0	*62*	**139**
10:15 PM	0	4	2	9	0	*15*	0	2	43	9	0	*54*	0	0	2	0	0	*2*	0	8	39	0	0	*47*	**118**
10:30 PM	0	2	3	11	0	*16*	0	1	39	9	0	*49*	0	0	1	1	0	*2*	0	10	40	0	0	*50*	**117**
10:45 PM	0	4	2	10	0	*16*	0	1	30	7	0	*38*	0	0	5	1	0	*6*	0	6	32	2	0	*40*	**100**
Hourly Total	0	13	10	38	0	*61*	0	6	162	31	0	*199*	0	0	12	3	0	*15*	0	41	156	2	0	*199*	**474**
11:00 PM	0	7	3	7	0	*17*	0	1	46	4	0	*51*	0	0	2	0	0	*2*	0	1	20	0	0	*21*	**91**
11:15 PM	0	4	2	9	0	*15*	0	0	26	5	0	*31*	0	0	0	1	0	*1*	0	5	9	0	0	*14*	**61**
11:30 PM	0	8	1	14	0	*23*	0	2	25	2	0	*29*	0	0	0	0	0	*0*	0	3	9	1	0	*13*	**65**
11:45 PM	0	6	1	10	0	*17*	0	2	12	4	0	*18*	0	0	1	2	0	*3*	0	0	11	6	0	*17*	**55**
Hourly Total	0	25	7	40	0	*72*	0	5	109	15	0	*129*	0	0	3	3	0	*6*	0	9	49	7	0	*65*	**272**
DAILY TOTAL	**0**	**343**	**303**	**700**	**0**	***1346***	**0**	**75**	**2134**	**436**	**0**	***2645***	**0**	**31**	**264**	**56**	**0**	***351***	**0**	**657**	**2255**	**40**	**0**	***2952***	**7294**
Cars	0	335	301	669	0	*1305*	0	74	2069	424	0	*2567*	0	31	261	56	0	*348*	0	628	2169	40	0	*2837*	**7057**
Heavy Vehicles	0	8	2	31	0	*41*	0	1	65	12	0	*78*	0	0	3	0	0	*3*	0	29	86	0	0	*115*	**237**
Heavy Vehicle %	0.00%	2.33%	0.66%	4.43%	0.00%	*3.05%*	0.00%	1.33%	3.05%	2.75%	0.00%	*2.95%*	0.00%	0.00%	1.14%	0.00%	0.00%	*0.85%*	0.00%	4.41%	3.81%	0.00%	0.00%	*3.90%*	**3.25%**

Farmway Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
AM Peak Hour

Time	Farmway Road Southbound						Karcher Road (SH 55) Westbound						Farmway Road Northbound						Karcher Road (SH 55) Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	14	15	28	0	*57*	0	5	73	21	0	*99*	0	0	11	2	0	*13*	0	31	104	2	0	*137*	**306**
4:15 PM	0	14	24	39	0	*77*	0	2	86	16	0	*104*	0	1	22	3	0	*26*	0	33	93	2	0	*128*	**335**
4:30 PM	0	22	18	34	0	*74*	0	4	101	18	0	*123*	0	4	11	1	0	*16*	0	39	110	1	0	*150*	**363**
4:45 PM	0	24	25	40	0	*89*	0	1	100	25	0	*126*	0	4	10	2	0	*16*	0	22	106	0	0	*128*	**359**
Peak Hour Total	0	74	82	141	0	*297*	0	12	360	80	0	*452*	0	9	54	8	0	*71*	0	125	413	5	0	*543*	**1363**
PHF	0.000	0.771	0.820	0.881	0.000	*0.834*	0.000	0.600	0.891	0.800	0.000	*0.897*	0.000	0.563	0.614	0.667	0.000	*0.683*	0.000	0.801	0.939	0.625	0.000	*0.905*	**0.939**
Heavy Vehicle %	0.00%	2.70%	0.00%	4.96%	0.00%	**3.03%**	0.00%	0.00%	5.00%	3.75%	0.00%	**4.65%**	0.00%	0.00%	1.85%	0.00%	0.00%	**1.41%**	0.00%	3.20%	5.81%	0.00%	0.00%	**5.16%**	**4.3%**

Total Vehicles On Leg			556		
Vehicles Entering Intersection	297		Vehicles Exiting Intersection	259	
Southbound					
Cars	134	82	72	0	0
Heavy	7	0	2	0	0
Total	**141**	**82**	**74**	**0**	**0**

Total Vehicles on Leg 1053		**Eastbound**	Cars	Heavy	**Total**
	Vehicles Entering Intersection 543		0	0	**0**
			0	0	**0**
	Vehicles Exiting Intersection 510		121	4	**125**
			389	24	**413**
			5	0	**5**

4-5 PM Arrival Hour Volumes

Cars	Heavy	**Total**	**Westbound**		Total Vehicles on Leg 947
77	3	**80**		Vehicles Entering Intersection 452	
342	18	**360**			
12	0	**12**		Vehicles Exiting Intersection 495	
0	0	**0**			
0	0	**0**			

Cars	0	0	9	53	8
Heavy	0	0	0	1	0
Total	**0**	**0**	**9**	**54**	**8**
Northbound					
Vehicles Entering Intersection	71		Vehicles Exiting Intersection	99	
Total Vehicles On Leg			170		

Farmway Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
PM Peak Hour

Time	Farmway Road Southbound						Karcher Road (SH 55) Westbound						Farmway Road Northbound						Karcher Road (SH 55) Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
9:00 PM	0	13	7	11	0	*31*	0	1	50	4	0	*55*	0	0	4	3	0	*7*	0	17	77	1	0	*95*	**188**
9:15 PM	0	6	8	15	0	*29*	0	1	55	7	0	*63*	0	2	4	1	0	*7*	0	21	88	1	0	*110*	**209**
9:30 PM	0	5	5	19	0	*29*	0	2	42	8	0	*52*	0	1	6	1	0	*8*	0	24	78	1	0	*103*	**192**
9:45 PM	0	6	1	10	0	*17*	0	2	40	6	0	*48*	0	1	4	2	0	*7*	0	16	66	1	0	*83*	**155**
Peak Hour Total	0	30	21	55	0	*106*	0	6	187	25	0	*218*	0	4	18	7	0	*29*	0	78	309	4	0	*391*	**744**
PHF	0.000	0.577	0.656	0.724	0.000	*0.855*	0.000	0.750	0.850	0.781	0.000	*0.865*	0.000	0.500	0.750	0.583	0.000	*0.906*	0.000	0.813	0.878	1.000	0.000	*0.889*	**0.890**
Heavy Vehicle %	0.00%	6.67%	4.76%	3.64%	0.00%	**4.72%**	0.00%	0.00%	6.42%	0.00%	0.00%	**5.50%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	1.28%	2.91%	0.00%	0.00%	**2.56%**	**3.6%**

Total Vehicles On Leg			227		
Vehicles Entering Intersection	106		Vehicles Exiting Intersection	121	
Southbound					
Cars	53	20	28	0	0
Heavy	2	1	2	0	0
Total	**55**	**21**	**30**	**0**	**0**

Total Vehicles on Leg 637	Vehicles Entering Intersection 391	**Eastbound**	Cars	Heavy	**Total**
			0	0	**0**
			0	0	**0**
	Vehicles Exiting Intersection 246		77	1	**78**
			300	9	**309**
			4	0	**4**

9-10 PM Departure Hour Volumes

Cars	Heavy	**Total**	**Westbound**	Vehicles Entering Intersection 218	Total Vehicles on Leg 564
25	0	**25**			
175	12	**187**			
6	0	**6**		Vehicles Exiting Intersection 346	
0	0	**0**			
0	0	**0**			

Cars	0	0	4	18	7
Heavy	0	0	0	0	0
Total	**0**	**0**	**4**	**18**	**7**
Northbound					
Vehicles Entering Intersection	29		Vehicles Exiting Intersection	31	
Total Vehicles On Leg			60		

Lowell Road & SH 55
Caldwell Idaho
Friday, June 10, 2022

Time	Southbound Sunnyslope Road (SH 55)						Westbound Lowell Road						Northbound Sunnyslope Road (SH 55)						Eastbound Lowell Road						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	0	54	0	0	*54*	0	8	2	5	0	*15*	0	1	65	3	0	*69*	0	0	2	1	0	*3*	**141**
4:15 PM	0	2	71	0	0	*73*	0	5	0	1	0	*6*	0	1	72	2	0	*75*	0	1	1	2	0	*4*	**158**
4:30 PM	0	2	59	2	0	*63*	0	8	2	1	0	*11*	0	0	62	5	0	*67*	0	0	0	0	0	*0*	**141**
4:45 PM	0	1	58	0	0	*59*	0	10	0	3	0	*13*	0	0	60	1	0	*61*	0	0	0	0	0	*0*	**133**
Hourly Total	0	5	242	2	0	*249*	0	31	4	10	0	*45*	0	2	259	11	0	*272*	0	1	3	3	0	*7*	**573**
5:00 PM	0	1	68	1	1	*70*	0	11	0	4	0	*15*	0	1	68	8	0	*77*	0	2	0	0	0	*2*	**164**
5:15 PM	0	7	75	0	0	*82*	0	12	0	3	0	*15*	0	0	64	2	0	*66*	0	0	0	2	0	*2*	**165**
5:30 PM	0	4	73	1	0	*78*	0	13	2	2	0	*17*	0	1	69	8	0	*78*	0	2	0	0	0	*2*	**175**
5:45 PM	0	4	66	0	0	*70*	0	18	1	2	0	*21*	0	0	66	5	0	*71*	0	0	1	3	0	*4*	**166**
Hourly Total	0	16	282	2	1	*300*	0	54	3	11	0	*68*	0	2	267	23	0	*292*	0	4	1	5	0	*10*	**670**
6:00 PM	0	2	58	0	0	*60*	0	13	0	2	0	*15*	0	0	68	2	0	*70*	0	0	0	0	1	*0*	**145**
6:15 PM	0	1	58	0	0	*59*	0	13	0	0	0	*13*	0	1	70	6	0	*77*	0	2	1	1	0	*4*	**153**
6:30 PM	0	2	56	0	0	*58*	0	5	0	1	0	*6*	0	0	60	6	0	*66*	0	0	0	0	0	*0*	**130**
6:45 PM	0	0	53	1	0	*54*	0	8	1	0	0	*9*	0	0	54	1	1	*55*	0	0	0	2	0	*2*	**120**
Hourly Total	0	5	225	1	0	*231*	0	39	1	3	0	*43*	0	1	252	15	1	*268*	0	2	1	3	1	*6*	**548**
7:00 PM	0	4	52	1	0	*57*	0	14	1	1	0	*16*	0	0	41	2	0	*43*	0	0	0	1	0	*1*	**117**
7:15 PM	0	1	41	0	0	*42*	0	2	0	3	0	*5*	0	0	44	9	0	*53*	0	0	0	1	0	*1*	**101**
7:30 PM	0	0	42	0	0	*42*	0	3	1	0	0	*4*	0	0	60	3	0	*63*	0	0	0	2	1	*2*	**111**
7:45 PM	0	0	30	0	0	*30*	0	4	1	0	0	*5*	0	0	37	7	0	*44*	0	0	0	1	0	*1*	**80**
Hourly Total	0	5	165	1	0	*171*	0	23	3	4	0	*30*	0	0	182	21	0	*203*	0	0	0	5	1	*5*	**409**
8:00 PM	0	0	34	0	0	*34*	0	4	0	1	0	*5*	0	0	39	4	0	*43*	0	0	2	0	0	*2*	**84**
8:15 PM	0	0	39	0	0	*39*	0	1	0	1	0	*2*	0	0	46	5	0	*51*	0	0	0	0	0	*0*	**92**
8:30 PM	0	1	26	0	0	*27*	0	3	0	0	0	*3*	0	0	33	10	0	*43*	0	0	0	0	0	*0*	**73**
8:45 PM	0	0	34	0	0	*34*	0	4	0	0	0	*4*	0	0	44	6	0	*50*	0	0	0	0	0	*0*	**88**
Hourly Total	0	1	133	0	0	*134*	0	12	0	2	0	*14*	0	0	162	25	0	*187*	0	0	2	0	0	*2*	**337**
9:00 PM	0	0	32	0	0	*32*	0	7	1	7	0	*15*	0	0	31	3	0	*34*	0	0	0	1	0	*1*	**82**
9:15 PM	0	0	30	0	0	*30*	0	5	0	5	0	*10*	0	2	36	3	0	*41*	0	0	1	2	0	*3*	**84**
9:30 PM	0	1	22	0	0	*23*	0	6	0	6	0	*12*	0	0	27	4	0	*31*	0	0	0	1	0	*1*	**67**
9:45 PM	0	0	31	0	0	*31*	0	6	2	1	0	*9*	0	0	26	2	0	*28*	0	0	0	0	0	*0*	**68**
Hourly Total	0	1	115	0	0	*116*	0	24	3	19	0	*46*	0	2	120	12	0	*134*	0	0	1	4	0	*5*	**301**
10:00 PM	0	0	32	0	0	*32*	0	10	0	1	0	*11*	0	0	17	3	0	*20*	0	1	2	1	0	*4*	**67**
10:15 PM	0	0	22	0	0	*22*	0	3	0	2	0	*5*	0	0	26	1	0	*27*	0	0	0	0	0	*0*	**54**
10:30 PM	1	0	23	0	0	*24*	0	1	2	0	0	*3*	0	1	18	3	0	*22*	0	0	0	0	0	*0*	**49**
10:45 PM	0	0	23	0	0	*23*	0	3	0	1	0	*4*	0	0	23	0	0	*23*	0	0	0	0	0	*0*	**50**
Hourly Total	1	0	100	0	0	*101*	0	17	2	4	0	*23*	0	1	84	7	0	*92*	0	1	2	1	0	*4*	**220**
11:00 PM	0	0	15	0	0	*15*	0	1	0	0	0	*1*	0	0	10	0	0	*10*	0	0	0	0	0	*0*	**26**
11:15 PM	0	2	6	0	0	*8*	0	5	0	0	0	*5*	0	0	10	1	0	*11*	0	0	0	0	0	*0*	**24**
11:30 PM	0	0	6	0	0	*6*	0	4	0	0	0	*4*	0	0	10	2	0	*12*	0	0	0	0	0	*0*	**22**
11:45 PM	0	1	8	0	0	*9*	0	8	0	2	0	*10*	0	0	9	1	0	*10*	0	0	0	0	0	*0*	**29**
Hourly Total	0	3	35	0	0	*38*	0	18	0	2	0	*20*	0	0	39	4	0	*43*	0	0	0	0	0	*0*	**101**
DAILY TOTAL	**1**	**36**	**1297**	**6**	**1**	***1340***	**0**	**218**	**16**	**55**	**0**	***289***	**0**	**8**	**1365**	**118**	**1**	***1491***	**0**	**8**	**10**	**21**	**2**	***39***	**3159**
Cars	1	36	1249	6	0	*1292*	0	217	16	54	0	*287*	0	8	1294	117	0	*1419*	0	7	10	21	0	*38*	**3036**
Heavy Vehicles	0	0	48	0	1	*48*	0	1	0	1	0	*2*	0	0	71	1	1	*72*	0	1	0	0	2	*1*	**123**
Heavy Vehicle %	0.00%	0.00%	3.70%	0.00%	100.00%	*3.58%*	0.00%	0.46%	0.00%	1.82%	0.00%	*0.69%*	0.00%	0.00%	5.20%	0.85%	100.00%	*4.83%*	0.00%	12.50%	0.00%	0.00%	100.00%	*2.56%*	**3.89%**

Lowell Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
AM Peak Hour

Time	Sunnyslope Road (SH 55) Southbound						Lowell Road Westbound						Sunnyslope Road (SH 55) Northbound						Lowell Road Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	0	54	0	0	*54*	0	8	2	5	0	*15*	0	1	65	3	0	*69*	0	0	2	1	0	*3*	**141**
4:15 PM	0	2	71	0	0	*73*	0	5	0	1	0	*6*	0	1	72	2	0	*75*	0	1	1	2	0	*4*	**158**
4:30 PM	0	2	59	2	0	*63*	0	8	2	1	0	*11*	0	0	62	5	0	*67*	0	0	0	0	0	*0*	**141**
4:45 PM	0	1	58	0	0	*59*	0	10	0	3	0	*13*	0	0	60	1	0	*61*	0	0	0	0	0	*0*	**133**
Peak Hour Total	0	5	242	2	0	*249*	0	31	4	10	0	*45*	0	2	259	11	0	*272*	0	1	3	3	0	*7*	**573**
PHF	0.000	0.625	0.852	0.250	0.000	*0.853*	0.000	0.775	0.500	0.500	0.000	*0.750*	0.000	0.500	0.899	0.550	0.000	*0.907*	0.000	0.250	0.375	0.375	0.000	*0.438*	**0.907**
Heavy Vehicle %	0.00%	0.00%	5.37%	0.00%	0.00%	**5.22%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	7.34%	0.00%	0.00%	**6.99%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	**5.6%**

Total Vehicles On Leg			519		
Vehicles Entering Intersection	249		Vehicles Exiting Intersection	270	
Southbound					
Cars	2	229	5	0	0
Heavy	0	13	0	0	0
Total	**2**	**242**	**5**	**0**	**0**

Total Vehicles on Leg 15	Vehicles Entering Intersection 7	**Eastbound**	Cars	Heavy	**Total**
			0	0	**0**
			0	0	**0**
	Vehicles Exiting Intersection 8		1	0	**1**
			3	0	**3**
			3	0	**3**

4-5 PM Arrival Hour Volumes

Cars	Heavy	**Total**	**Westbound**	Vehicles Entering Intersection 45	Total Vehicles on Leg 64
10	0	**10**			
4	0	**4**			
31	0	**31**		Vehicles Exiting Intersection 19	
0	0	**0**			
0	0	**0**			

Cars	0	0	2	240	11
Heavy	0	0	0	19	0
Total	**0**	**0**	**2**	**259**	**11**
Northbound					
Vehicles Entering Intersection	272		Vehicles Exiting Intersection	276	
Total Vehicles On Leg			548		

Lowell Road & SH 55
Caldwell Idaho
Friday, June 10, 2022
PM Peak Hour

Time	Sunnyslope Road (SH 55) Southbound						Lowell Road Westbound						Sunnyslope Road (SH 55) Northbound						Lowell Road Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
9:00 PM	0	0	32	0	0	*32*	0	7	1	7	0	*15*	0	0	31	3	0	*34*	0	0	0	1	0	*1*	**82**
9:15 PM	0	0	30	0	0	*30*	0	5	0	5	0	*10*	0	2	36	3	0	*41*	0	0	1	2	0	*3*	**84**
9:30 PM	0	1	22	0	0	*23*	0	6	0	6	0	*12*	0	0	27	4	0	*31*	0	0	0	1	0	*1*	**67**
9:45 PM	0	0	31	0	0	*31*	0	6	2	1	0	*9*	0	0	26	2	0	*28*	0	0	0	0	0	*0*	**68**
Peak Hour Total	0	1	115	0	0	*116*	0	24	3	19	0	*46*	0	2	120	12	0	*134*	0	0	1	4	0	*5*	**301**
PHF	0.000	0.250	0.898	0.000	0.000	*0.906*	0.000	0.857	0.375	0.679	0.000	*0.767*	0.000	0.250	0.833	0.750	0.000	*0.817*	0.000	0.000	0.250	0.500	0.000	*0.417*	**0.896**
Heavy Vehicle %	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**	**0.0%**

Total Vehicles On Leg			255		
Vehicles Entering Intersection	116		Vehicles Exiting Intersection	139	
Southbound					
Cars	0	115	1	0	0
Heavy	0	0	0	0	0
Total	**0**	**115**	**1**	**0**	**0**

Total Vehicles on Leg 10		**Eastbound**	Cars	Heavy	**Total**
	Vehicles Entering Intersection 5		0	0	**0**
			0	0	**0**
	Vehicles Exiting Intersection 5		0	0	**0**
			1	0	**1**
			4	0	**4**

9-10 PM Departure Hour Volumes

Cars	Heavy	**Total**	**Westbound**		Total Vehicles on Leg 60
19	0	**19**		Vehicles Entering Intersection 46	
3	0	**3**			
24	0	**24**		Vehicles Exiting Intersection 14	
0	0	**0**			
0	0	**0**			

Cars	0	0	2	120	12
Heavy	0	0	0	0	0
Total	**0**	**0**	**2**	**120**	**12**
Northbound					
Vehicles Entering Intersection	134		Vehicles Exiting Intersection	143	
Total Vehicles On Leg			277		

APPENDIX C: 2022 SYNCHRO REPORT

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	348	1	13	338	15	1	11	10	10	8	4
Future Vol, veh/h	7	348	1	13	338	15	1	11	10	10	8	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	382	1	14	371	16	1	12	11	11	9	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	383	0	0	813	814	383	817	806	379
Stage 1	-	-	-	-	-	-	399	399	-	407	407	-
Stage 2	-	-	-	-	-	-	414	415	-	410	399	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1109	-	-	1175	-	-	297	286	664	295	291	668
Stage 1	-	-	-	-	-	-	627	561	-	621	559	-
Stage 2	-	-	-	-	-	-	616	552	-	619	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1109	-	-	1175	-	-	283	279	664	276	284	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	279	-	276	284	-
Stage 1	-	-	-	-	-	-	621	556	-	615	551	-
Stage 2	-	-	-	-	-	-	593	544	-	590	559	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	15.1	17.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	379	1109	-	-	1175	-	-	313
HCM Lane V/C Ratio	0.064	0.007	-	-	0.012	-	-	0.077
HCM Control Delay (s)	15.1	8.3	0	-	8.1	0	-	17.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	3	31	4	10	2	259	11	5	242	2
Future Vol, veh/h	1	3	3	31	4	10	2	259	11	5	242	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	3	34	4	11	2	285	12	5	266	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	426	578	134	440	573	149	268	0	0	297	0	0
Stage 1	277	277	-	295	295	-	-	-	-	-	-	-
Stage 2	149	301	-	145	278	-	-	-	-	-	-	-
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	512	425	890	501	428	871	1293	-	-	1261	-	-
Stage 1	706	680	-	689	668	-	-	-	-	-	-	-
Stage 2	838	664	-	843	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	500	422	890	494	425	871	1293	-	-	1261	-	-
Mov Cap-2 Maneuver	570	497	-	563	500	-	-	-	-	-	-	-
Stage 1	705	677	-	688	667	-	-	-	-	-	-	-
Stage 2	821	663	-	832	676	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	11.5	0.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1293	-	-	627	604	1261	-	-
HCM Lane V/C Ratio	0.002	-	-	0.012	0.082	0.004	-	-
HCM Control Delay (s)	7.8	-	-	10.8	11.5	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	175	1	2	168	2	1	11	15	4	7	0
Future Vol, veh/h	4	175	1	2	168	2	1	11	15	4	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	4	197	1	2	189	2	1	12	17	4	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	198	0	0	404	401	198	414	400	190
Stage 1	-	-	-	-	-	-	206	206	-	194	194	-
Stage 2	-	-	-	-	-	-	198	195	-	220	206	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1383	-	-	1375	-	-	557	514	843	549	538	852
Stage 1	-	-	-	-	-	-	796	702	-	808	740	-
Stage 2	-	-	-	-	-	-	804	710	-	782	731	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1383	-	-	1375	-	-	549	511	843	526	535	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	511	-	526	535	-
Stage 1	-	-	-	-	-	-	794	700	-	806	739	-
Stage 2	-	-	-	-	-	-	794	709	-	751	729	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	10.8	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	656	1383	-	-	1375	-	-	532
HCM Lane V/C Ratio	0.046	0.003	-	-	0.002	-	-	0.023
HCM Control Delay (s)	10.8	7.6	0	-	7.6	0	-	11.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	4	24	3	19	2	120	12	1	115	0
Future Vol, veh/h	0	1	4	24	3	19	2	120	12	1	115	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	4	27	3	21	2	133	13	1	128	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	202	280	64	211	274	73	128	0	0	146	0	0
Stage 1	130	130	-	144	144	-	-	-	-	-	-	-
Stage 2	72	150	-	67	130	-	-	-	-	-	-	-
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	738	627	987	728	632	974	1456	-	-	1434	-	-
Stage 1	860	788	-	844	777	-	-	-	-	-	-	-
Stage 2	929	772	-	936	788	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	718	626	987	723	631	974	1456	-	-	1434	-	-
Mov Cap-2 Maneuver	728	641	-	729	644	-	-	-	-	-	-	-
Stage 1	859	787	-	843	776	-	-	-	-	-	-	-
Stage 2	904	771	-	930	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.8	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1456	-	-	891	806	1434	-	-
HCM Lane V/C Ratio	0.002	-	-	0.006	0.063	0.001	-	-
HCM Control Delay (s)	7.5	-	-	9.1	9.8	7.5	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	348	1	13	338	15	1	11	10	10	8	4
Future Vol, veh/h	7	348	1	13	338	15	1	11	10	10	8	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	382	1	14	371	16	1	12	11	11	9	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	383	0	0	813	814	383	817	806	379
Stage 1	-	-	-	-	-	-	399	399	-	407	407	-
Stage 2	-	-	-	-	-	-	414	415	-	410	399	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1109	-	-	1175	-	-	297	286	664	295	291	668
Stage 1	-	-	-	-	-	-	627	561	-	621	559	-
Stage 2	-	-	-	-	-	-	616	552	-	619	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1109	-	-	1175	-	-	284	281	664	276	285	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	281	-	276	285	-
Stage 1	-	-	-	-	-	-	623	557	-	617	552	-
Stage 2	-	-	-	-	-	-	595	545	-	591	560	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	15.1	17.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	381	1109	-	-	1175	-	-	313
HCM Lane V/C Ratio	0.063	0.007	-	-	0.012	-	-	0.077
HCM Control Delay (s)	15.1	8.3	-	-	8.1	-	-	17.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	175	1	2	168	2	1	11	15	4	7	0
Future Vol, veh/h	4	175	1	2	168	2	1	11	15	4	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	4	197	1	2	189	2	1	12	17	4	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	198	0	0	404	401	198	414	400	190
Stage 1	-	-	-	-	-	-	206	206	-	194	194	-
Stage 2	-	-	-	-	-	-	198	195	-	220	206	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1383	-	-	1375	-	-	557	514	843	549	538	852
Stage 1	-	-	-	-	-	-	796	702	-	808	740	-
Stage 2	-	-	-	-	-	-	804	710	-	782	731	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1383	-	-	1375	-	-	549	512	843	526	536	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	512	-	526	536	-
Stage 1	-	-	-	-	-	-	794	700	-	806	739	-
Stage 2	-	-	-	-	-	-	794	709	-	751	729	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	10.7	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	657	1383	-	-	1375	-	-	532
HCM Lane V/C Ratio	0.046	0.003	-	-	0.002	-	-	0.023
HCM Control Delay (s)	10.7	7.6	-	-	7.6	-	-	11.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

APPENDIX D: 2024 BACKGROUND SYNCHRO REPORT

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	369	1	14	359	16	1	12	11	11	8	4
Future Vol, veh/h	7	369	1	14	359	16	1	12	11	11	8	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	405	1	15	395	18	1	13	12	12	9	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	406	0	0	863	865	406	868	856	404
Stage 1	-	-	-	-	-	-	422	422	-	434	434	-
Stage 2	-	-	-	-	-	-	441	443	-	434	422	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1084	-	-	1153	-	-	275	266	645	273	271	647
Stage 1	-	-	-	-	-	-	609	548	-	600	544	-
Stage 2	-	-	-	-	-	-	595	535	-	600	551	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1084	-	-	1153	-	-	261	259	645	252	264	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	259	-	252	264	-
Stage 1	-	-	-	-	-	-	603	543	-	594	535	-
Stage 2	-	-	-	-	-	-	571	526	-	569	545	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	15.9	18.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	1084	-	-	1153	-	-	287
HCM Lane V/C Ratio	0.074	0.007	-	-	0.013	-	-	0.088
HCM Control Delay (s)	15.9	8.3	0	-	8.2	0	-	18.8
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	369	1	14	359	16	1	12	11	11	8	4
Future Vol, veh/h	7	369	1	14	359	16	1	12	11	11	8	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	405	1	15	395	18	1	13	12	12	9	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	406	0	0	863	865	406	868	856	404
Stage 1	-	-	-	-	-	-	422	422	-	434	434	-
Stage 2	-	-	-	-	-	-	441	443	-	434	422	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1084	-	-	1153	-	-	275	266	645	273	271	647
Stage 1	-	-	-	-	-	-	609	548	-	600	544	-
Stage 2	-	-	-	-	-	-	595	535	-	600	551	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1084	-	-	1153	-	-	262	261	645	254	266	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	261	-	254	266	-
Stage 1	-	-	-	-	-	-	605	544	-	596	537	-
Stage 2	-	-	-	-	-	-	574	528	-	570	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	15.8	18.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	359	1084	-	-	1153	-	-	289
HCM Lane V/C Ratio	0.073	0.007	-	-	0.013	-	-	0.087
HCM Control Delay (s)	15.8	8.3	-	-	8.2	-	-	18.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	3	32	4	10	2	275	12	5	257	2
Future Vol, veh/h	1	3	3	32	4	10	2	275	12	5	257	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	3	35	4	11	2	302	13	5	282	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	450	612	142	466	607	158	284	0	0	315	0	0
Stage 1	293	293	-	313	313	-	-	-	-	-	-	-
Stage 2	157	319	-	153	294	-	-	-	-	-	-	-
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	493	407	880	480	409	859	1275	-	-	1242	-	-
Stage 1	691	669	-	672	656	-	-	-	-	-	-	-
Stage 2	829	652	-	834	668	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	481	405	880	474	407	859	1275	-	-	1242	-	-
Mov Cap-2 Maneuver	555	484	-	547	486	-	-	-	-	-	-	-
Stage 1	690	666	-	671	655	-	-	-	-	-	-	-
Stage 2	812	651	-	823	665	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	11.7	0.1	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1275	-	-	614	587	1242	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.086	0.004	-	-
HCM Control Delay (s)	7.8	-	-	10.9	11.7	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	186	1	2	178	2	1	12	16	4	7	0
Future Vol, veh/h	4	186	1	2	178	2	1	12	16	4	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	4	207	1	2	198	2	1	13	18	4	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	200	0	0	208	0	0	423	420	208	434	419	199
Stage 1	-	-	-	-	-	-	216	216	-	203	203	-
Stage 2	-	-	-	-	-	-	207	204	-	231	216	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1372	-	-	1363	-	-	541	501	832	532	525	842
Stage 1	-	-	-	-	-	-	786	695	-	799	733	-
Stage 2	-	-	-	-	-	-	795	704	-	772	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1372	-	-	1363	-	-	533	498	832	508	522	842
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	498	-	508	522	-
Stage 1	-	-	-	-	-	-	784	693	-	797	732	-
Stage 2	-	-	-	-	-	-	785	703	-	739	722	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	10.9	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	642	1372	-	-	1363	-	-	517
HCM Lane V/C Ratio	0.05	0.003	-	-	0.002	-	-	0.024
HCM Control Delay (s)	10.9	7.6	0	-	7.6	0	-	12.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	186	1	2	178	2	1	12	16	4	7	0
Future Vol, veh/h	4	186	1	2	178	2	1	12	16	4	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	4	207	1	2	198	2	1	13	18	4	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	200	0	0	208	0	0	423	420	208	434	419	199
Stage 1	-	-	-	-	-	-	216	216	-	203	203	-
Stage 2	-	-	-	-	-	-	207	204	-	231	216	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1372	-	-	1363	-	-	541	501	832	532	525	842
Stage 1	-	-	-	-	-	-	786	695	-	799	733	-
Stage 2	-	-	-	-	-	-	795	704	-	772	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1372	-	-	1363	-	-	533	499	832	508	523	842
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	499	-	508	523	-
Stage 1	-	-	-	-	-	-	784	693	-	797	732	-
Stage 2	-	-	-	-	-	-	785	703	-	739	722	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	10.9	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	642	1372	-	-	1363	-	-	517
HCM Lane V/C Ratio	0.05	0.003	-	-	0.002	-	-	0.024
HCM Control Delay (s)	10.9	7.6	-	-	7.6	-	-	12.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	4	25	3	20	2	127	13	1	122	0
Future Vol, veh/h	0	1	4	25	3	20	2	127	13	1	122	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	4	28	3	22	2	141	14	1	136	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	214	297	68	223	290	78	136	0	0	155	0	0
Stage 1	138	138	-	152	152	-	-	-	-	-	-	-
Stage 2	76	159	-	71	138	-	-	-	-	-	-	-
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	724	613	981	714	619	967	1446	-	-	1423	-	-
Stage 1	851	781	-	835	771	-	-	-	-	-	-	-
Stage 2	924	765	-	931	781	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	704	612	981	709	618	967	1446	-	-	1423	-	-
Mov Cap-2 Maneuver	718	631	-	719	635	-	-	-	-	-	-	-
Stage 1	850	780	-	834	770	-	-	-	-	-	-	-
Stage 2	898	764	-	925	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.8	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1446	-	-	883	798	1423	-	-
HCM Lane V/C Ratio	0.002	-	-	0.006	0.067	0.001	-	-
HCM Control Delay (s)	7.5	-	-	9.1	9.8	7.5	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

APPENDIX E: 2024 TOTAL SYNCHRO & SIM TRAFFIC REPORT

Sunnyslope Event Facility
Canyon County, Idaho

Peak Hour Factor Calculations

Chicken Dinner / SH 55	**Existing**		**2024 Total**		**2029 Total**	
Time	**4-5 PM**	**9-10 PM**	**4-5 PM**	**9-10 PM**	**4-5 PM**	**9-10 PM**
Pk Hr	169	91	466	496	499	512
+15	211	110	508	515	541	531
+30	200	102	497	507	530	523
+45	186	87	483	492	516	508
Total	766	390	1,955	2,009	2,084	2,075
PHF	0.91	0.89	0.96	0.98	0.96	0.98
		Synchro Use	**0.96**	**0.98**	**0.96**	**0.98**

Lowell / SH 55	**Existing**		**2024 Total**		**2029 Total**	
Time	**4-5 PM**	**9-10 PM**	**4-5 PM**	**9-10 PM**	**4-5 PM**	**9-10 PM**
Pk Hr	141	82	399	447	423	459
+15	158	84	416	449	440	461
+30	141	67	399	432	423	444
+45	133	68	391	433	415	445
Total	573	301	1,605	1,759	1,699	1,807
PHF	0.91	0.90	0.96	0.98	0.96	0.98
		Synchro Use	**0.96**	**0.98**	**0.96**	**0.98**

***** Site Accesses Use PHF from Lowell Road and SH 55 Intersection**

Intersection	
Int Delay, s/veh	22.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Future Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	480	1	172	1291	17	1	13	17	11	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1308	0	0	481	0	0	2154	2149	481	2156	2141	1300
Stage 1	-	-	-	-	-	-	497	497	-	1644	1644	-
Stage 2	-	-	-	-	-	-	1657	1652	-	512	497	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	491	-	-	1082	-	-	35	41	585	35	42	197
Stage 1	-	-	-	-	-	-	555	505	-	126	139	-
Stage 2	-	-	-	-	-	-	124	136	-	545	508	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	491	-	-	1082	-	-	10	17	585	~ 8	17	197
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	17	-	~ 8	17	-
Stage 1	-	-	-	-	-	-	543	494	-	123	58	-
Stage 2	-	-	-	-	-	-	39	56	-	505	497	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1	279.3	$ 945.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	35	491	-	-	1082	-	-	18
HCM Lane V/C Ratio	0.863	0.017	-	-	0.159	-	-	2.083
HCM Control Delay (s)	279.3	12.5	0	-	9	0	-	$ 945.7
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	3.1	0.1	-	-	0.6	-	-	5.2

Notes

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

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Future Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	480	1	172	1291	17	1	13	17	11	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1308	0	0	481	0	0	2154	2149	481	2156	2141	1300
Stage 1	-	-	-	-	-	-	497	497	-	1644	1644	-
Stage 2	-	-	-	-	-	-	1657	1652	-	512	497	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	491	-	-	1082	-	-	35	41	585	35	42	197
Stage 1	-	-	-	-	-	-	555	505	-	126	139	-
Stage 2	-	-	-	-	-	-	124	136	-	545	508	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	491	-	-	1082	-	-	22	34	585	21	35	197
Mov Cap-2 Maneuver	-	-	-	-	-	-	22	34	-	21	35	-
Stage 1	-	-	-	-	-	-	546	497	-	124	117	-
Stage 2	-	-	-	-	-	-	88	114	-	508	500	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1	94.8	253.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	68	491	-	-	1082	-	-	42
HCM Lane V/C Ratio	0.444	0.017	-	-	0.159	-	-	0.893
HCM Control Delay (s)	94.8	12.5	-	-	9	-	-	253.7
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.6	-	-	3.5

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	32	4	52	3	326	12	406	748	2
Future Vol, veh/h	1	3	16	32	4	52	3	326	12	406	748	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	17	33	4	54	3	340	13	423	779	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1804	1985	391	1590	1980	177	781	0	0	353	0	0
Stage 1	1626	1626	-	353	353	-	-	-	-	-	-	-
Stage 2	178	359	-	1237	1627	-	-	-	-	-	-	-
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	61	608	72	61	835	832	-	-	1202	-	-
Stage 1	106	159	-	637	629	-	-	-	-	-	-	-
Stage 2	806	626	-	186	159	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	39	608	48	39	835	832	-	-	1202	-	-
Mov Cap-2 Maneuver	33	39	-	96	86	-	-	-	-	-	-	-
Stage 1	106	103	-	634	626	-	-	-	-	-	-	-
Stage 2	746	623	-	114	103	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.8	37.7	0.1	3.4
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	832	-	-	150	199	1202	-	-
HCM Lane V/C Ratio	0.004	-	-	0.139	0.461	0.352	-	-
HCM Control Delay (s)	9.3	-	-	32.8	37.7	9.6	-	-
HCM Lane LOS	A	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	2.2	1.6	-	-

Intersection	
Int Delay, s/veh	37

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Future Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	22	1531	1	4	269	2	1	14	193	4	7	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	1532	0	0	1858	1855	1532	1957	1854	270
Stage 1	-	-	-	-	-	-	1576	1576	-	278	278	-
Stage 2	-	-	-	-	-	-	282	279	-	1679	1576	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	434	-	-	56	67	~ 144	48	74	769
Stage 1	-	-	-	-	-	-	138	156	-	728	680	-
Stage 2	-	-	-	-	-	-	725	652	-	120	170	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	434	-	-	46	59	~ 144	-	65	769
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	59	-	-	65	-
Stage 1	-	-	-	-	-	-	122	138	-	645	673	-
Stage 2	-	-	-	-	-	-	708	645	-	-	151	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	$ 363.6	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	130	1292	-	-	434	-	-	-
HCM Lane V/C Ratio	1.601	0.017	-	-	0.009	-	-	-
HCM Control Delay (s)	$ 363.6	7.8	0	-	13.4	0	-	-
HCM Lane LOS	F	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	15	0.1	-	-	0	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	35.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Future Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	22	1531	1	4	269	2	1	14	193	4	7	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	1532	0	0	1858	1855	1532	1957	1854	270
Stage 1	-	-	-	-	-	-	1576	1576	-	278	278	-
Stage 2	-	-	-	-	-	-	282	279	-	1679	1576	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	434	-	-	56	67	~ 144	48	74	769
Stage 1	-	-	-	-	-	-	138	156	-	728	680	-
Stage 2	-	-	-	-	-	-	725	652	-	120	170	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	434	-	-	51	65	~ 144	-	72	769
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	65	-	-	72	-
Stage 1	-	-	-	-	-	-	136	153	-	716	674	-
Stage 2	-	-	-	-	-	-	710	646	-	-	167	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	$ 352.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	132	1292	-	-	434	-	-	-
HCM Lane V/C Ratio	1.577	0.017	-	-	0.009	-	-	-
HCM Control Delay (s)	$ 352.4	7.8	-	-	13.4	-	-	-
HCM Lane LOS	F	A	-	-	B	-	-	-
HCM 95th %tile Q(veh)	14.8	0.1	-	-	0	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	32.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	5	25	3	487	22	993	13	44	166	0
Future Vol, veh/h	0	1	5	25	3	487	22	993	13	44	166	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	5	26	3	497	22	1013	13	45	169	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	811	1329	85	1239	1323	513	169	0	0	1026	0	0
Stage 1	259	259	-	1064	1064	-	-	-	-	-	-	-
Stage 2	552	1070	-	175	259	-	-	-	-	-	-	-
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	271	154	957	132	155	506	1406	-	-	673	-	-
Stage 1	723	692	-	238	298	-	-	-	-	-	-	-
Stage 2	486	296	-	810	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	141	957	122	142	506	1406	-	-	673	-	-
Mov Cap-2 Maneuver	5	141	-	198	235	-	-	-	-	-	-	-
Stage 1	711	646	-	234	293	-	-	-	-	-	-	-
Stage 2	8	291	-	751	646	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	108.5	0.2	2.2
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	487	468	673	-	-
HCM Lane V/C Ratio	0.016	-	-	0.013	1.123	0.067	-	-
HCM Control Delay (s)	7.6	-	-	12.5	108.5	10.7	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	18.1	0.2	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Future Vol, veh/h	8	461	1	165	1239	16	1	12	16	11	9	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	8	480	1	172	1291	17	1	13	17	11	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1308	0	0	481	0	0	1491	2149	241	1907	2141	654
Stage 1	-	-	-	-	-	-	497	497	-	1644	1644	-
Stage 2	-	-	-	-	-	-	994	1652	-	263	497	-
Critical Hdwy	4.38	-	-	4.14	-	-	7.54	7.04	6.94	7.54	7	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	6.04	-	6.54	6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	6.04	-	6.54	6	-
Follow-up Hdwy	2.34	-	-	2.22	-	-	3.52	4.27	3.32	3.52	4.25	3.32
Pot Cap-1 Maneuver	465	-	-	1078	-	-	86	35	760	42	36	409
Stage 1	-	-	-	-	-	-	523	485	-	104	124	-
Stage 2	-	-	-	-	-	-	263	120	-	719	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	465	-	-	1078	-	-	65	29	760	31	30	409
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	78	-	85	81	-
Stage 1	-	-	-	-	-	-	514	477	-	102	104	-
Stage 2	-	-	-	-	-	-	193	101	-	673	481	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1	31.5	44
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	760	465	-	-	1078	-	-	129
HCM Lane V/C Ratio	0.167	0.022	0.018	-	-	0.159	-	-	0.291
HCM Control Delay (s)	58.2	9.8	12.9	-	-	9	-	-	44
HCM Lane LOS	F	A	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.6	0.1	0.1	-	-	0.6	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	461	1	165	1239	16	1	12	16	11	9	16
Future Volume (veh/h)	8	461	1	165	1239	16	1	12	16	11	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1811	1870	1870	1826	1796	1870	1500	1870	1870	1530	1870
Adj Flow Rate, veh/h	8	480	1	172	1291	17	1	12	17	11	9	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	14	6	2	2	5	7	2	27	2	2	25	2
Cap, veh/h	195	1408	3	766	1454	19	33	57	63	49	17	24
Arrive On Green	0.01	0.78	0.78	0.04	0.81	0.81	0.04	0.04	0.04	0.04	0.04	0.04
Sat Flow, veh/h	1612	1807	4	1781	1798	24	53	1433	1585	297	417	607
Grp Volume(v), veh/h	8	0	481	172	0	1308	13	0	17	37	0	0
Grp Sat Flow(s),veh/h/ln	1612	0	1810	1781	0	1822	1487	0	1585	1321	0	0
Q Serve(g_s), s	0.1	0.0	10.2	2.5	0.0	61.9	0.0	0.0	1.3	2.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	10.2	2.5	0.0	61.9	1.1	0.0	1.3	3.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.08		1.00	0.30		0.46
Lane Grp Cap(c), veh/h	195	0	1411	766	0	1473	90	0	63	89	0	0
V/C Ratio(X)	0.04	0.00	0.34	0.22	0.00	0.89	0.14	0.00	0.27	0.41	0.00	0.00
Avail Cap(c_a), veh/h	293	0	1411	822	0	1473	307	0	299	282	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.4	0.0	4.2	2.8	0.0	8.2	59.1	0.0	59.2	60.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.1	0.0	8.3	0.7	0.0	2.3	3.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	4.9	0.9	0.0	22.7	0.8	0.0	1.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	4.9	3.0	0.0	16.5	59.8	0.0	61.4	63.2	0.0	0.0
LnGrp LOS	B	A	A	A	A	B	E	A	E	E	A	A
Approach Vol, veh/h		489			1480			30			37	
Approach Delay, s/veh		5.1			15.0			60.7			63.2	
Approach LOS		A			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	108.8		11.1	11.0	105.0		11.1
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.1	63.9		5.5	4.5	12.2		3.3
Green Ext Time (p_c), s	0.0	15.2		0.1	0.2	2.8		0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

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

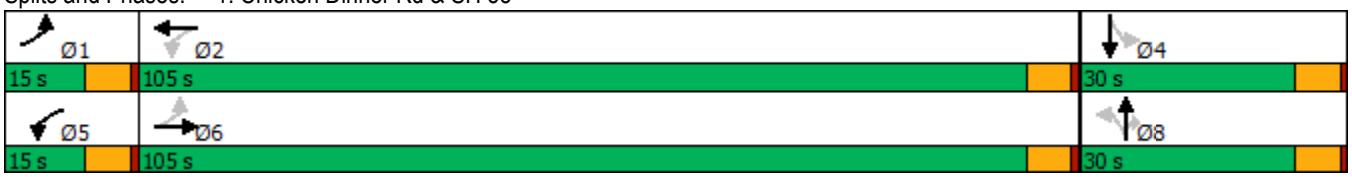
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	461	1	165	1239	16	1	12	16	11	9	16
Future Volume (vph)	8	461	1	165	1239	16	1	12	16	11	9	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)	1583	1792		1770	1806			1512	1583		1632	
Flt Permitted	0.11	1.00		0.44	1.00			0.97	1.00		0.89	
Satd. Flow (perm)	180	1792		812	1806			1475	1583		1482	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	8	480	1	172	1291	17	1	12	17	11	9	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	16	0	16	0
Lane Group Flow (vph)	8	481	0	172	1308	0	0	14	1	0	21	0
Heavy Vehicles (%)	14%	6%	2%	2%	5%	7%	2%	27%	2%	2%	25%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	105.7	104.6		118.9	111.8			6.3	6.3		6.3	
Effective Green, g (s)	105.7	104.6		118.9	111.8			6.3	6.3		6.3	
Actuated g/C Ratio	0.77	0.76		0.87	0.81			0.05	0.05		0.05	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	149	1366		761	1471			67	72		68	
v/s Ratio Prot	0.00	0.27		c0.01	c0.72							
v/s Ratio Perm	0.04			0.18				0.01	0.00		c0.01	
v/c Ratio	0.05	0.35		0.23	0.89			0.21	0.01		0.31	
Uniform Delay, d1	14.6	5.3		2.0	8.5			63.0	62.5		63.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.7		0.2	8.4			1.6	0.1		2.5	
Delay (s)	14.8	6.0		2.1	16.9			64.6	62.5		65.9	
Level of Service	B	A		A	B			E	E		E	
Approach Delay (s)		6.2			15.2			63.5			65.9	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	137.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	27	28	11	27	28
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		13	15		13	15
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	101	129	9	101	129
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	86	114	144	86	114

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	461	1	165	1239	16	1	12	16	11	9	16
Future Volume (veh/h)	8	461	1	165	1239	16	1	12	16	11	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1811	1870	1870	1826	1796	1870	1500	1870	1870	1530	1870
Adj Flow Rate, veh/h	8	480	1	172	1291	17	1	12	17	11	9	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	14	6	2	2	5	7	2	27	2	2	25	2
Cap, veh/h	321	2431	5	770	2583	34	48	65	73	68	18	28
Arrive On Green	0.01	0.69	0.69	0.06	0.74	0.74	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1612	3523	7	1781	3506	46	63	1420	1585	312	400	605
Grp Volume(v), veh/h	8	234	247	172	639	669	13	0	17	37	0	0
Grp Sat Flow(s),veh/h/ln	1612	1721	1810	1781	1735	1818	1483	0	1585	1317	0	0
Q Serve(g_s), s	0.1	4.2	4.2	2.3	13.3	13.3	0.0	0.0	0.9	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.2	4.2	2.3	13.3	13.3	0.7	0.0	0.9	2.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.03	0.08		1.00	0.30		0.46
Lane Grp Cap(c), veh/h	321	1187	1249	770	1278	1339	113	0	73	114	0	0
V/C Ratio(X)	0.02	0.20	0.20	0.22	0.50	0.50	0.12	0.00	0.23	0.32	0.00	0.00
Avail Cap(c_a), veh/h	472	1187	1249	1058	1278	1339	533	0	529	487	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.4	4.8	4.8	3.2	4.8	4.8	39.9	0.0	40.0	40.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.1	1.4	1.3	0.4	0.0	1.6	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	1.9	2.0	0.8	5.1	5.3	0.5	0.0	0.7	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.5	5.2	5.2	3.3	6.2	6.1	40.3	0.0	41.6	42.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		489			1480			30			37	
Approach Delay, s/veh		5.2			5.8			41.0			42.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	70.0		10.0	10.9	66.0		10.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	64.0		29.0	19.0	54.0		29.0
Max Q Clear Time (g_c+I1), s	2.1	15.3		4.4	4.3	6.2		2.9
Green Ext Time (p_c), s	0.0	9.8		0.1	0.3	2.5		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

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

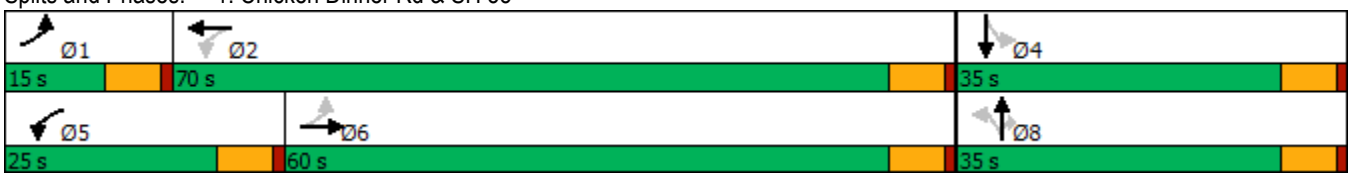
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	461	1	165	1239	16	1	12	16	11	9	16
Future Volume (vph)	8	461	1	165	1239	16	1	12	16	11	9	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)	1583	3405		1770	3431			1512	1583		1632	
Flt Permitted	0.21	1.00		0.44	1.00			0.97	1.00		0.89	
Satd. Flow (perm)	342	3405		813	3431			1472	1583		1482	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	8	480	1	172	1291	17	1	12	17	11	9	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	16	0	16	0
Lane Group Flow (vph)	8	481	0	172	1308	0	0	14	1	0	21	0
Heavy Vehicles (%)	14%	6%	2%	2%	5%	7%	2%	27%	2%	2%	25%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	64.7	63.7		77.6	70.6			4.5	4.5		4.5	
Effective Green, g (s)	64.7	63.7		77.6	70.6			4.5	4.5		4.5	
Actuated g/C Ratio	0.69	0.68		0.82	0.75			0.05	0.05		0.05	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	248	2304		750	2574			70	75		70	
v/s Ratio Prot	0.00	0.14		c0.02	c0.38							
v/s Ratio Perm	0.02			0.17				0.01	0.00		c0.01	
v/c Ratio	0.03	0.21		0.23	0.51			0.20	0.01		0.30	
Uniform Delay, d1	4.6	5.7		1.8	4.7			43.1	42.7		43.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	0.2		0.2	0.7			1.4	0.1		2.4	
Delay (s)	4.7	5.9		2.0	5.5			44.5	42.7		45.6	
Level of Service	A	A		A	A			D	D		D	
Approach Delay (s)		5.9			5.1			43.5			45.6	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	70	35	25	60	35
Maximum Split (%)	12.5%	58.3%	29.2%	20.8%	50.0%	29.2%
Minimum Split (s)	11	27	31	11	27	31
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		13	18		13	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	85	0	25	85
End Time (s)	15	85	0	25	85	0
Yield/Force Off (s)	9	79	114	19	79	114
Yield/Force Off 170(s)	9	66	96	19	66	96
Local Start Time (s)	95	110	60	95	0	60
Local Yield (s)	104	54	89	114	54	89
Local Yield 170(s)	104	41	71	114	41	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	80

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Future Vol, veh/h	22	1500	1	4	264	2	1	14	189	4	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	22	1531	1	4	269	2	1	14	193	4	7	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	1532	0	0	1722	1855	766	1095	1854	136
Stage 1	-	-	-	-	-	-	1576	1576	-	278	278	-
Stage 2	-	-	-	-	-	-	146	279	-	817	1576	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.86	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.86	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.86	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.18	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1289	-	-	430	-	-	57	61	345	168	73	888
Stage 1	-	-	-	-	-	-	115	144	-	705	679	-
Stage 2	-	-	-	-	-	-	842	640	-	337	168	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1289	-	-	430	-	-	54	59	345	66	71	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	120	-	111	136	-
Stage 1	-	-	-	-	-	-	113	142	-	693	673	-
Stage 2	-	-	-	-	-	-	824	634	-	131	165	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	28.8	34.3
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	118	345	1289	-	-	430	-	-	135
HCM Lane V/C Ratio	0.13	0.559	0.017	-	-	0.009	-	-	0.091
HCM Control Delay (s)	40	27.9	7.8	-	-	13.5	-	-	34.3
HCM Lane LOS	E	D	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.4	3.2	0.1	-	-	0	-	-	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1500	1	4	264	2	1	14	189	4	7	1
Future Volume (veh/h)	22	1500	1	4	264	2	1	14	189	4	7	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1781	1870	1870	1633	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1531	1	4	269	2	1	14	193	4	7	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	2	2	8	2	2	18	2	2	2	2
Cap, veh/h	823	1341	1	61	1261	9	32	216	223	94	152	19
Arrive On Green	0.02	0.73	0.73	0.01	0.71	0.71	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	1839	1	1781	1766	13	31	1592	1585	438	1118	141
Grp Volume(v), veh/h	22	0	1532	4	0	271	15	0	193	12	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1841	1781	0	1779	1623	0	1585	1698	0	0
Q Serve(g_s), s	0.5	0.0	101.1	0.1	0.0	7.1	0.0	0.0	16.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	101.1	0.1	0.0	7.1	1.1	0.0	16.5	0.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.07		1.00	0.33		0.08
Lane Grp Cap(c), veh/h	823	0	1342	61	0	1270	248	0	223	265	0	0
V/C Ratio(X)	0.03	0.00	1.14	0.07	0.00	0.21	0.06	0.00	0.86	0.05	0.00	0.00
Avail Cap(c_a), veh/h	902	0	1342	168	0	1270	308	0	282	327	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.1	0.0	18.8	40.8	0.0	6.7	52.3	0.0	58.3	52.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	73.0	0.4	0.0	0.4	0.1	0.0	19.6	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	80.6	0.2	0.0	4.3	0.8	0.0	12.4	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	0.0	91.8	41.3	0.0	7.1	52.4	0.0	77.8	52.2	0.0	0.0
LnGrp LOS	A	A	F	D	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1554			275			208			12	
Approach Delay, s/veh		90.6			7.6			76.0			52.2	
Approach LOS		F			A			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	105.0		24.8	6.7	107.1		24.8
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.5	9.1		2.8	2.1	103.1		18.5
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	0.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E

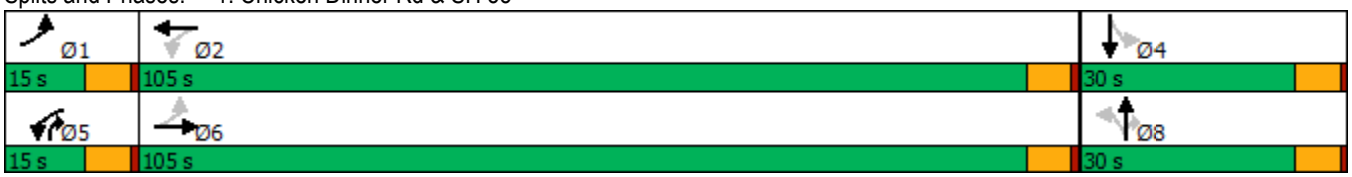
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	1500	1	4	264	2	1	14	189	4	7	1
Future Volume (vph)	22	1500	1	4	264	2	1	14	189	4	7	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1770	1827		1770	1758			1619	1583		1812	
Flt Permitted	0.59	1.00		0.04	1.00			0.97	1.00		0.89	
Satd. Flow (perm)	1104	1827		68	1758			1583	1583		1637	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1531	1	4	269	2	1	14	193	4	7	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	44	0	1	0
Lane Group Flow (vph)	22	1532	0	4	271	0	0	15	149	0	11	0
Heavy Vehicles (%)	2%	4%	2%	2%	8%	2%	2%	18%	2%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	105.3	103.1		118.1	109.9			3.0	12.0		3.0	
Effective Green, g (s)	105.3	103.1		118.1	109.9			3.0	12.0		3.0	
Actuated g/C Ratio	0.79	0.77		0.89	0.83			0.02	0.09		0.02	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	884	1415		175	1451			35	214		36	
v/s Ratio Prot	0.00	c0.84		0.00	0.15				c0.05			
v/s Ratio Perm	0.02			0.02				0.01	0.05		0.01	
v/c Ratio	0.02	1.08		0.02	0.19			0.43	0.70		0.31	
Uniform Delay, d1	2.9	15.0		42.4	2.4			64.2	58.8		64.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	49.7		0.1	0.3			8.2	9.5		4.8	
Delay (s)	3.0	64.7		42.5	2.7			72.4	68.3		68.8	
Level of Service	A	E		D	A			E	E		E	
Approach Delay (s)		63.8			3.3			68.6			68.8	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	56.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	133.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	26	28	11	26	28
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		13	15		13	15
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	101	129	9	101	129
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	86	114	144	86	114

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1500	1	4	264	2	1	14	189	4	7	1
Future Volume (veh/h)	22	1500	1	4	264	2	1	14	189	4	7	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1781	1870	1870	1633	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1531	1	4	269	2	1	14	193	4	7	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	2	2	8	2	2	18	2	2	2	2
Cap, veh/h	802	2396	2	225	2239	17	43	230	236	107	167	20
Arrive On Green	0.02	0.67	0.67	0.01	0.65	0.65	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3587	2	1781	3444	26	25	1600	1585	406	1160	142
Grp Volume(v), veh/h	22	746	786	4	132	139	15	0	193	12	0	0
Grp Sat Flow(s),veh/h/ln	1781	1749	1840	1781	1692	1777	1625	0	1585	1708	0	0
Q Serve(g_s), s	0.4	24.3	24.3	0.1	2.9	2.9	0.0	0.0	11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	24.3	24.3	0.1	2.9	2.9	0.8	0.0	11.6	0.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.07		1.00	0.33		0.08
Lane Grp Cap(c), veh/h	802	1168	1229	225	1100	1155	273	0	236	295	0	0
V/C Ratio(X)	0.03	0.64	0.64	0.02	0.12	0.12	0.05	0.00	0.82	0.04	0.00	0.00
Avail Cap(c_a), veh/h	924	1168	1229	379	1100	1155	514	0	475	545	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	9.5	9.5	8.5	6.5	6.5	36.4	0.0	40.6	36.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	2.6	0.0	0.2	0.2	0.1	0.0	6.8	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	11.9	12.4	0.0	1.6	1.6	0.6	0.0	8.6	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	12.2	12.0	8.5	6.8	6.7	36.5	0.0	47.3	36.4	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		1554			275			208			12	
Approach Delay, s/veh		12.0			6.8			46.5			36.4	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	70.0		20.2	6.5	71.7		20.2
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	64.0		29.0	9.0	64.0		29.0
Max Q Clear Time (g_c+I1), s	2.4	4.9		2.6	2.1	26.3		13.6
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	12.4		0.6

Intersection Summary		
HCM 6th Ctrl Delay		14.9
HCM 6th LOS		B

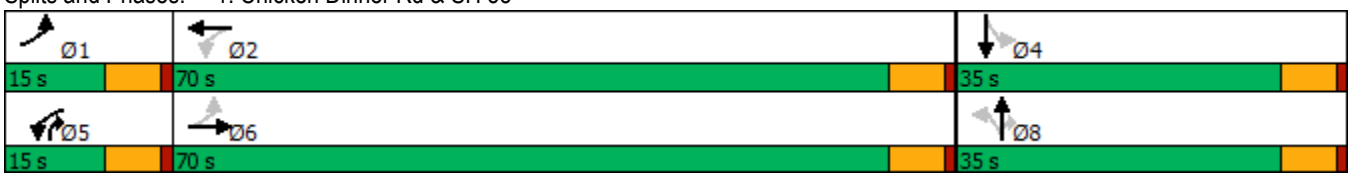
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	1500	1	4	264	2	1	14	189	4	7	1
Future Volume (vph)	22	1500	1	4	264	2	1	14	189	4	7	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1770	3471		1770	3340			1619	1583		1812	
Flt Permitted	0.58	1.00		0.12	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1089	3471		218	3340			1625	1583		1842	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	1531	1	4	269	2	1	14	193	4	7	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	24	0	1	0
Lane Group Flow (vph)	22	1532	0	4	271	0	0	15	169	0	11	0
Heavy Vehicles (%)	2%	4%	2%	2%	8%	2%	2%	18%	2%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	72.7	70.4		85.4	77.1			1.4	10.4		1.4	
Effective Green, g (s)	72.7	70.4		85.4	77.1			1.4	10.4		1.4	
Actuated g/C Ratio	0.74	0.71		0.86	0.78			0.01	0.11		0.01	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	817	2473		329	2606			23	262		26	
v/s Ratio Prot	0.00	c0.44		0.00	0.08				c0.06			
v/s Ratio Perm	0.02			0.01				0.01	0.05		0.01	
v/c Ratio	0.03	0.62		0.01	0.10			0.65	0.64		0.42	
Uniform Delay, d1	3.5	7.3		3.6	2.6			48.5	42.4		48.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.2		0.0	0.1			50.9	5.3		10.7	
Delay (s)	3.5	8.5		3.6	2.7			99.4	47.8		59.0	
Level of Service	A	A		A	A			F	D		E	
Approach Delay (s)		8.4			2.7			51.5			59.0	
Approach LOS		A			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	98.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	70	35	15	70	35
Maximum Split (%)	12.5%	58.3%	29.2%	12.5%	58.3%	29.2%
Minimum Split (s)	11	26	31	11	26	31
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		13	18		13	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	85	0	15	85
End Time (s)	15	85	0	15	85	0
Yield/Force Off (s)	9	79	114	9	79	114
Yield/Force Off 170(s)	9	66	96	9	66	96
Local Start Time (s)	105	0	70	105	0	70
Local Yield (s)	114	64	99	114	64	99
Local Yield 170(s)	114	51	81	114	51	81

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	90

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	32	4	52	3	326	12	406	748	2
Future Vol, veh/h	1	3	16	32	4	52	3	326	12	406	748	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	-	-	-	-	-	100	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	17	33	4	54	3	340	13	423	779	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1804	1985	391	1590	1980	177	781	0	0	353	0	0
Stage 1	1626	1626	-	353	353	-	-	-	-	-	-	-
Stage 2	178	359	-	1237	1627	-	-	-	-	-	-	-
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	61	608	72	61	835	832	-	-	1202	-	-
Stage 1	106	159	-	637	629	-	-	-	-	-	-	-
Stage 2	806	626	-	186	159	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	39	608	48	39	835	832	-	-	1202	-	-
Mov Cap-2 Maneuver	33	39	-	96	86	-	-	-	-	-	-	-
Stage 1	106	103	-	634	626	-	-	-	-	-	-	-
Stage 2	746	623	-	114	103	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.8	32.6	0.1	3.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	832	-	-	150	95	835	1202	-	-
HCM Lane V/C Ratio	0.004	-	-	0.139	0.395	0.065	0.352	-	-
HCM Control Delay (s)	9.3	-	-	32.8	65.7	9.6	9.6	-	-
HCM Lane LOS	A	-	-	D	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	1.6	0.2	1.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	16	32	4	52	3	326	12	406	748	2
Future Volume (veh/h)	1	3	16	32	4	52	3	326	12	406	748	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870	1796	1870
Adj Flow Rate, veh/h	1	3	17	33	4	54	3	340	12	423	779	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	5	2	2	7	2
Cap, veh/h	41	15	71	140	13	86	544	2281	80	885	2632	7
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.67	0.67	0.09	0.75	0.75
Sat Flow, veh/h	36	273	1312	1275	241	1585	1781	3418	120	1781	3492	9
Grp Volume(v), veh/h	21	0	0	37	0	54	3	172	180	423	381	400
Grp Sat Flow(s),veh/h/ln	1620	0	0	1517	0	1585	1781	1735	1804	1781	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	3.2	0.1	3.5	3.5	6.6	6.8	6.8
Cycle Q Clear(g_c), s	1.2	0.0	0.0	2.1	0.0	3.2	0.1	3.5	3.5	6.6	6.8	6.8
Prop In Lane	0.05		0.81	0.89		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	0	154	0	86	544	1158	1204	885	1286	1353
V/C Ratio(X)	0.16	0.00	0.00	0.24	0.00	0.63	0.01	0.15	0.15	0.48	0.30	0.30
Avail Cap(c_a), veh/h	526	0	0	509	0	479	704	1158	1204	891	1286	1353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	0.0	43.8	0.0	44.4	5.2	5.9	5.9	3.4	3.7	3.7
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.8	0.0	7.2	0.0	0.3	0.3	0.4	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	1.6	0.0	2.4	0.0	1.8	1.9	2.0	2.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	0.0	0.0	44.6	0.0	51.6	5.2	6.2	6.2	3.8	4.3	4.3
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		21			91			355			1204	
Approach Delay, s/veh		44.0			48.8			6.1			4.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.2	6.4	78.3		11.2	14.7	70.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		29.0	9.0	64.0		29.0	9.0	64.0				
Max Q Clear Time (g_c+I1), s		5.2	2.1	8.8		3.2	8.6	5.5				
Green Ext Time (p_c), s		0.3	0.0	4.5		0.1	0.1	1.8				

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

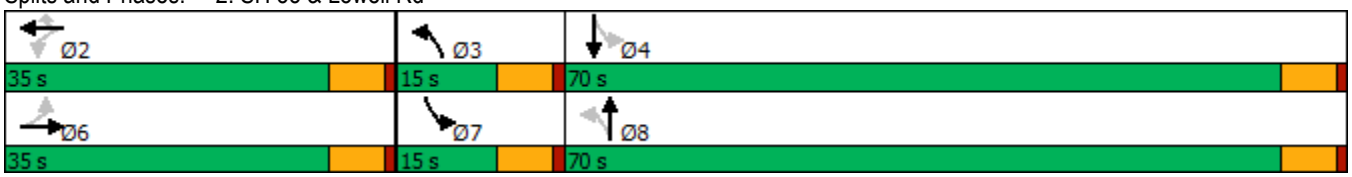
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	16	32	4	52	3	326	12	406	748	2
Future Volume (vph)	1	3	16	32	4	52	3	326	12	406	748	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1655			1783	1583	1770	3423		1770	3373	
Flt Permitted		0.98			0.73	1.00	0.36	1.00		0.50	1.00	
Satd. Flow (perm)		1626			1367	1583	663	3423		926	3373	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	3	17	33	4	54	3	340	12	423	779	2
RTOR Reduction (vph)	0	16	0	0	0	50	0	2	0	0	0	0
Lane Group Flow (vph)	0	5	0	0	37	4	3	351	0	423	781	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	7%	2%
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		6.7			6.7	6.7	70.3	69.2		84.2	77.1	
Effective Green, g (s)		6.7			6.7	6.7	70.3	69.2		84.2	77.1	
Actuated g/C Ratio		0.07			0.07	0.07	0.68	0.67		0.82	0.75	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		105			89	103	464	2301		831	2527	
v/s Ratio Prot							0.00	0.10		c0.04	0.23	
v/s Ratio Perm		0.00			c0.03	0.00	0.00			c0.37		
v/c Ratio		0.05			0.42	0.03	0.01	0.15		0.51	0.31	
Uniform Delay, d1		45.1			46.2	45.1	5.2	6.1		2.5	4.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			3.1	0.1	0.0	0.1		0.5	0.3	
Delay (s)		45.3			49.3	45.2	5.2	6.3		3.0	4.5	
Level of Service		D			D	D	A	A		A	A	
Approach Delay (s)		45.3			46.9			6.3			4.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	35	15	70	35	15	70
Maximum Split (%)	29.2%	12.5%	58.3%	29.2%	12.5%	58.3%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	35	50	0	35	50
End Time (s)	35	50	0	35	50	0
Yield/Force Off (s)	29	44	114	29	44	114
Yield/Force Off 170(s)	11	44	100	11	44	100
Local Start Time (s)	0	35	50	0	35	50
Local Yield (s)	29	44	114	29	44	114
Local Yield 170(s)	11	44	100	11	44	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	18.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	5	25	3	487	22	993	13	44	166	0
Future Vol, veh/h	0	1	5	25	3	487	22	993	13	44	166	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	-	-	-	-	-	100	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	5	26	3	497	22	1013	13	45	169	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	811	1329	85	1239	1323	513	169	0	0	1026	0	0
Stage 1	259	259	-	1064	1064	-	-	-	-	-	-	-
Stage 2	552	1070	-	175	259	-	-	-	-	-	-	-
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	271	154	957	132	155	506	1406	-	-	673	-	-
Stage 1	723	692	-	238	298	-	-	-	-	-	-	-
Stage 2	486	296	-	810	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	141	957	122	142	506	1406	-	-	673	-	-
Mov Cap-2 Maneuver	5	141	-	198	235	-	-	-	-	-	-	-
Stage 1	711	646	-	234	293	-	-	-	-	-	-	-
Stage 2	8	291	-	751	646	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	62.2	0.2	2.2
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	487	201	506	673	-	-
HCM Lane V/C Ratio	0.016	-	-	0.013	0.142	0.982	0.067	-	-
HCM Control Delay (s)	7.6	-	-	12.5	25.9	64.3	10.7	-	-
HCM Lane LOS	A	-	-	B	D	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	13.1	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	5	25	3	487	22	993	13	44	166	0
Future Volume (veh/h)	0	1	5	25	3	487	22	993	13	44	166	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1	5	26	3	497	22	1013	13	45	169	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	86	431	475	51	560	669	1700	22	278	1725	0
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.02	0.47	0.47	0.04	0.49	0.00
Sat Flow, veh/h	0	271	1355	1287	162	1585	1781	3593	46	1781	3647	0
Grp Volume(v), veh/h	0	0	6	29	0	497	22	501	525	45	169	0
Grp Sat Flow(s),veh/h/ln	0	0	1626	1448	0	1585	1781	1777	1862	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	30.6	0.7	21.4	21.4	1.3	2.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	30.6	0.7	21.4	21.4	1.3	2.7	0.0
Prop In Lane	0.00		0.83	0.90		1.00	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	517	527	0	560	669	841	881	278	1725	0
V/C Ratio(X)	0.00	0.00	0.01	0.06	0.00	0.89	0.03	0.60	0.60	0.16	0.10	0.00
Avail Cap(c_a), veh/h	0	0	534	541	0	576	784	841	881	371	1725	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	24.2	24.5	0.0	31.6	13.3	20.0	20.0	15.3	14.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	15.3	0.0	3.1	3.0	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.2	0.9	0.0	18.9	0.4	13.3	13.7	0.9	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	24.2	24.6	0.0	46.9	13.4	23.1	23.0	15.5	14.5	0.0
LnGrp LOS	A	A	C	C	A	D	B	C	C	B	B	A
Approach Vol, veh/h		6			526			1048			214	
Approach Delay, s/veh		24.2			45.7			22.9			14.7	
Approach LOS		C			D			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		38.9	8.3	56.3		38.9	9.6	55.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		34.0	9.0	49.0		34.0	9.0	49.0
Max Q Clear Time (g_c+I1), s		32.6	2.7	4.7		2.3	3.3	23.4
Green Ext Time (p_c), s		0.3	0.0	0.9		0.0	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	5	25	3	487	22	993	13	44	166	0
Future Volume (vph)	0	1	5	25	3	487	22	993	13	44	166	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1653			1783	1583	1770	3532		1770	3539	
Flt Permitted		1.00			1.00	1.00	0.65	1.00		0.22	1.00	
Satd. Flow (perm)		1653			1863	1583	1202	3532		407	3539	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1	5	26	3	497	22	1013	13	45	169	0
RTOR Reduction (vph)	0	5	0	0	0	44	0	0	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	29	453	22	1026	0	45	169	0
Turn Type		NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		3.0			3.0	12.1	55.5	53.3		68.4	60.2	
Effective Green, g (s)		3.0			3.0	12.1	55.5	53.3		68.4	60.2	
Actuated g/C Ratio		0.04			0.04	0.15	0.67	0.64		0.82	0.72	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		59			67	343	814	2257		482	2554	
v/s Ratio Prot		0.00				c0.14	0.00	c0.29		0.01	0.05	
v/s Ratio Perm					0.02	0.14	0.02			0.07		
v/c Ratio		0.02			0.43	1.32	0.03	0.45		0.09	0.07	
Uniform Delay, d1		38.8			39.4	35.7	4.7	7.7		2.5	3.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			4.4	162.8	0.0	0.7		0.1	0.0	
Delay (s)		38.9			43.8	198.5	4.7	8.3		2.6	3.4	
Level of Service		D			D	F	A	A		A	A	
Approach Delay (s)		38.9			190.0			8.2			3.3	
Approach LOS		D			F			A			A	

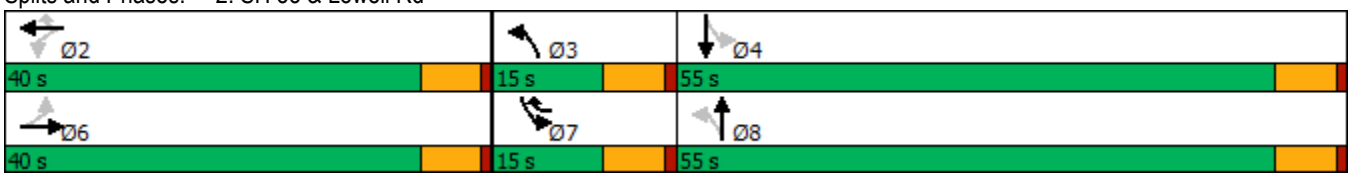
Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	83.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	40	15	55	40	15	55
Maximum Split (%)	36.4%	13.6%	50.0%	36.4%	13.6%	50.0%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	55	0	40	55
End Time (s)	40	55	0	40	55	0
Yield/Force Off (s)	34	49	104	34	49	104
Yield/Force Off 170(s)	16	49	90	16	49	90
Local Start Time (s)	0	40	55	0	40	55
Local Yield (s)	34	49	104	34	49	104
Local Yield 170(s)	16	49	90	16	49	90

Intersection Summary	
Cycle Length	110
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Lowell Rd	2	0.8	50.8	0.8	55
	19	0.3	16.9	0.3	54
	20	0.4	16.4	0.2	54
	21	2.5	68.0	1.0	53
	22	1.0	20.2	0.3	52
	8	1.5	25.8	0.4	52
Chicken Dinner Rd	1	3.5	46.3	0.8	59
Total		10.0	244.5	3.7	55

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	2.8	58.5	0.8	52
	8	3.5	53.0	0.8	51
	22	2.0	26.3	0.4	51
	21	1.7	20.9	0.3	50
	20	3.8	68.9	1.0	52
	19	1.0	16.9	0.2	52
Lowell Rd	2	1.0	15.5	0.3	59
Total		15.7	260.1	3.8	52

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Lowell Rd	2	0.8	50.3	0.8	56
	19	0.3	16.8	0.3	54
	20	0.3	16.1	0.2	54
	21	1.7	66.7	1.0	54
	22	0.7	19.8	0.3	53
	8	0.9	25.1	0.4	53
Chicken Dinner Rd	1	2.2	47.3	0.8	58
Total		6.9	242.0	3.7	55

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	1.1	56.5	0.8	54
	8	1.8	51.1	0.8	53
	22	1.2	25.8	0.4	52
	21	1.1	20.4	0.3	52
	20	2.5	68.6	1.0	53
	19	0.6	16.7	0.2	52
Lowell Rd	2	0.5	15.0	0.3	61
Total		8.9	254.1	3.8	53

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	1.0	27.9	0.4	53
Access B	4	1.0	9.0	0.1	48
Lowell Rd	2	1.3	17.6	0.3	51
	19	0.7	17.5	0.3	52
	20	0.4	16.5	0.2	53
	21	2.8	68.2	1.0	53
	22	1.2	20.5	0.3	51
	8	1.8	26.5	0.4	51
Chicken Dinner Rd	1	4.6	49.5	0.8	55
Total		14.9	253.1	3.7	53

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	16.6	73.6	0.8	43
	8	7.7	57.0	0.8	48
	22	3.1	27.5	0.4	49
	21	2.6	21.8	0.3	48
	20	5.0	70.1	1.0	52
	19	1.5	17.4	0.2	50
Lowell Rd	2	3.7	19.4	0.3	47
Access B	4	2.7	18.1	0.3	50
Access C	5	0.4	8.4	0.1	51
Total		43.4	313.3	4.1	48

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.2	26.7	0.4	55
Access B	4	0.8	8.7	0.1	50
Lowell Rd	2	2.7	18.8	0.3	48
	19	1.6	18.1	0.3	50
	20	0.7	16.7	0.2	53
	21	8.7	73.6	1.0	49
	22	2.4	21.5	0.3	49
	8	3.3	27.8	0.4	48
Chicken Dinner Rd	1	10.7	59.2	0.8	46
Total		31.1	271.2	3.7	49

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	1.7	57.1	0.8	54
	8	2.5	51.5	0.8	53
	22	1.6	26.2	0.4	51
	21	1.4	20.8	0.3	51
	20	3.6	68.7	1.0	53
	19	0.9	17.0	0.2	51
Lowell Rd	2	1.1	16.2	0.3	56
Access B	4	1.4	17.5	0.3	51
Access C	5	0.5	8.2	0.1	52
Total		14.8	283.2	4.1	53

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.8	27.8	0.4	53
Access B	4	1.0	9.0	0.1	48
Lowell Rd	2	5.2	21.5	0.3	42
	19	2.2	19.0	0.3	48
	20	0.5	16.7	0.2	52
	21	3.3	69.6	1.0	52
	22	1.2	20.7	0.3	51
	8	1.6	26.2	0.4	51
Chicken Dinner Rd	1	7.1	52.4	0.8	52
Total		23.0	262.9	3.7	51

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	24.5	81.9	0.8	38
	8	10.0	59.2	0.8	46
	22	3.1	27.5	0.4	49
	21	2.6	21.9	0.3	48
	20	5.3	70.7	1.0	51
	19	1.7	17.7	0.2	50
Lowell Rd	2	5.3	21.0	0.3	43
Access B	4	3.7	19.0	0.3	47
Access C	5	0.4	8.2	0.1	52
Total		56.7	327.1	4.1	46

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.4	26.7	0.4	55
Access B	4	0.9	8.8	0.1	49
Lowell Rd	2	9.0	24.9	0.3	36
	19	4.1	20.6	0.3	44
	20	0.9	17.0	0.2	52
	21	13.0	78.2	1.0	46
	22	2.9	22.1	0.3	48
	8	15.2	39.6	0.4	34
Chicken Dinner Rd	1	159.5	229.6	0.8	13
Total		205.9	467.4	3.7	30

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	2.9	57.7	0.8	53
	8	3.1	52.1	0.8	52
	22	1.6	26.1	0.4	51
	21	1.4	20.7	0.3	51
	20	3.3	68.2	1.0	53
	19	0.8	16.9	0.2	52
Lowell Rd	2	1.4	16.2	0.3	56
Access B	4	1.4	17.7	0.3	51
Access C	5	0.4	8.1	0.1	53
Total		16.2	283.7	4.1	53

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	401	279	46	42	10
Future Vol, veh/h	20	401	279	46	42	10
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	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	418	291	48	44	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	860	230
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	630	-
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	-	-	1121	-	326	809
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1121	-	239	809
Mov Cap-2 Maneuver	-	-	-	-	239	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	389	-

Approach	EB	WB	NB
HCM Control Delay, s	0	8	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	239	809	-	-	1121	-
HCM Lane V/C Ratio	0.183	0.013	-	-	0.259	-
HCM Control Delay (s)	23.4	9.5	-	-	9.3	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	0	-	-	1	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	401	279	46	42	10
Future Vol, veh/h	20	401	279	46	42	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	418	291	48	44	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	651	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	630	-
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	-	-	1121	-	433	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1121	-	320	1056
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	393	-

Approach	EB	WB	NB
HCM Control Delay, s	0	8	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	352	1056	-	-	1121	-
HCM Lane V/C Ratio	0.124	0.01	-	-	0.259	-
HCM Control Delay (s)	16.7	8.4	-	-	9.3	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0	-	-	1	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	24	317	112	324	472
Future Vol, veh/h	9	24	317	112	324	472
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	25	330	117	338	492

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1311	224	0	0	447	0
Stage 1	389	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	150	779	-	-	1110	-
Stage 1	654	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	104	779	-	-	1110	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	242	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	196	779	1110	-
HCM Lane V/C Ratio	-	-	0.048	0.032	0.304	-
HCM Control Delay (s)	-	-	24.3	9.8	9.7	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	1.3	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	24	317	112	324	472
Future Vol, veh/h	9	24	317	112	324	472
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	25	330	117	338	492

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1252	165	0	0	447	0
Stage 1	330	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	164	850	-	-	1110	-
Stage 1	701	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	114	850	-	-	1110	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	242	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	200	850	1110	-
HCM Lane V/C Ratio	-	-	0.047	0.029	0.304	-
HCM Control Delay (s)	-	-	23.9	9.4	9.7	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	1.3	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	28	401	20	180	301
Future Vol, veh/h	2	28	401	20	180	301
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	29	418	21	188	314

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	220	0	0	439	0
Stage 1	429	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	254	784	-	-	1117	-
Stage 1	624	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	211	784	-	-	1117	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	3.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	334	784	1117	-
HCM Lane V/C Ratio	-	-	0.006	0.037	0.168	-
HCM Control Delay (s)	-	-	15.8	9.8	8.9	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.6	-

Intersection	
Int Delay, s/veh	11

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	43	6	48	467	417
Future Vol, veh/h	15	43	6	48	467	417
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	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	44	6	49	477	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	98	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	61	-
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	-	-	1545	-	901	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1545	-	897	1035
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	897	1035	-	-	1545	-
HCM Lane V/C Ratio	0.531	0.411	-	-	0.004	-
HCM Control Delay (s)	13.5	10.9	-	-	7.3	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	3.2	2	-	-	0	-

Intersection	
Int Delay, s/veh	11

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	43	6	48	467	417
Future Vol, veh/h	15	43	6	48	467	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	44	6	49	477	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	76	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	61	-
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	-	-	1545	-	927	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1545	-	923	1065
Mov Cap-2 Maneuver	-	-	-	-	865	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	865	1065	-	-	1545	-
HCM Lane V/C Ratio	0.551	0.4	-	-	0.004	-
HCM Control Delay (s)	14.1	10.6	-	-	7.3	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	3.4	1.9	-	-	0	-

Intersection	
Int Delay, s/veh	18

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	750	278	8	40	156
Future Vol, veh/h	167	750	278	8	40	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	765	284	8	41	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	450	146	0	0	292	0
Stage 1	288	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	538	875	-	-	1267	-
Stage 1	735	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	521	875	-	-	1267	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.1	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	590	875	1267	-
HCM Lane V/C Ratio	-	-	0.289	0.875	0.032	-
HCM Control Delay (s)	-	-	13.6	30.1	7.9	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.2	11.4	0.1	-

Intersection	
Int Delay, s/veh	17.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	750	278	8	40	156
Future Vol, veh/h	167	750	278	8	40	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	765	284	8	41	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	446	142	0	0	292	0
Stage 1	284	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	541	880	-	-	1267	-
Stage 1	739	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	524	880	-	-	1267	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.5	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	592	880	1267	-
HCM Lane V/C Ratio	-	-	0.288	0.87	0.032	-
HCM Control Delay (s)	-	-	13.5	29.4	7.9	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.2	11.2	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	136	150	2	5	318
Future Vol, veh/h	30	136	150	2	5	318
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	139	153	2	5	324

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	326	78	0	0	155	0
Stage 1	154	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	643	967	-	-	1423	-
Stage 1	858	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	640	967	-	-	1423	-
Mov Cap-2 Maneuver	679	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	838	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	679	967	1423	-
HCM Lane V/C Ratio	-	-	0.045	0.144	0.004	-
HCM Control Delay (s)	-	-	10.6	9.3	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.5	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	32	4	61	3	317	12	406	748	2
Future Vol, veh/h	1	3	16	32	4	61	3	317	12	406	748	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	-	-	-	100	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	17	33	4	64	3	330	13	423	779	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1799	1975	391	1580	1970	172	781	0	0	343	0	0
Stage 1	1626	1626	-	343	343	-	-	-	-	-	-	-
Stage 2	173	349	-	1237	1627	-	-	-	-	-	-	-
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	61	608	73	62	842	832	-	-	1213	-	-
Stage 1	106	159	-	646	636	-	-	-	-	-	-	-
Stage 2	812	632	-	186	159	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	32	40	608	49	40	842	832	-	-	1213	-	-
Mov Cap-2 Maneuver	32	40	-	96	87	-	-	-	-	-	-	-
Stage 1	106	104	-	643	633	-	-	-	-	-	-	-
Stage 2	743	629	-	114	104	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.6	30.4	0.1	3.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	832	-	-	151	95	842	1213	-	-
HCM Lane V/C Ratio	0.004	-	-	0.138	0.395	0.075	0.349	-	-
HCM Control Delay (s)	9.3	-	-	32.6	65.7	9.6	9.5	-	-
HCM Lane LOS	A	-	-	D	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	1.6	0.2	1.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	16	32	4	61	3	317	12	406	748	2
Future Volume (veh/h)	1	3	16	32	4	61	3	317	12	406	748	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870	1796	1870
Adj Flow Rate, veh/h	1	3	17	33	4	64	3	330	12	423	779	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	5	2	2	7	2
Cap, veh/h	105	25	125	297	26	152	328	637	23	720	1470	4
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.19	0.19	0.24	0.42	0.42
Sat Flow, veh/h	46	262	1308	1211	270	1585	1781	3414	124	1781	3492	9
Grp Volume(v), veh/h	21	0	0	37	0	64	3	167	175	423	381	400
Grp Sat Flow(s),veh/h/ln	1616	0	0	1481	0	1585	1781	1735	1804	1781	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	1.4	0.1	3.3	3.3	6.1	6.2	6.2
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.8	0.0	1.4	0.1	3.3	3.3	6.1	6.2	6.2
Prop In Lane	0.05		0.81	0.89		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	255	0	0	323	0	152	328	324	337	720	718	755
V/C Ratio(X)	0.08	0.00	0.00	0.11	0.00	0.42	0.01	0.52	0.52	0.59	0.53	0.53
Avail Cap(c_a), veh/h	1341	0	0	1291	0	1224	747	2493	2593	1196	2907	3057
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	0.0	15.7	0.0	16.0	12.3	13.8	13.8	7.3	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	1.9	0.0	1.3	1.2	0.8	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.8	0.0	1.7	1.8	1.7	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.7	0.0	0.0	15.8	0.0	17.9	12.3	15.0	15.0	8.1	8.7	8.7
LnGrp LOS	B	A	A	B	A	B	B	B	B	A	A	A
Approach Vol, veh/h		21			101			345			1204	
Approach Delay, s/veh		15.7			17.1			15.0			8.5	
Approach LOS		B			B			B			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.6	6.2	21.8		9.6	15.0	13.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		29.0	9.0	64.0		29.0	19.0	54.0				
Max Q Clear Time (g_c+I1), s		3.4	2.1	8.2		2.4	8.1	5.3				
Green Ext Time (p_c), s		0.3	0.0	4.5		0.1	1.0	1.7				

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

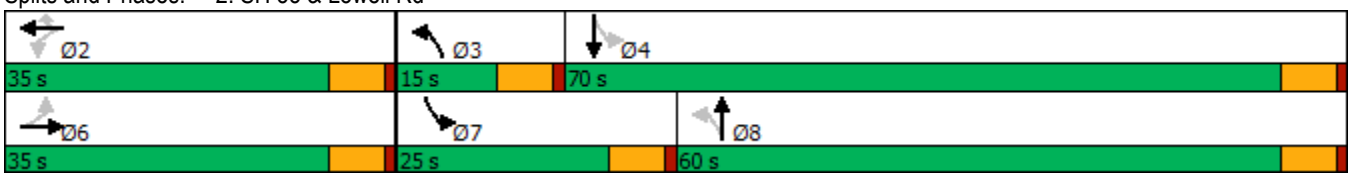
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	16	32	4	61	3	317	12	406	748	2
Future Volume (vph)	1	3	16	32	4	61	3	317	12	406	748	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1655			1783	1583	1770	3422		1770	3373	
Flt Permitted		0.98			0.73	1.00	0.36	1.00		0.39	1.00	
Satd. Flow (perm)		1626			1367	1583	663	3422		733	3373	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	3	17	33	4	64	3	330	12	423	779	2
RTOR Reduction (vph)	0	15	0	0	0	58	0	3	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	37	6	3	340	0	423	781	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	7%	2%
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		5.2			5.2	5.2	16.4	15.5		37.3	30.4	
Effective Green, g (s)		5.2			5.2	5.2	16.4	15.5		37.3	30.4	
Actuated g/C Ratio		0.10			0.10	0.10	0.30	0.28		0.68	0.56	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		155			130	151	217	973		802	1881	
v/s Ratio Prot							0.00	0.10		c0.15	0.23	
v/s Ratio Perm		0.00			c0.03	0.00	0.00			c0.21		
v/c Ratio		0.04			0.28	0.04	0.01	0.35		0.53	0.42	
Uniform Delay, d1		22.4			22.9	22.4	13.4	15.5		4.1	6.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			1.2	0.1	0.0	0.2		0.6	0.1	
Delay (s)		22.5			24.1	22.5	13.4	15.7		4.8	7.1	
Level of Service		C			C	C	B	B		A	A	
Approach Delay (s)		22.5			23.1			15.7			6.3	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Min	None	None	Min
Maximum Split (s)	35	15	70	35	25	60
Maximum Split (%)	29.2%	12.5%	58.3%	29.2%	20.8%	50.0%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	35	50	0	35	60
End Time (s)	35	50	0	35	60	0
Yield/Force Off (s)	29	44	114	29	54	114
Yield/Force Off 170(s)	11	44	114	11	54	114
Local Start Time (s)	0	35	50	0	35	60
Local Yield (s)	29	44	114	29	54	114
Local Yield 170(s)	11	44	114	11	54	114

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	20	401	279	46	51	10
Future Vol, veh/h	20	401	279	46	51	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	418	291	48	53	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	651	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	630	-
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	-	-	1121	-	433	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1121	-	320	1056
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	393	-

Approach	EB	WB	NB
HCM Control Delay, s	0	8	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	352	1056	-	-	1121	-
HCM Lane V/C Ratio	0.151	0.01	-	-	0.259	-
HCM Control Delay (s)	17	8.4	-	-	9.3	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0	-	-	1	-

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	43	29	132	504	292
Future Vol, veh/h	11	43	29	132	504	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	45	30	138	525	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1232	15	0	0	168	0
Stage 1	30	-	-	-	-	-
Stage 2	1202	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	169	1061	-	-	1407	-
Stage 1	989	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	106	1061	-	-	1407	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	155	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	5.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	139	1061	1407	-
HCM Lane V/C Ratio	-	-	0.082	0.042	0.373	-
HCM Control Delay (s)	-	-	33.2	8.5	9.1	-
HCM Lane LOS	-	-	D	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	1.8	-

Intersection	
Int Delay, s/veh	26.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	5	25	3	553	22	926	13	44	166	0
Future Vol, veh/h	0	1	5	25	3	553	22	926	13	44	166	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	-	-	-	100	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	5	26	3	564	22	945	13	45	169	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	777	1261	85	1171	1255	479	169	0	0	958	0	0
Stage 1	259	259	-	996	996	-	-	-	-	-	-	-
Stage 2	518	1002	-	175	259	-	-	-	-	-	-	-
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	287	169	957	148	170	~ 533	1406	-	-	714	-	-
Stage 1	723	692	-	262	320	-	-	-	-	-	-	-
Stage 2	509	318	-	810	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	156	957	138	157	~ 533	1406	-	-	714	-	-
Mov Cap-2 Maneuver	-	156	-	217	251	-	-	-	-	-	-	-
Stage 1	711	648	-	258	315	-	-	-	-	-	-	-
Stage 2	-	313	-	754	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		80.3	0.2	2.2
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	-	220	533	714	-	-
HCM Lane V/C Ratio	0.016	-	-	-	0.13	1.059	0.063	-	-
HCM Control Delay (s)	7.6	-	-	-	23.8	83.2	10.4	-	-
HCM Lane LOS	A	-	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.4	16.6	0.2	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	5	25	3	553	22	926	13	44	166	0
Future Volume (veh/h)	0	1	5	25	3	553	22	926	13	44	166	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1	5	26	3	564	22	945	13	45	169	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	98	491	528	58	628	623	1585	22	267	1611	0
Arrive On Green	0.00	0.36	0.36	0.36	0.36	0.36	0.02	0.44	0.44	0.03	0.45	0.00
Sat Flow, veh/h	0	271	1355	1289	159	1585	1781	3589	49	1781	3647	0
Grp Volume(v), veh/h	0	0	6	29	0	564	22	468	490	45	169	0
Grp Sat Flow(s),veh/h/ln	0	0	1626	1448	0	1585	1781	1777	1861	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.3	1.1	0.0	37.0	0.7	22.1	22.1	1.5	3.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.4	0.0	37.0	0.7	22.1	22.1	1.5	3.0	0.0
Prop In Lane	0.00		0.83	0.90		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	589	586	0	628	623	785	822	267	1611	0
V/C Ratio(X)	0.00	0.00	0.01	0.05	0.00	0.90	0.04	0.60	0.60	0.17	0.10	0.00
Avail Cap(c_a), veh/h	0	0	645	636	0	682	728	785	822	351	1611	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.0	0.0	31.4	16.2	23.5	23.5	18.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	14.1	0.0	3.3	3.2	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.2	0.9	0.0	21.7	0.5	14.1	14.6	1.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	22.7	23.0	0.0	45.5	16.2	26.8	26.6	18.3	17.5	0.0
LnGrp LOS	A	A	C	C	A	D	B	C	C	B	B	A
Approach Vol, veh/h		6			593			980			214	
Approach Delay, s/veh		22.7			44.4			26.5			17.7	
Approach LOS		C			D			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		46.2	8.5	56.3		46.2	9.8	55.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		44.0	9.0	49.0		44.0	9.0	49.0				
Max Q Clear Time (g_c+I1), s		39.0	2.7	5.0		2.3	3.5	24.1				
Green Ext Time (p_c), s		1.2	0.0	0.9		0.0	0.0	5.5				

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	5	25	3	553	22	926	13	44	166	0
Future Volume (vph)	0	1	5	25	3	553	22	926	13	44	166	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1653			1783	1583	1770	3532		1770	3539	
Flt Permitted		1.00			1.00	1.00	0.65	1.00		0.24	1.00	
Satd. Flow (perm)		1653			1863	1583	1202	3532		446	3539	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1	5	26	3	564	22	945	13	45	169	0
RTOR Reduction (vph)	0	5	0	0	0	42	0	0	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	29	522	22	958	0	45	169	0
Turn Type		NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		3.0			3.0	12.1	55.3	53.2		68.3	60.2	
Effective Green, g (s)		3.0			3.0	12.1	55.3	53.2		68.3	60.2	
Actuated g/C Ratio		0.04			0.04	0.15	0.66	0.64		0.82	0.72	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		59			67	343	812	2255		510	2557	
v/s Ratio Prot		0.00				c0.17	0.00	c0.27		0.01	0.05	
v/s Ratio Perm					0.02	0.16	0.02			0.06		
v/c Ratio		0.02			0.43	1.52	0.03	0.42		0.09	0.07	
Uniform Delay, d1		38.7			39.3	35.6	4.8	7.5		2.3	3.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			4.4	249.4	0.0	0.6		0.1	0.0	
Delay (s)		38.9			43.8	285.0	4.8	8.0		2.4	3.4	
Level of Service		D			D	F	A	A		A	A	
Approach Delay (s)		38.9			273.2			8.0			3.2	
Approach LOS		D			F			A			A	

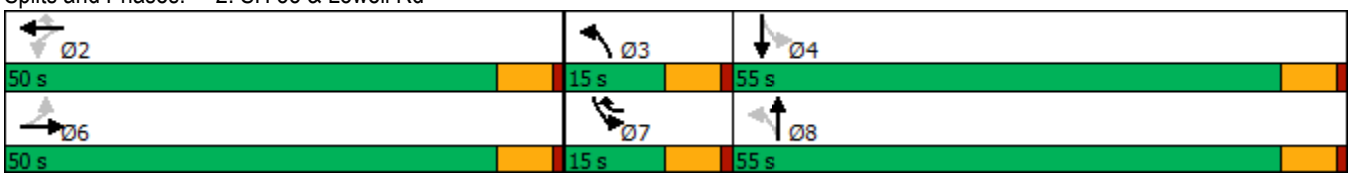
Intersection Summary			
HCM 2000 Control Delay	95.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	50	15	55	50	15	55
Maximum Split (%)	41.7%	12.5%	45.8%	41.7%	12.5%	45.8%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	50	65	0	50	65
End Time (s)	50	65	0	50	65	0
Yield/Force Off (s)	44	59	114	44	59	114
Yield/Force Off 170(s)	26	59	100	26	59	100
Local Start Time (s)	0	50	65	0	50	65
Local Yield (s)	44	59	114	44	59	114
Local Yield 170(s)	26	59	100	26	59	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	12.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	15	43	6	48	533	417
Future Vol, veh/h	15	43	6	48	533	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	44	6	49	544	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	76	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	61	-
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	-	-	1545	-	927	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1545	-	923	1065
Mov Cap-2 Maneuver	-	-	-	-	865	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	865	1065	-	-	1545	-
HCM Lane V/C Ratio	0.629	0.4	-	-	0.004	-
HCM Control Delay (s)	15.9	10.6	-	-	7.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	4.6	1.9	-	-	0	-

Intersection	
Int Delay, s/veh	17.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	197	820	142	10	45	151
Future Vol, veh/h	197	820	142	10	45	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	201	837	145	10	46	154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	314	73	0	0	155	0
Stage 1	145	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	654	974	-	-	1423	-
Stage 1	867	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	633	974	-	-	1423	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	1.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	672	974	1423	-
HCM Lane V/C Ratio	-	-	0.299	0.859	0.032	-
HCM Control Delay (s)	-	-	12.6	26.3	7.6	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.3	11.1	0.1	-

APPENDIX F: 2029 BACKGROUND SYNCHRO REPORT

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	9	428	1	16	416	18	1	14	12	12	10	5
Future Vol, veh/h	9	428	1	16	416	18	1	14	12	12	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	10	470	1	18	457	20	1	15	13	13	11	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	477	0	0	471	0	0	1002	1004	471	1008	994	467
Stage 1	-	-	-	-	-	-	491	491	-	503	503	-
Stage 2	-	-	-	-	-	-	511	513	-	505	491	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1025	-	-	1091	-	-	221	219	593	219	224	596
Stage 1	-	-	-	-	-	-	559	509	-	551	505	-
Stage 2	-	-	-	-	-	-	545	497	-	549	512	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1025	-	-	1091	-	-	205	211	593	197	216	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	211	-	197	216	-
Stage 1	-	-	-	-	-	-	552	502	-	544	493	-
Stage 2	-	-	-	-	-	-	516	486	-	514	505	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	18.6	22.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	295	1025	-	-	1091	-	-	234
HCM Lane V/C Ratio	0.101	0.01	-	-	0.016	-	-	0.127
HCM Control Delay (s)	18.6	8.5	0	-	8.4	0	-	22.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.4

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	9	428	1	16	416	18	1	14	12	12	10	5
Future Vol, veh/h	9	428	1	16	416	18	1	14	12	12	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	10	470	1	18	457	20	1	15	13	13	11	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	477	0	0	471	0	0	1002	1004	471	1008	994	467
Stage 1	-	-	-	-	-	-	491	491	-	503	503	-
Stage 2	-	-	-	-	-	-	511	513	-	505	491	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	1025	-	-	1091	-	-	221	219	593	219	224	596
Stage 1	-	-	-	-	-	-	559	509	-	551	505	-
Stage 2	-	-	-	-	-	-	545	497	-	549	512	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1025	-	-	1091	-	-	206	213	593	198	218	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	213	-	198	218	-
Stage 1	-	-	-	-	-	-	553	504	-	545	497	-
Stage 2	-	-	-	-	-	-	519	489	-	515	507	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	18.5	22.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	1025	-	-	1091	-	-	235
HCM Lane V/C Ratio	0.1	0.01	-	-	0.016	-	-	0.126
HCM Control Delay (s)	18.5	8.5	-	-	8.4	-	-	22.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	3	36	5	11	2	319	14	6	298	2
Future Vol, veh/h	1	3	3	36	5	11	2	319	14	6	298	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	3	40	5	12	2	351	15	7	327	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	524	712	165	542	706	183	329	0	0	366	0	0
Stage 1	342	342	-	363	363	-	-	-	-	-	-	-
Stage 2	182	370	-	179	343	-	-	-	-	-	-	-
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	436	356	850	423	359	828	1227	-	-	1189	-	-
Stage 1	646	637	-	628	623	-	-	-	-	-	-	-
Stage 2	802	619	-	805	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	423	353	850	417	356	828	1227	-	-	1189	-	-
Mov Cap-2 Maneuver	510	445	-	503	448	-	-	-	-	-	-	-
Stage 1	645	633	-	627	622	-	-	-	-	-	-	-
Stage 2	782	618	-	793	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	12.4	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1227	-	-	572	542	1189	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.105	0.006	-	-
HCM Control Delay (s)	7.9	-	-	11.4	12.4	8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	215	1	2	207	2	1	14	18	5	9	0
Future Vol, veh/h	5	215	1	2	207	2	1	14	18	5	9	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	6	239	1	2	230	2	1	16	20	6	10	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	240	0	0	492	488	240	505	487	231
Stage 1	-	-	-	-	-	-	252	252	-	235	235	-
Stage 2	-	-	-	-	-	-	240	236	-	270	252	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1327	-	-	487	458	799	478	481	808
Stage 1	-	-	-	-	-	-	752	670	-	768	710	-
Stage 2	-	-	-	-	-	-	763	681	-	736	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1327	-	-	477	455	799	451	478	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	477	455	-	451	478	-
Stage 1	-	-	-	-	-	-	748	667	-	764	709	-
Stage 2	-	-	-	-	-	-	751	680	-	697	695	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	11.4	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	596	1336	-	-	1327	-	-	468
HCM Lane V/C Ratio	0.062	0.004	-	-	0.002	-	-	0.033
HCM Control Delay (s)	11.4	7.7	0	-	7.7	0	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	215	1	2	207	2	1	14	18	5	9	0
Future Vol, veh/h	5	215	1	2	207	2	1	14	18	5	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	6	239	1	2	230	2	1	16	20	6	10	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	240	0	0	492	488	240	505	487	231
Stage 1	-	-	-	-	-	-	252	252	-	235	235	-
Stage 2	-	-	-	-	-	-	240	236	-	270	252	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1327	-	-	487	458	799	478	481	808
Stage 1	-	-	-	-	-	-	752	670	-	768	710	-
Stage 2	-	-	-	-	-	-	763	681	-	736	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1327	-	-	477	455	799	452	478	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	477	455	-	452	478	-
Stage 1	-	-	-	-	-	-	749	667	-	765	709	-
Stage 2	-	-	-	-	-	-	751	680	-	698	695	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	11.4	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	596	1336	-	-	1327	-	-	468
HCM Lane V/C Ratio	0.062	0.004	-	-	0.002	-	-	0.033
HCM Control Delay (s)	11.4	7.7	-	-	7.7	-	-	13
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	5	28	3	22	2	148	15	1	141	0
Future Vol, veh/h	0	1	5	28	3	22	2	148	15	1	141	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	6	31	3	24	2	164	17	1	157	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	344	79	258	336	91	157	0	0	181	0	0
Stage 1	159	159	-	177	177	-	-	-	-	-	-	-
Stage 2	88	185	-	81	159	-	-	-	-	-	-	-
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	686	577	965	674	583	949	1420	-	-	1392	-	-
Stage 1	827	765	-	808	752	-	-	-	-	-	-	-
Stage 2	910	746	-	918	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	665	576	965	668	582	949	1420	-	-	1392	-	-
Mov Cap-2 Maneuver	691	607	-	690	611	-	-	-	-	-	-	-
Stage 1	826	764	-	807	751	-	-	-	-	-	-	-
Stage 2	881	745	-	911	764	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	10	0.1	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1420	-	-	879	772	1392	-	-
HCM Lane V/C Ratio	0.002	-	-	0.008	0.076	0.001	-	-
HCM Control Delay (s)	7.5	-	-	9.1	10	7.6	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

APPENDIX G: 2029 TOTAL SYNCHRO & SIM TRAFFIC REPORT

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	520	1	167	1296	18	1	14	17	12	11	17
Future Vol, veh/h	10	520	1	167	1296	18	1	14	17	12	11	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	10	542	1	174	1350	19	1	15	18	13	11	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1369	0	0	543	0	0	2285	2280	543	2287	2271	1360
Stage 1	-	-	-	-	-	-	563	563	-	1708	1708	-
Stage 2	-	-	-	-	-	-	1722	1717	-	579	563	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	465	-	-	1026	-	-	28	34	540	28	35	182
Stage 1	-	-	-	-	-	-	511	471	-	115	129	-
Stage 2	-	-	-	-	-	-	113	126	-	501	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	465	-	-	1026	-	-	-	~ 9	540	-	~ 10	182
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 9	-	-	~ 10	-
Stage 1	-	-	-	-	-	-	495	456	-	111	37	-
Stage 2	-	-	-	-	-	-	20	36	-	455	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	465	-	-	1026	-	-	-
HCM Lane V/C Ratio	-	0.022	-	-	0.17	-	-	-
HCM Control Delay (s)	-	12.9	0	-	9.2	0	-	-
HCM Lane LOS	-	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	0.6	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	520	1	167	1296	18	1	14	17	12	11	17
Future Vol, veh/h	10	520	1	167	1296	18	1	14	17	12	11	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	14	6	2	2	5	7	2	27	2	2	25	2
Mvmt Flow	10	542	1	174	1350	19	1	15	18	13	11	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1369	0	0	543	0	0	2285	2280	543	2287	2271	1360
Stage 1	-	-	-	-	-	-	563	563	-	1708	1708	-
Stage 2	-	-	-	-	-	-	1722	1717	-	579	563	-
Critical Hdwy	4.24	-	-	4.12	-	-	7.12	6.77	6.22	7.12	6.75	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.77	-	6.12	5.75	-
Follow-up Hdwy	2.326	-	-	2.218	-	-	3.518	4.243	3.318	3.518	4.225	3.318
Pot Cap-1 Maneuver	465	-	-	1026	-	-	28	34	540	28	35	182
Stage 1	-	-	-	-	-	-	511	471	-	115	129	-
Stage 2	-	-	-	-	-	-	113	126	-	501	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	465	-	-	1026	-	-	15	28	540	14	28	182
Mov Cap-2 Maneuver	-	-	-	-	-	-	15	28	-	14	28	-
Stage 1	-	-	-	-	-	-	500	461	-	112	107	-
Stage 2	-	-	-	-	-	-	76	105	-	459	464	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1	151.3	$ 500
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	53	465	-	-	1026	-	-	30
HCM Lane V/C Ratio	0.629	0.022	-	-	0.17	-	-	1.389
HCM Control Delay (s)	151.3	12.9	-	-	9.2	-	-	$ 500
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.5	0.1	-	-	0.6	-	-	4.7

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1811	1870	1870	1826	1796	1870	1500	1870	1870	1530	1870
Adj Flow Rate, veh/h	10	542	1	174	1350	19	1	15	18	12	11	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	14	6	2	2	5	7	2	27	2	2	25	2
Cap, veh/h	150	1403	3	713	1443	20	32	63	69	49	20	25
Arrive On Green	0.01	0.78	0.78	0.04	0.80	0.80	0.04	0.04	0.04	0.04	0.04	0.04
Sat Flow, veh/h	1612	1807	3	1781	1796	25	40	1449	1585	287	458	583
Grp Volume(v), veh/h	10	0	543	174	0	1369	16	0	18	41	0	0
Grp Sat Flow(s),veh/h/ln	1612	0	1810	1781	0	1821	1489	0	1585	1328	0	0
Q Serve(g_s), s	0.2	0.0	12.2	2.5	0.0	75.8	0.0	0.0	1.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	12.2	2.5	0.0	75.8	1.3	0.0	1.4	3.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.06		1.00	0.29		0.44
Lane Grp Cap(c), veh/h	150	0	1405	713	0	1464	95	0	69	94	0	0
V/C Ratio(X)	0.07	0.00	0.39	0.24	0.00	0.94	0.17	0.00	0.26	0.43	0.00	0.00
Avail Cap(c_a), veh/h	245	0	1405	769	0	1464	307	0	298	282	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.0	0.0	4.6	3.1	0.0	9.9	59.0	0.0	59.0	60.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.2	0.0	12.5	0.8	0.0	2.0	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	6.0	0.9	0.0	29.0	0.9	0.0	1.1	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	0.0	5.4	3.3	0.0	22.4	59.8	0.0	61.0	63.3	0.0	0.0
LnGrp LOS	C	A	A	A	A	C	E	A	E	E	A	A
Approach Vol, veh/h		553			1543			34			41	
Approach Delay, s/veh		5.7			20.2			60.4			63.3	
Approach LOS		A			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	108.5		11.6	11.0	105.0		11.6
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.2	77.8		5.8	4.5	14.2		3.4
Green Ext Time (p_c), s	0.0	12.7		0.1	0.2	3.3		0.1

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

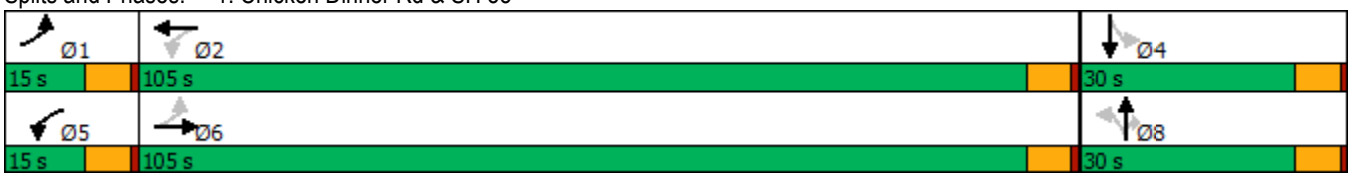
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1583	1792		1770	1805			1510	1583		1632	
Flt Permitted	0.07	1.00		0.40	1.00			0.98	1.00		0.89	
Satd. Flow (perm)	122	1792		749	1805			1485	1583		1475	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	542	1	174	1350	19	1	15	18	12	11	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	17	0	17	0
Lane Group Flow (vph)	10	543	0	174	1369	0	0	16	1	0	25	0
Heavy Vehicles (%)	14%	6%	2%	2%	5%	7%	2%	27%	2%	2%	25%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	105.7	104.6		118.9	111.8			6.6	6.6		6.6	
Effective Green, g (s)	105.7	104.6		118.9	111.8			6.6	6.6		6.6	
Actuated g/C Ratio	0.77	0.76		0.86	0.81			0.05	0.05		0.05	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	105	1363		709	1467			71	75		70	
v/s Ratio Prot	0.00	0.30		c0.01	c0.76							
v/s Ratio Perm	0.07			0.20				0.01	0.00		c0.02	
v/c Ratio	0.10	0.40		0.25	0.93			0.23	0.01		0.36	
Uniform Delay, d1	21.2	5.6		2.3	10.0			63.0	62.3		63.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.4	0.9		0.2	12.2			1.6	0.1		3.1	
Delay (s)	21.6	6.5		2.5	22.1			64.6	62.4		66.5	
Level of Service	C	A		A	C			E	E		E	
Approach Delay (s)		6.8			19.9			63.4			66.5	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	137.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	25	29	11	25	29
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		14	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	100	126	9	100	126
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	85	111	144	85	111

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	36	5	53	3	370	14	407	789	2
Future Vol, veh/h	1	3	16	36	5	53	3	370	14	407	789	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	17	38	5	55	3	385	15	424	822	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1872	2077	412	1660	2071	200	824	0	0	400	0	0
Stage 1	1671	1671	-	399	399	-	-	-	-	-	-	-
Stage 2	201	406	-	1261	1672	-	-	-	-	-	-	-
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	44	53	589	64	53	808	802	-	-	1155	-	-
Stage 1	100	151	-	598	601	-	-	-	-	-	-	-
Stage 2	782	596	-	180	151	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	28	33	589	41	33	808	802	-	-	1155	-	-
Mov Cap-2 Maneuver	28	33	-	89	80	-	-	-	-	-	-	-
Stage 1	100	96	-	596	599	-	-	-	-	-	-	-
Stage 2	720	594	-	107	96	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.9	48.5	0.1	3.4
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	802	-	-	130	176	1155	-	-
HCM Lane V/C Ratio	0.004	-	-	0.16	0.556	0.367	-	-
HCM Control Delay (s)	9.5	-	-	37.9	48.5	9.9	-	-
HCM Lane LOS	A	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.9	1.7	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	36	5	53	3	370	14	407	789	2
Future Vol, veh/h	1	3	16	36	5	53	3	370	14	407	789	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	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	16	37	5	55	3	381	14	420	813	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1853	2055	408	1642	2049	198	815	0	0	395	0	0
Stage 1	1654	1654	-	394	394	-	-	-	-	-	-	-
Stage 2	199	401	-	1248	1655	-	-	-	-	-	-	-
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	46	55	593	66	55	810	808	-	-	1160	-	-
Stage 1	102	154	-	602	604	-	-	-	-	-	-	-
Stage 2	784	599	-	183	154	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	29	35	593	43	35	810	808	-	-	1160	-	-
Mov Cap-2 Maneuver	29	35	-	92	81	-	-	-	-	-	-	-
Stage 1	102	98	-	600	602	-	-	-	-	-	-	-
Stage 2	722	597	-	110	98	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36.1	38.2	0.1	3.3
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	808	-	-	136	91	810	1160	-	-
HCM Lane V/C Ratio	0.004	-	-	0.152	0.464	0.067	0.362	-	-
HCM Control Delay (s)	9.5	-	-	36.1	75	9.8	9.9	-	-
HCM Lane LOS	A	-	-	E	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	2	0.2	1.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	16	36	5	53	3	370	14	407	789	2
Future Volume (veh/h)	1	3	16	36	5	53	3	370	14	407	789	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870	1796	1870
Adj Flow Rate, veh/h	1	3	17	38	5	55	3	385	15	424	822	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	5	2	2	7	2
Cap, veh/h	43	14	70	145	11	244	517	2207	86	853	2602	6
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.65	0.65	0.10	0.74	0.74
Sat Flow, veh/h	38	271	1311	1321	197	1585	1781	3404	132	1781	3493	8
Grp Volume(v), veh/h	21	0	0	43	0	55	3	196	204	424	402	422
Grp Sat Flow(s),veh/h/ln	1620	0	0	1518	0	1585	1781	1735	1802	1781	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	2.8	0.1	4.1	4.1	6.5	7.1	7.1
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.4	0.0	2.8	0.1	4.1	4.1	6.5	7.1	7.1
Prop In Lane	0.05		0.81	0.88		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	0	156	0	244	517	1124	1168	853	1271	1337
V/C Ratio(X)	0.16	0.00	0.00	0.28	0.00	0.23	0.01	0.17	0.17	0.50	0.32	0.32
Avail Cap(c_a), veh/h	554	0	0	536	0	665	686	1124	1168	947	1271	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	0.0	41.8	0.0	33.7	5.5	6.4	6.4	3.5	3.9	3.9
Incr Delay (d2), s/veh	0.6	0.0	0.0	1.0	0.0	0.5	0.0	0.3	0.3	0.5	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.0	1.7	0.0	1.8	0.0	2.1	2.2	1.9	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	0.0	42.8	0.0	34.2	5.5	6.7	6.7	3.9	4.5	4.5
LnGrp LOS	D	A	A	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		21			98			403			1248	
Approach Delay, s/veh		41.9			38.0			6.7			4.3	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.9	6.4	73.8		10.9	15.2	65.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		29.0	9.0	64.0		29.0	14.0	59.0				
Max Q Clear Time (g_c+I1), s		4.8	2.1	9.1		3.1	8.5	6.1				
Green Ext Time (p_c), s		0.3	0.0	4.9		0.1	0.7	2.1				

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

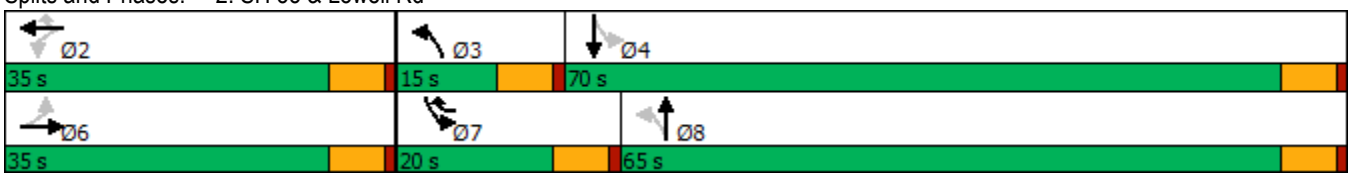
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	16	36	5	53	3	370	14	407	789	2
Future Volume (vph)	1	3	16	36	5	53	3	370	14	407	789	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1655			1784	1583	1770	3422		1770	3373	
Flt Permitted		0.98			0.74	1.00	0.34	1.00		0.47	1.00	
Satd. Flow (perm)		1625			1370	1583	636	3422		880	3373	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	3	17	38	5	55	3	385	15	424	822	2
RTOR Reduction (vph)	0	16	0	0	0	46	0	2	0	0	0	0
Lane Group Flow (vph)	0	5	0	0	43	9	3	398	0	424	824	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	7%	2%
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		5.4			5.4	17.1	65.7	64.7		82.4	75.4	
Effective Green, g (s)		5.4			5.4	17.1	65.7	64.7		82.4	75.4	
Actuated g/C Ratio		0.05			0.05	0.17	0.66	0.65		0.83	0.76	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		87			74	366	430	2218		830	2548	
v/s Ratio Prot						0.00	0.00	0.12		c0.06	0.24	
v/s Ratio Perm		0.00			c0.03	0.00	0.00			c0.36		
v/c Ratio		0.06			0.58	0.03	0.01	0.18		0.51	0.32	
Uniform Delay, d1		44.8			46.1	34.4	5.8	7.0		2.3	3.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			11.1	0.0	0.0	0.2		0.5	0.3	
Delay (s)		45.1			57.2	34.4	5.8	7.2		2.9	4.3	
Level of Service		D			E	C	A	A		A	A	
Approach Delay (s)		45.1			44.4			7.2			3.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	99.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	35	15	70	35	20	65
Maximum Split (%)	29.2%	12.5%	58.3%	29.2%	16.7%	54.2%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	35	50	0	35	55
End Time (s)	35	50	0	35	55	0
Yield/Force Off (s)	29	44	114	29	49	114
Yield/Force Off 170(s)	11	44	100	11	49	100
Local Start Time (s)	0	35	50	0	35	55
Local Yield (s)	29	44	114	29	49	114
Local Yield 170(s)	11	44	100	11	49	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	23	401	279	52	42	10
Future Vol, veh/h	23	401	279	52	42	10
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	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	418	291	54	44	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	442	0	869	233
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1118	-	322	806
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1118	-	236	806
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.9	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	236	806	-	-	1118	-
HCM Lane V/C Ratio	0.185	0.013	-	-	0.26	-
HCM Control Delay (s)	23.7	9.5	-	-	9.3	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	0	-	-	1	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	23	401	279	52	42	10
Future Vol, veh/h	23	401	279	52	42	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	413	288	54	43	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	437	0	654	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	630	-
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	-	-	1123	-	431	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1123	-	321	1052
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	395	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.8	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	354	1052	-	-	1123	-
HCM Lane V/C Ratio	0.122	0.01	-	-	0.256	-
HCM Control Delay (s)	16.6	8.5	-	-	9.3	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0	-	-	1	-

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	24	363	112	324	517
Future Vol, veh/h	9	24	363	112	324	517
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	25	378	117	338	539

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1383	248	0	0	495	0
Stage 1	437	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	135	752	-	-	1065	-
Stage 1	619	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	92	752	-	-	1065	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	231	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	3.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	184	752	1065	-
HCM Lane V/C Ratio	-	-	0.051	0.033	0.317	-
HCM Control Delay (s)	-	-	25.6	10	9.9	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	1.4	-

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	24	363	112	324	517
Future Vol, veh/h	9	24	363	112	324	517
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	25	374	115	334	533

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1309	187	0	0	489	0
Stage 1	374	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	151	823	-	-	1070	-
Stage 1	666	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	104	823	-	-	1070	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	235	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	3.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	192	823	1070	-
HCM Lane V/C Ratio	-	-	0.048	0.03	0.312	-
HCM Control Delay (s)	-	-	24.7	9.5	9.9	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	1.3	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	28	447	20	180	346
Future Vol, veh/h	2	28	447	20	180	346
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	29	466	21	188	360

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1033	244	0	0	487	0
Stage 1	477	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	228	757	-	-	1072	-
Stage 1	590	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	188	757	-	-	1072	-
Mov Cap-2 Maneuver	314	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	3.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	314	757	1072	-
HCM Lane V/C Ratio	-	-	0.007	0.039	0.175	-
HCM Control Delay (s)	-	-	16.5	9.9	9.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.6	-

Intersection	
Int Delay, s/veh	43.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1529	1	4	293	2	1	16	191	5	9	1
Future Vol, veh/h	23	1529	1	4	293	2	1	16	191	5	9	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	23	1560	1	4	299	2	1	16	195	5	9	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	301	0	0	1561	0	0	1920	1916	1561	2020	1915	300
Stage 1	-	-	-	-	-	-	1607	1607	-	308	308	-
Stage 2	-	-	-	-	-	-	313	309	-	1712	1607	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1260	-	-	423	-	-	51	61	~ 138	43	68	740
Stage 1	-	-	-	-	-	-	132	151	-	702	660	-
Stage 2	-	-	-	-	-	-	698	632	-	115	164	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	423	-	-	40	52	~ 138	-	58	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	40	52	-	-	58	-
Stage 1	-	-	-	-	-	-	114	130	-	605	653	-
Stage 2	-	-	-	-	-	-	680	625	-	-	141	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	$ 433.1	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	121	1260	-	-	423	-	-	-
HCM Lane V/C Ratio	1.754	0.019	-	-	0.01	-	-	-
HCM Control Delay (s)	$ 433.1	7.9	0	-	13.6	0	-	-
HCM Lane LOS	F	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	16.3	0.1	-	-	0	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	41.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1529	1	4	293	2	1	16	191	5	9	1
Future Vol, veh/h	23	1529	1	4	293	2	1	16	191	5	9	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	4	2	2	8	2	2	18	2	2	2	2
Mvmt Flow	23	1560	1	4	299	2	1	16	195	5	9	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	301	0	0	1561	0	0	1920	1916	1561	2020	1915	300
Stage 1	-	-	-	-	-	-	1607	1607	-	308	308	-
Stage 2	-	-	-	-	-	-	313	309	-	1712	1607	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.68	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.68	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.162	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1260	-	-	423	-	-	51	61	~ 138	43	68	740
Stage 1	-	-	-	-	-	-	132	151	-	702	660	-
Stage 2	-	-	-	-	-	-	698	632	-	115	164	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	423	-	-	45	59	~ 138	-	66	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	45	59	-	-	66	-
Stage 1	-	-	-	-	-	-	130	148	-	689	654	-
Stage 2	-	-	-	-	-	-	681	626	-	-	161	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	$ 413.2	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	1260	-	-	423	-	-	-
HCM Lane V/C Ratio	1.712	0.019	-	-	0.01	-	-	-
HCM Control Delay (s)	$ 413.2	7.9	-	-	13.6	-	-	-
HCM Lane LOS	F	A	-	-	B	-	-	-
HCM 95th %tile Q(veh)	16	0.1	-	-	0	-	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1781	1870	1870	1633	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	1560	1	4	299	2	1	16	195	5	9	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	2	2	8	2	2	18	2	2	2	2
Cap, veh/h	794	1340	1	61	1259	8	31	219	225	95	157	16
Arrive On Green	0.02	0.73	0.73	0.01	0.71	0.71	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	1839	1	1781	1767	12	25	1600	1585	440	1147	113
Grp Volume(v), veh/h	23	0	1561	4	0	301	17	0	195	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1841	1781	0	1779	1625	0	1585	1701	0	0
Q Serve(g_s), s	0.5	0.0	101.2	0.1	0.0	8.1	0.0	0.0	16.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	101.2	0.1	0.0	8.1	1.3	0.0	16.7	1.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.06		1.00	0.33		0.07
Lane Grp Cap(c), veh/h	794	0	1341	61	0	1267	250	0	225	268	0	0
V/C Ratio(X)	0.03	0.00	1.16	0.07	0.00	0.24	0.07	0.00	0.87	0.06	0.00	0.00
Avail Cap(c_a), veh/h	872	0	1341	167	0	1267	307	0	282	327	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	18.9	40.8	0.0	6.9	52.3	0.0	58.3	52.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	82.5	0.4	0.0	0.4	0.1	0.0	20.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	86.4	0.2	0.0	4.9	1.0	0.0	12.6	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	0.0	101.4	41.3	0.0	7.4	52.4	0.0	78.3	52.3	0.0	0.0
LnGrp LOS	A	A	F	D	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1584			305			212			15	
Approach Delay, s/veh		100.0			7.8			76.2			52.3	
Approach LOS		F			A			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	105.0		25.0	6.7	107.2		25.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.5	10.1		3.0	2.1	103.2		18.7
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	0.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	84.0
HCM 6th LOS	F

Notes

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

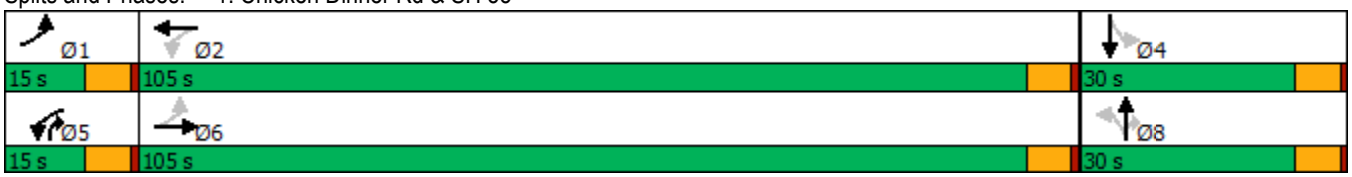
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1770	1827		1770	1758			1618	1583		1816	
Flt Permitted	0.58	1.00		0.04	1.00			0.98	1.00		0.88	
Satd. Flow (perm)	1074	1827		69	1758			1586	1583		1629	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	23	1560	1	4	299	2	1	16	195	5	9	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	41	0	1	0
Lane Group Flow (vph)	23	1561	0	4	301	0	0	17	154	0	14	0
Heavy Vehicles (%)	2%	4%	2%	2%	8%	2%	2%	18%	2%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	105.3	101.9		116.5	107.5			3.1	12.1		3.1	
Effective Green, g (s)	105.3	101.9		116.5	107.5			3.1	12.1		3.1	
Actuated g/C Ratio	0.80	0.77		0.88	0.81			0.02	0.09		0.02	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	874	1410		176	1431			37	217		38	
v/s Ratio Prot	0.00	c0.85		0.00	c0.17				c0.05			
v/s Ratio Perm	0.02			0.02				0.01	0.05		0.01	
v/c Ratio	0.03	1.11		0.02	0.21			0.46	0.71		0.37	
Uniform Delay, d1	2.7	15.0		41.6	2.7			63.6	58.2		63.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	59.0		0.1	0.3			8.8	10.4		6.0	
Delay (s)	2.7	74.0		41.6	3.1			72.4	68.7		69.5	
Level of Service	A	E		D	A			E	E		E	
Approach Delay (s)		73.0			3.6			69.0			69.5	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	62.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	132.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	25	29	11	29	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		18	14
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	100	126	9	96	130
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	85	111	144	81	115

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Intersection	
Int Delay, s/veh	36.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	6	28	3	489	22	1014	15	44	185	0
Future Vol, veh/h	0	1	6	28	3	489	22	1014	15	44	185	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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	6	29	3	499	22	1035	15	45	189	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	842	1373	95	1272	1366	525	189	0	0	1050	0	0
Stage 1	279	279	-	1087	1087	-	-	-	-	-	-	-
Stage 2	563	1094	-	185	279	-	-	-	-	-	-	-
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	257	145	943	125	146	~ 497	1382	-	-	659	-	-
Stage 1	704	678	-	231	290	-	-	-	-	-	-	-
Stage 2	478	288	-	799	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	133	943	116	134	~ 497	1382	-	-	659	-	-
Mov Cap-2 Maneuver	-	133	-	191	227	-	-	-	-	-	-	-
Stage 1	693	632	-	227	285	-	-	-	-	-	-	-
Stage 2	-	283	-	738	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		124.8	0.2	2.1
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1382	-	-	-	455	659	-	-
HCM Lane V/C Ratio	0.016	-	-	-	1.166	0.068	-	-
HCM Control Delay (s)	7.6	-	-	-	124.8	10.9	-	-
HCM Lane LOS	A	-	-	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	19.6	0.2	-	-

Notes

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

Intersection	
Int Delay, s/veh	19.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	6	28	3	489	22	1014	15	44	185	0
Future Vol, veh/h	0	1	6	28	3	489	22	1014	15	44	185	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	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	6	29	3	499	22	1035	15	45	189	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	842	1373	95	1272	1366	525	189	0	0	1050	0	0
Stage 1	279	279	-	1087	1087	-	-	-	-	-	-	-
Stage 2	563	1094	-	185	279	-	-	-	-	-	-	-
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	257	145	943	125	146	~ 497	1382	-	-	659	-	-
Stage 1	704	678	-	231	290	-	-	-	-	-	-	-
Stage 2	478	288	-	799	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	133	943	116	134	~ 497	1382	-	-	659	-	-
Mov Cap-2 Maneuver	-	133	-	191	227	-	-	-	-	-	-	-
Stage 1	693	632	-	227	285	-	-	-	-	-	-	-
Stage 2	-	283	-	738	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		67.8	0.2	2.1
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1382	-	-	-	194	497	659	-	-
HCM Lane V/C Ratio	0.016	-	-	-	0.163	1.004	0.068	-	-
HCM Control Delay (s)	7.6	-	-	-	27.1	70.4	10.9	-	-
HCM Lane LOS	A	-	-	-	D	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6	13.8	0.2	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	6	28	3	489	22	1014	15	44	185	0
Future Volume (veh/h)	0	1	6	28	3	489	22	1014	15	44	185	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1	6	29	3	499	22	1035	15	45	189	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	74	447	478	47	563	661	1734	25	272	1759	0
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	0.02	0.48	0.48	0.03	0.50	0.00
Sat Flow, veh/h	0	232	1389	1295	145	1585	1781	3586	52	1781	3647	0
Grp Volume(v), veh/h	0	0	7	32	0	499	22	513	537	45	189	0
Grp Sat Flow(s),veh/h/ln	0	0	1620	1440	0	1585	1781	1777	1861	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.3	1.5	0.0	33.1	0.7	23.4	23.4	1.4	3.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.8	0.0	33.1	0.7	23.4	23.4	1.4	3.2	0.0
Prop In Lane	0.00		0.86	0.91		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	521	525	0	563	661	859	900	272	1759	0
V/C Ratio(X)	0.00	0.00	0.01	0.06	0.00	0.89	0.03	0.60	0.60	0.17	0.11	0.00
Avail Cap(c_a), veh/h	0	0	566	564	0	607	765	859	900	355	1759	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	25.8	26.3	0.0	33.9	13.8	20.9	20.9	16.0	15.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	14.1	0.0	3.1	2.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.2	1.1	0.0	19.9	0.5	14.4	14.9	0.9	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	25.8	26.4	0.0	47.9	13.9	24.0	23.9	16.3	15.2	0.0
LnGrp LOS	A	A	C	C	A	D	B	C	C	B	B	A
Approach Vol, veh/h		7			531			1072			234	
Approach Delay, s/veh		25.8			46.6			23.7			15.4	
Approach LOS		C			D			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		41.9	8.5	61.3		41.9	9.8	60.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		39.0	9.0	54.0		39.0	9.0	54.0
Max Q Clear Time (g_c+I1), s		35.1	2.7	5.2		2.3	3.4	25.4
Green Ext Time (p_c), s		0.8	0.0	1.1		0.0	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	6	28	3	489	22	1014	15	44	185	0
Future Volume (vph)	0	1	6	28	3	489	22	1014	15	44	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.88			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1647			1782	1583	1770	3532		1770	3539	
Flt Permitted		1.00			0.81	1.00	0.63	1.00		0.21	1.00	
Satd. Flow (perm)		1647			1511	1583	1179	3532		396	3539	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1	6	29	3	499	22	1035	15	45	189	0
RTOR Reduction (vph)	0	6	0	0	0	42	0	1	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	32	457	22	1049	0	45	189	0
Turn Type		NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		4.7			4.7	13.8	60.3	58.1		73.2	65.0	
Effective Green, g (s)		4.7			4.7	13.8	60.3	58.1		73.2	65.0	
Actuated g/C Ratio		0.05			0.05	0.15	0.67	0.65		0.81	0.72	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		86			78	348	805	2282		461	2558	
v/s Ratio Prot		0.00				c0.13	0.00	c0.30		0.01	0.05	
v/s Ratio Perm					0.02	0.16	0.02			0.07		
v/c Ratio		0.02			0.41	1.31	0.03	0.46		0.10	0.07	
Uniform Delay, d1		40.4			41.3	38.1	4.9	8.0		2.8	3.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			3.5	159.7	0.0	0.7		0.1	0.1	
Delay (s)		40.5			44.7	197.7	4.9	8.7		2.9	3.7	
Level of Service		D			D	F	A	A		A	A	
Approach Delay (s)		40.5			188.5			8.6			3.5	
Approach LOS		D			F			A			A	

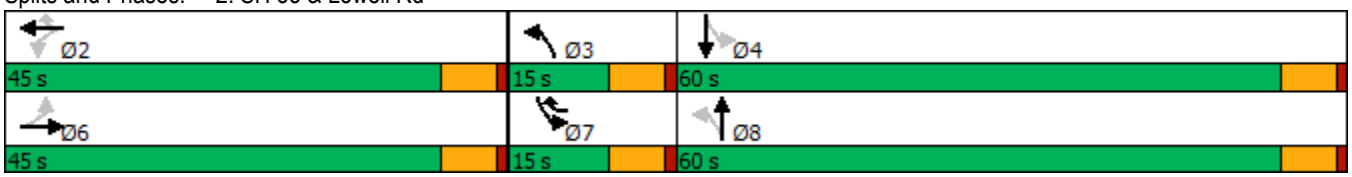
Intersection Summary			
HCM 2000 Control Delay	59.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	45	15	60	45	15	60
Maximum Split (%)	37.5%	12.5%	50.0%	37.5%	12.5%	50.0%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	45	60	0	45	60
End Time (s)	45	60	0	45	60	0
Yield/Force Off (s)	39	54	114	39	54	114
Yield/Force Off 170(s)	21	54	100	21	54	100
Local Start Time (s)	0	45	60	0	45	60
Local Yield (s)	39	54	114	39	54	114
Local Yield 170(s)	21	54	100	21	54	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	10.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	43	6	53	467	417
Future Vol, veh/h	17	43	6	53	467	417
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	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	44	6	54	477	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	105	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	66	-
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	-	-	1542	-	893	1033
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1542	-	889	1033
Mov Cap-2 Maneuver	-	-	-	-	889	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	1033	-	-	1542	-
HCM Lane V/C Ratio	0.536	0.412	-	-	0.004	-
HCM Control Delay (s)	13.6	10.9	-	-	7.3	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	3.3	2	-	-	0	-

Intersection	
Int Delay, s/veh	11.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	43	6	53	467	417
Future Vol, veh/h	17	43	6	53	467	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	44	6	54	477	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	83	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	66	-
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	-	-	1542	-	919	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1542	-	915	1062
Mov Cap-2 Maneuver	-	-	-	-	860	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	860	1062	-	-	1542	-
HCM Lane V/C Ratio	0.554	0.401	-	-	0.004	-
HCM Control Delay (s)	14.3	10.6	-	-	7.3	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	3.5	2	-	-	0	-

Intersection	
Int Delay, s/veh	18.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	750	301	8	40	179
Future Vol, veh/h	167	750	301	8	40	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	765	307	8	41	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	485	158	0	0	315	0
Stage 1	311	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	511	859	-	-	1242	-
Stage 1	716	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	494	859	-	-	1242	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29	0	1.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	570	859	1242	-
HCM Lane V/C Ratio	-	-	0.299	0.891	0.033	-
HCM Control Delay (s)	-	-	14	32.4	8	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.2	12.1	0.1	-

Intersection	
Int Delay, s/veh	18.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	750	301	8	40	179
Future Vol, veh/h	167	750	301	8	40	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	765	307	8	41	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	481	154	0	0	315	0
Stage 1	307	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	514	864	-	-	1242	-
Stage 1	719	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	864	-	-	1242	-
Mov Cap-2 Maneuver	572	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.4	0	1.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	572	864	1242	-
HCM Lane V/C Ratio	-	-	0.298	0.886	0.033	-
HCM Control Delay (s)	-	-	13.9	31.6	8	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.2	11.9	0.1	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	136	173	2	5	341
Future Vol, veh/h	30	136	173	2	5	341
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	139	177	2	5	348

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	362	90	0	0	179	0
Stage 1	178	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	610	950	-	-	1394	-
Stage 1	835	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	950	-	-	1394	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	656	950	1394	-
HCM Lane V/C Ratio	-	-	0.047	0.146	0.004	-
HCM Control Delay (s)	-	-	10.8	9.4	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.5	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1811	1870	1870	1826	1796	1870	1500	1870	1870	1530	1870
Adj Flow Rate, veh/h	10	542	1	174	1350	19	1	15	18	12	11	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	14	6	2	2	5	7	2	27	2	2	25	2
Cap, veh/h	165	1406	1230	714	1467	1223	32	63	69	49	20	25
Arrive On Green	0.01	0.78	0.78	0.04	0.80	0.80	0.04	0.04	0.04	0.04	0.04	0.04
Sat Flow, veh/h	1612	1811	1585	1781	1826	1522	40	1449	1585	287	458	583
Grp Volume(v), veh/h	10	542	1	174	1350	19	16	0	18	41	0	0
Grp Sat Flow(s),veh/h/ln	1612	1811	1585	1781	1826	1522	1489	0	1585	1328	0	0
Q Serve(g_s), s	0.2	12.2	0.0	2.5	71.0	0.3	0.0	0.0	1.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	12.2	0.0	2.5	71.0	0.3	1.3	0.0	1.4	3.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.06		1.00	0.29		0.44
Lane Grp Cap(c), veh/h	165	1406	1230	714	1467	1223	95	0	69	94	0	0
V/C Ratio(X)	0.06	0.39	0.00	0.24	0.92	0.02	0.17	0.00	0.26	0.43	0.00	0.00
Avail Cap(c_a), veh/h	260	1406	1230	770	1467	1223	307	0	298	282	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	4.6	3.2	3.1	9.4	2.5	59.0	0.0	59.0	60.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.2	10.8	0.0	0.8	0.0	2.0	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	6.0	0.0	0.9	27.0	0.1	0.9	0.0	1.1	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	5.4	3.2	3.3	20.3	2.5	59.8	0.0	61.0	63.3	0.0	0.0
LnGrp LOS	C	A	A	A	C	A	E	A	E	E	A	A
Approach Vol, veh/h		553			1543			34			41	
Approach Delay, s/veh		5.6			18.1			60.4			63.3	
Approach LOS		A			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	108.5		11.6	11.0	105.0		11.6
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.2	73.0		5.8	4.5	14.2		3.4
Green Ext Time (p_c), s	0.0	14.0		0.1	0.2	3.3		0.1

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

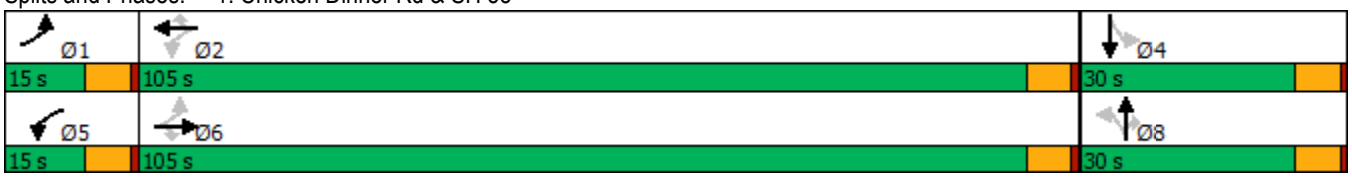
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00		0.98	
Satd. Flow (prot)	1583	1792	1583	1770	1810	1509		1510	1583		1632	
Flt Permitted	0.08	1.00	1.00	0.40	1.00	1.00		0.98	1.00		0.89	
Satd. Flow (perm)	140	1792	1583	750	1810	1509		1485	1583		1475	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	542	1	174	1350	19	1	15	18	12	11	18
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	17	0	17	0
Lane Group Flow (vph)	10	542	1	174	1350	15	0	16	1	0	25	0
Heavy Vehicles (%)	14%	6%	2%	2%	5%	7%	2%	27%	2%	2%	25%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6		6	2		2	8		8	4		
Actuated Green, G (s)	105.7	104.6	104.6	118.9	111.8	111.8		6.6	6.6		6.6	
Effective Green, g (s)	105.7	104.6	104.6	118.9	111.8	111.8		6.6	6.6		6.6	
Actuated g/C Ratio	0.77	0.76	0.76	0.86	0.81	0.81		0.05	0.05		0.05	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	119	1363	1204	710	1471	1226		71	75		70	
v/s Ratio Prot	0.00	0.30		c0.01	c0.75							
v/s Ratio Perm	0.06		0.00	0.20		0.01		0.01	0.00		c0.02	
v/c Ratio	0.08	0.40	0.00	0.25	0.92	0.01		0.23	0.01		0.36	
Uniform Delay, d1	19.0	5.6	3.9	2.3	9.5	2.4		63.0	62.3		63.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.3	0.9	0.0	0.2	10.6	0.0		1.6	0.1		3.1	
Delay (s)	19.3	6.5	3.9	2.5	20.1	2.4		64.6	62.4		66.5	
Level of Service	B	A	A	A	C	A		E	E		E	
Approach Delay (s)		6.7			17.9			63.4			66.5	
Approach LOS		A			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	137.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	25	29	11	25	29
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		14	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	100	126	9	100	126
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	85	111	144	85	111

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1781	1870	1870	1633	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	1560	1	4	299	2	1	16	195	5	9	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	2	2	8	2	2	18	2	2	2	2
Cap, veh/h	796	1341	1154	61	1269	1129	31	219	225	95	157	16
Arrive On Green	0.02	0.73	0.73	0.01	0.71	0.71	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	1841	1585	1781	1781	1585	25	1600	1585	440	1147	113
Grp Volume(v), veh/h	23	1560	1	4	299	2	17	0	195	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1841	1585	1781	1781	1585	1625	0	1585	1701	0	0
Q Serve(g_s), s	0.5	101.2	0.0	0.1	8.1	0.1	0.0	0.0	16.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	101.2	0.0	0.1	8.1	0.1	1.3	0.0	16.7	1.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.06		1.00	0.33		0.07
Lane Grp Cap(c), veh/h	796	1341	1154	61	1269	1129	250	0	225	268	0	0
V/C Ratio(X)	0.03	1.16	0.00	0.07	0.24	0.00	0.07	0.00	0.87	0.06	0.00	0.00
Avail Cap(c_a), veh/h	874	1341	1154	167	1269	1129	307	0	282	327	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	18.9	5.1	40.8	6.9	5.8	52.3	0.0	58.3	52.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	82.2	0.0	0.4	0.4	0.0	0.1	0.0	20.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	86.2	0.0	0.2	4.9	0.0	1.0	0.0	12.6	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	101.0	5.1	41.3	7.3	5.8	52.4	0.0	78.3	52.3	0.0	0.0
LnGrp LOS	A	F	A	D	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1584			305			212			15	
Approach Delay, s/veh		99.6			7.8			76.2			52.3	
Approach LOS		F			A			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	105.0		25.0	6.7	107.2		25.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	99.0		24.0	9.0	99.0		24.0
Max Q Clear Time (g_c+I1), s	2.5	10.1		3.0	2.1	103.2		18.7
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	0.0		0.3

Intersection Summary	
HCM 6th Ctrl Delay	83.7
HCM 6th LOS	F

Notes

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

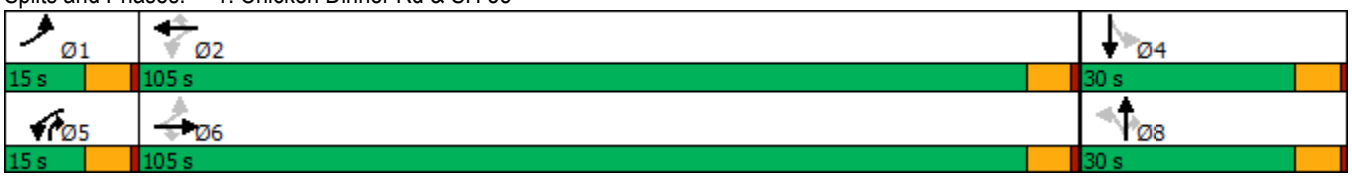
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00		0.98	
Satd. Flow (prot)	1770	1827	1583	1770	1759	1583		1618	1583		1816	
Flt Permitted	0.58	1.00	1.00	0.04	1.00	1.00		0.98	1.00		0.88	
Satd. Flow (perm)	1076	1827	1583	69	1759	1583		1586	1583		1629	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	23	1560	1	4	299	2	1	16	195	5	9	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	41	0	1	0
Lane Group Flow (vph)	23	1560	1	4	299	2	0	17	154	0	14	0
Heavy Vehicles (%)	2%	4%	2%	2%	8%	2%	2%	18%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6		6	2		2	8		8	4		
Actuated Green, G (s)	105.3	101.9	101.9	116.5	107.5	107.5		3.1	12.1		3.1	
Effective Green, g (s)	105.3	101.9	101.9	116.5	107.5	107.5		3.1	12.1		3.1	
Actuated g/C Ratio	0.80	0.77	0.77	0.88	0.81	0.81		0.02	0.09		0.02	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	876	1410	1222	176	1432	1289		37	217		38	
v/s Ratio Prot	0.00	c0.85		0.00	c0.17				c0.05			
v/s Ratio Perm	0.02		0.00	0.02		0.00		0.01	0.05		0.01	
v/c Ratio	0.03	1.11	0.00	0.02	0.21	0.00		0.46	0.71		0.37	
Uniform Delay, d1	2.7	15.0	3.4	41.6	2.7	2.3		63.6	58.2		63.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	58.7	0.0	0.1	0.3	0.0		8.8	10.4		6.0	
Delay (s)	2.7	73.7	3.4	41.6	3.1	2.3		72.4	68.7		69.5	
Level of Service	A	E	A	D	A	A		E	E		E	
Approach Delay (s)		72.7			3.6			69.0			69.5	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	62.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	132.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	105	30	15	105	30
Maximum Split (%)	10.0%	70.0%	20.0%	10.0%	70.0%	20.0%
Minimum Split (s)	11	25	29	11	29	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		18	14
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	120	0	15	120
End Time (s)	15	120	0	15	120	0
Yield/Force Off (s)	9	114	144	9	114	144
Yield/Force Off 170(s)	9	100	126	9	96	130
Local Start Time (s)	135	0	105	135	0	105
Local Yield (s)	144	99	129	144	99	129
Local Yield 170(s)	144	85	111	144	81	115

Intersection Summary	
Cycle Length	150
Control Type	Semi Act-Uncoord
Natural Cycle	150

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (veh/h)	10	520	1	167	1296	18	1	14	17	12	11	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1811	1870	1870	1826	1796	1870	1500	1870	1870	1530	1870
Adj Flow Rate, veh/h	10	542	1	174	1350	19	1	15	18	12	11	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	14	6	2	2	5	7	2	27	2	2	25	2
Cap, veh/h	306	2429	4	729	2569	36	46	69	76	68	21	28
Arrive On Green	0.01	0.69	0.69	0.06	0.73	0.73	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1612	3524	7	1781	3502	49	50	1437	1585	307	437	582
Grp Volume(v), veh/h	10	265	278	174	668	701	16	0	18	41	0	0
Grp Sat Flow(s),veh/h/ln	1612	1721	1810	1781	1735	1817	1487	0	1585	1326	0	0
Q Serve(g_s), s	0.2	4.9	4.9	2.4	14.6	14.6	0.0	0.0	1.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.2	4.9	4.9	2.4	14.6	14.6	0.9	0.0	1.0	2.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.03	0.06		1.00	0.29		0.44
Lane Grp Cap(c), veh/h	306	1186	1248	729	1272	1333	115	0	76	117	0	0
V/C Ratio(X)	0.03	0.22	0.22	0.24	0.53	0.53	0.14	0.00	0.24	0.35	0.00	0.00
Avail Cap(c_a), veh/h	452	1186	1248	914	1272	1333	532	0	527	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	5.0	5.0	3.3	5.0	5.0	40.0	0.0	40.0	40.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.2	1.6	1.5	0.5	0.0	1.6	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	2.2	2.3	0.8	5.8	6.0	0.6	0.0	0.7	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	5.4	5.4	3.5	6.6	6.5	40.5	0.0	41.6	42.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		553			1543			34			41	
Approach Delay, s/veh		5.4			6.2			41.1			42.5	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	70.0		10.2	10.9	66.1		10.2
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	64.0		29.0	14.0	59.0		29.0
Max Q Clear Time (g_c+I1), s	2.2	16.6		4.6	4.4	6.9		3.0
Green Ext Time (p_c), s	0.0	10.6		0.2	0.3	2.9		0.1

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

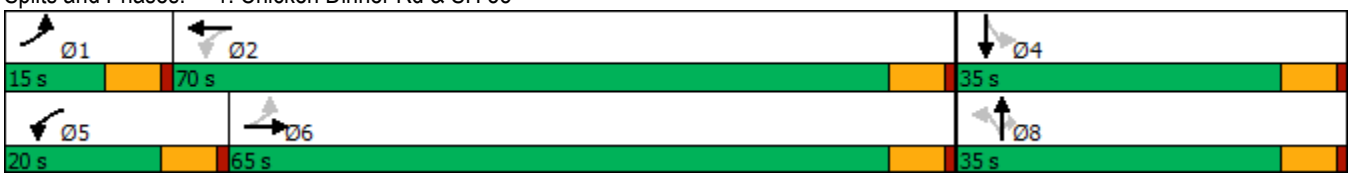
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Future Volume (vph)	10	520	1	167	1296	18	1	14	17	12	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1583	3405		1770	3430			1510	1583		1632	
Flt Permitted	0.19	1.00		0.41	1.00			0.97	1.00		0.89	
Satd. Flow (perm)	317	3405		769	3430			1474	1583		1475	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	542	1	174	1350	19	1	15	18	12	11	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	17	0	17	0
Lane Group Flow (vph)	10	543	0	174	1369	0	0	16	1	0	25	0
Heavy Vehicles (%)	14%	6%	2%	2%	5%	7%	2%	27%	2%	2%	25%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	68.8	67.7		82.1	75.0			4.8	4.8		4.8	
Effective Green, g (s)	68.8	67.7		82.1	75.0			4.8	4.8		4.8	
Actuated g/C Ratio	0.70	0.68		0.83	0.76			0.05	0.05		0.05	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	234	2330		723	2601			71	76		71	
v/s Ratio Prot	0.00	0.16		c0.02	c0.40							
v/s Ratio Perm	0.03			0.18				0.01	0.00		c0.02	
v/c Ratio	0.04	0.23		0.24	0.53			0.23	0.01		0.35	
Uniform Delay, d1	4.6	5.9		1.8	4.8			45.3	44.8		45.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	0.2		0.2	0.8			1.6	0.1		3.0	
Delay (s)	4.7	6.1		2.0	5.6			46.9	44.9		48.5	
Level of Service	A	A		A	A			D	D		D	
Approach Delay (s)		6.1			5.2			45.8			48.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	98.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	70	35	20	65	35
Maximum Split (%)	12.5%	58.3%	29.2%	16.7%	54.2%	29.2%
Minimum Split (s)	11	25	29	11	25	29
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		14	18
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	85	0	20	85
End Time (s)	15	85	0	20	85	0
Yield/Force Off (s)	9	79	114	14	79	114
Yield/Force Off 170(s)	9	65	96	14	65	96
Local Start Time (s)	100	115	65	100	0	65
Local Yield (s)	109	59	94	114	59	94
Local Yield 170(s)	109	45	76	114	45	76

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	80

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (veh/h)	23	1529	1	4	293	2	1	16	191	5	9	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1781	1870	1870	1633	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	1560	1	4	299	2	1	16	195	5	9	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	2	2	8	2	2	18	2	2	2	2
Cap, veh/h	779	2392	2	218	2236	15	42	233	239	108	173	17
Arrive On Green	0.02	0.67	0.67	0.01	0.65	0.65	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3587	2	1781	3447	23	20	1606	1585	408	1189	114
Grp Volume(v), veh/h	23	761	800	4	147	154	17	0	195	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1749	1840	1781	1692	1777	1627	0	1585	1712	0	0
Q Serve(g_s), s	0.4	25.3	25.3	0.1	3.3	3.3	0.0	0.0	11.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	25.3	25.3	0.1	3.3	3.3	0.9	0.0	11.8	0.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.01	0.06		1.00	0.33		0.07
Lane Grp Cap(c), veh/h	779	1166	1228	218	1098	1153	275	0	239	297	0	0
V/C Ratio(X)	0.03	0.65	0.65	0.02	0.13	0.13	0.06	0.00	0.82	0.05	0.00	0.00
Avail Cap(c_a), veh/h	899	1166	1228	371	1098	1153	513	0	474	544	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	9.7	9.7	8.7	6.7	6.7	36.4	0.0	40.6	36.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	2.7	0.0	0.3	0.2	0.1	0.0	6.7	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	12.4	12.9	0.0	1.8	1.8	0.6	0.0	8.6	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	12.5	12.4	8.8	6.9	6.9	36.5	0.0	47.3	36.4	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		1584			305			212			15	
Approach Delay, s/veh		12.3			6.9			46.5			36.4	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	70.0		20.3	6.5	71.8		20.3
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	64.0		29.0	9.0	64.0		29.0
Max Q Clear Time (g_c+I1), s	2.4	5.3		2.7	2.1	27.3		13.8
Green Ext Time (p_c), s	0.0	1.5		0.0	0.0	12.7		0.6

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

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

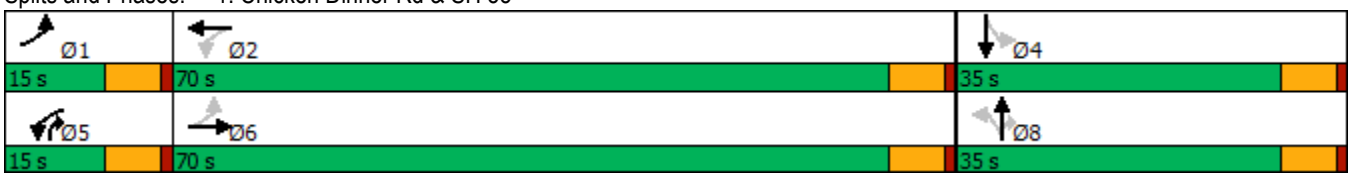
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Future Volume (vph)	23	1529	1	4	293	2	1	16	191	5	9	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00		0.98	
Satd. Flow (prot)	1770	3471		1770	3340			1618	1583		1816	
Flt Permitted	0.57	1.00		0.11	1.00			0.98	1.00		0.92	
Satd. Flow (perm)	1058	3471		205	3340			1586	1583		1697	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	23	1560	1	4	299	2	1	16	195	5	9	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	24	0	1	0
Lane Group Flow (vph)	23	1561	0	4	301	0	0	17	171	0	14	0
Heavy Vehicles (%)	2%	4%	2%	2%	8%	2%	2%	18%	2%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	73.5	71.2		86.2	77.9			2.9	11.9		2.9	
Effective Green, g (s)	73.5	71.2		86.2	77.9			2.9	11.9		2.9	
Actuated g/C Ratio	0.73	0.70		0.85	0.77			0.03	0.12		0.03	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	785	2444		314	2573			45	280		48	
v/s Ratio Prot	0.00	c0.45		0.00	0.09				c0.05			
v/s Ratio Perm	0.02			0.01				0.01	0.05		0.01	
v/c Ratio	0.03	0.64		0.01	0.12			0.38	0.61		0.29	
Uniform Delay, d1	3.8	8.0		4.3	2.9			48.2	42.4		48.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.3		0.0	0.1			5.2	3.9		3.4	
Delay (s)	3.8	9.3		4.3	3.0			53.5	46.3		51.5	
Level of Service	A	A		A	A			D	D		D	
Approach Delay (s)		9.2			3.0			46.9			51.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	101.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	1	2	4	5	6	8
Movement	EBL	WBTL	SBTL	WBL	EBTL	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	15	70	35	15	70	35
Maximum Split (%)	12.5%	58.3%	29.2%	12.5%	58.3%	29.2%
Minimum Split (s)	11	25	29	11	29	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		14	18		18	14
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	85	0	15	85
End Time (s)	15	85	0	15	85	0
Yield/Force Off (s)	9	79	114	9	79	114
Yield/Force Off 170(s)	9	65	96	9	61	100
Local Start Time (s)	105	0	70	105	0	70
Local Yield (s)	114	64	99	114	64	99
Local Yield 170(s)	114	50	81	114	46	85

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	80

Splits and Phases: 1: Chicken Dinner Rd & SH 55



Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Lowell Rd	2	1.0	51.7	0.8	54
	19	0.4	17.1	0.3	53
	20	0.4	16.4	0.2	53
	21	3.2	69.1	1.0	52
	22	1.4	20.5	0.3	51
	8	1.9	26.2	0.4	51
Chicken Dinner Rd	1	4.3	48.7	0.8	56
Total		12.7	249.8	3.7	53

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	2.9	58.2	0.8	53
	8	3.8	52.9	0.8	51
	22	2.3	26.7	0.4	50
	21	1.9	21.0	0.3	50
	20	3.9	68.6	1.0	53
	19	1.0	16.8	0.2	52
Lowell Rd	2	1.1	15.7	0.3	58
Total		16.9	259.9	3.8	52

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Lowell Rd	2	0.7	50.9	0.8	55
	19	0.3	16.9	0.3	54
	20	0.2	16.2	0.2	54
	21	1.3	66.7	1.0	54
	22	0.6	19.9	0.3	53
	8	0.9	25.3	0.4	53
Chicken Dinner Rd	1	2.2	46.6	0.8	58
Total		6.1	242.5	3.7	55

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	1.5	57.0	0.8	54
	8	2.2	51.6	0.8	53
	22	1.5	25.9	0.4	52
	21	1.3	20.6	0.3	51
	20	2.6	68.1	1.0	53
	19	0.7	16.7	0.2	53
Lowell Rd	2	0.6	14.5	0.3	63
Total		10.4	254.4	3.8	53

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.9	27.2	0.4	54
Access B	4	1.0	8.8	0.1	49
Lowell Rd	2	1.3	17.3	0.3	52
	19	0.6	17.1	0.3	53
	20	0.3	16.4	0.2	54
	21	2.7	67.8	1.0	53
	22	1.1	20.1	0.3	52
	8	1.7	26.2	0.4	51
Chicken Dinner Rd	1	4.2	47.6	0.8	57
Total		14.0	248.6	3.7	54

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	20.6	80.1	0.8	41
	8	8.8	58.1	0.8	47
	22	3.4	27.8	0.4	48
	21	2.8	21.8	0.3	48
	20	5.2	70.2	1.0	51
	19	1.6	17.7	0.2	50
Lowell Rd	2	3.9	19.4	0.3	47
Access B	4	2.5	17.9	0.3	50
Access C	5	0.5	8.4	0.1	51
Total		49.3	321.5	4.1	47

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.4	26.9	0.4	55
Access B	4	0.8	8.7	0.1	50
Lowell Rd	2	2.8	19.1	0.3	47
	19	1.8	18.5	0.3	49
	20	0.8	16.9	0.2	52
	21	9.8	74.8	1.0	48
	22	2.5	21.7	0.3	48
	8	3.4	27.8	0.4	48
Chicken Dinner Rd	1	11.3	59.6	0.8	46
Total		33.5	273.9	3.7	49

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	2.0	57.3	0.8	54
	8	2.9	52.5	0.8	52
	22	1.8	26.2	0.4	51
	21	1.5	20.7	0.3	51
	20	3.4	68.2	1.0	53
	19	0.9	17.0	0.2	52
Lowell Rd	2	0.9	15.6	0.3	58
Access B	4	1.0	17.2	0.3	52
Access C	5	0.4	8.2	0.1	53
Total		14.7	282.8	4.1	53

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.9	27.6	0.4	53
Access B	4	1.0	8.9	0.1	48
Lowell Rd	2	7.4	23.3	0.3	39
	19	3.1	19.6	0.3	47
	20	0.5	16.6	0.2	53
	21	3.7	68.9	1.0	52
	22	1.1	20.4	0.3	51
	8	1.7	26.3	0.4	51
Chicken Dinner Rd	1	8.5	52.7	0.8	52
Total		28.0	264.3	3.7	50

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	63.6	120.6	0.8	26
	8	10.9	60.2	0.8	45
	22	3.2	27.7	0.4	49
	21	2.6	21.8	0.3	48
	20	5.3	70.3	1.0	51
	19	1.8	17.9	0.2	49
Lowell Rd	2	5.7	21.3	0.3	43
Access B	4	3.2	18.8	0.3	48
Access C	5	0.5	8.4	0.1	51
Total		96.7	366.9	4.1	41

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.4	26.6	0.4	55
Access B	4	1.0	8.9	0.1	48
Lowell Rd	2	8.5	24.7	0.3	36
	19	4.4	20.9	0.3	44
	20	1.0	17.1	0.2	52
	21	23.2	88.0	1.0	41
	22	33.8	52.7	0.3	20
	8	74.9	98.9	0.4	14
Chicken Dinner Rd	1	220.6	309.8	0.8	10
Total		367.9	647.6	3.7	22

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	3.6	59.0	0.8	52
	8	3.6	51.7	0.8	53
	22	1.8	26.1	0.4	51
	21	1.6	20.7	0.3	51
	20	3.8	68.7	1.0	53
	19	1.0	17.1	0.2	52
Lowell Rd	2	1.7	16.7	0.3	54
Access B	4	1.6	17.9	0.3	50
Access C	5	0.5	8.3	0.1	52
Total		19.1	286.2	4.1	52

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	1.0	27.4	0.4	54
Access B	4	1.0	8.8	0.1	49
Lowell Rd	2	8.3	24.2	0.3	37
	19	3.5	19.9	0.3	46
	20	0.6	16.6	0.2	53
	21	3.0	68.3	1.0	53
	22	1.0	19.9	0.3	53
	8	1.3	25.8	0.4	52
Chicken Dinner Rd	1	6.1	49.9	0.8	55
Total		25.7	260.8	3.7	51

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	7.1	61.5	0.8	50
	8	5.0	54.3	0.8	50
	22	2.3	26.6	0.4	50
	21	2.1	21.3	0.3	49
	20	7.3	72.1	1.0	50
	19	1.9	18.1	0.2	49
Lowell Rd	2	6.3	21.8	0.3	42
Access B	4	3.8	19.1	0.3	47
Access C	5	0.4	8.3	0.1	52
Total		36.2	303.1	4.1	49

Arterial Level of Service: NB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access C	5	0.4	27.0	0.4	55
Access B	4	0.8	8.7	0.1	49
Lowell Rd	2	9.2	25.5	0.3	35
	19	4.4	21.0	0.3	43
	20	0.9	17.1	0.2	52
	21	5.3	70.3	1.0	51
	22	1.8	20.9	0.3	50
	8	2.3	26.7	0.4	50
Chicken Dinner Rd	1	10.5	58.9	0.8	46
Total		35.6	276.1	3.7	48

Arterial Level of Service: SB SH 55

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Chicken Dinner Rd	1	1.6	56.4	0.8	54
	8	1.6	50.3	0.8	54
	22	0.8	25.1	0.4	53
	21	0.8	19.8	0.3	53
	20	3.0	66.9	1.0	54
	19	0.8	16.8	0.2	52
Lowell Rd	2	1.9	16.3	0.3	56
Access B	4	1.7	17.7	0.3	51
Access C	5	0.5	8.2	0.1	52
Total		12.8	277.7	4.1	54

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	16	36	5	62	3	361	14	407	789	2
Future Vol, veh/h	1	3	16	36	5	62	3	361	14	407	789	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	-	-	-	100	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	7	2
Mvmt Flow	1	3	17	38	5	65	3	376	15	424	822	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1868	2068	412	1651	2062	196	824	0	0	391	0	0
Stage 1	1671	1671	-	390	390	-	-	-	-	-	-	-
Stage 2	197	397	-	1261	1672	-	-	-	-	-	-	-
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	45	54	589	65	54	812	802	-	-	1164	-	-
Stage 1	100	151	-	606	606	-	-	-	-	-	-	-
Stage 2	786	602	-	180	151	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	28	34	589	42	34	812	802	-	-	1164	-	-
Mov Cap-2 Maneuver	28	34	-	90	80	-	-	-	-	-	-	-
Stage 1	100	96	-	604	604	-	-	-	-	-	-	-
Stage 2	715	600	-	108	96	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.3	37	0.1	3.3
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	802	-	-	132	89	812	1164	-	-
HCM Lane V/C Ratio	0.004	-	-	0.158	0.48	0.08	0.364	-	-
HCM Control Delay (s)	9.5	-	-	37.3	78.2	9.8	9.9	-	-
HCM Lane LOS	A	-	-	E	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	2	0.3	1.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	16	36	5	62	3	361	14	407	789	2
Future Volume (veh/h)	1	3	16	36	5	62	3	361	14	407	789	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870	1796	1870
Adj Flow Rate, veh/h	1	3	17	38	5	65	3	376	15	424	822	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	5	2	2	7	2
Cap, veh/h	45	18	84	157	16	102	502	2112	84	848	2540	6
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.00	0.62	0.62	0.11	0.73	0.73
Sat Flow, veh/h	33	276	1312	1254	252	1585	1781	3401	135	1781	3493	8
Grp Volume(v), veh/h	21	0	0	43	0	65	3	191	200	424	402	422
Grp Sat Flow(s),veh/h/ln	1621	0	0	1506	0	1585	1781	1735	1802	1781	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	3.5	0.1	4.1	4.2	6.8	7.4	7.4
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.3	0.0	3.5	0.1	4.1	4.2	6.8	7.4	7.4
Prop In Lane	0.05		0.81	0.88		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	147	0	0	174	0	102	502	1077	1119	848	1241	1305
V/C Ratio(X)	0.14	0.00	0.00	0.25	0.00	0.64	0.01	0.18	0.18	0.50	0.32	0.32
Avail Cap(c_a), veh/h	573	0	0	555	0	522	677	1077	1119	1036	1241	1305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	0.0	39.5	0.0	40.2	6.2	7.1	7.1	3.9	4.3	4.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	6.5	0.0	0.4	0.3	0.5	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.0	1.7	0.0	2.6	0.0	2.2	2.3	2.2	2.9	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	0.0	40.3	0.0	46.7	6.2	7.5	7.5	4.3	5.0	4.9
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		21			108			394			1248	
Approach Delay, s/veh		39.5			44.1			7.4			4.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.6	6.4	70.0		11.6	15.7	60.7				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		29.0	9.0	64.0		29.0	19.0	54.0				
Max Q Clear Time (g_c+I1), s		5.5	2.1	9.4		3.1	8.8	6.2				
Green Ext Time (p_c), s		0.4	0.0	4.9		0.1	0.9	2.0				

Intersection Summary	
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

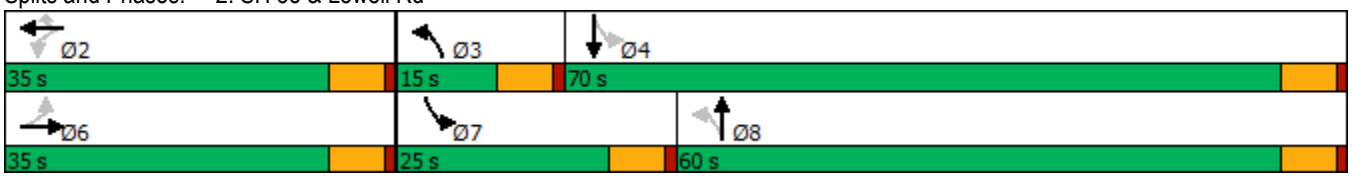
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	16	36	5	62	3	361	14	407	789	2
Future Volume (vph)	1	3	16	36	5	62	3	361	14	407	789	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1655			1784	1583	1770	3422		1770	3373	
Flt Permitted		0.98			0.74	1.00	0.34	1.00		0.47	1.00	
Satd. Flow (perm)		1626			1370	1583	636	3422		882	3373	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	3	17	38	5	65	3	376	15	424	822	2
RTOR Reduction (vph)	0	16	0	0	0	60	0	2	0	0	0	0
Lane Group Flow (vph)	0	5	0	0	43	5	3	389	0	424	824	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	7%	2%
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		6.8			6.8	6.8	60.6	59.6		78.9	71.9	
Effective Green, g (s)		6.8			6.8	6.8	60.6	59.6		78.9	71.9	
Actuated g/C Ratio		0.07			0.07	0.07	0.62	0.61		0.81	0.74	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		113			95	110	406	2087		833	2482	
v/s Ratio Prot							0.00	0.11		c0.07	0.24	
v/s Ratio Perm		0.00			c0.03	0.00	0.00			c0.34		
v/c Ratio		0.05			0.45	0.04	0.01	0.19		0.51	0.33	
Uniform Delay, d1		42.4			43.7	42.4	7.1	8.4		2.7	4.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			3.4	0.2	0.0	0.2		0.5	0.4	
Delay (s)		42.6			47.1	42.6	7.1	8.6		3.2	4.9	
Level of Service		D			D	D	A	A		A	A	
Approach Delay (s)		42.6			44.4			8.6			4.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	97.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	35	15	70	35	25	60
Maximum Split (%)	29.2%	12.5%	58.3%	29.2%	20.8%	50.0%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	35	50	0	35	60
End Time (s)	35	50	0	35	60	0
Yield/Force Off (s)	29	44	114	29	54	114
Yield/Force Off 170(s)	11	44	100	11	54	100
Local Start Time (s)	0	35	50	0	35	60
Local Yield (s)	29	44	114	29	54	114
Local Yield 170(s)	11	44	100	11	54	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	23	401	279	52	51	10
Future Vol, veh/h	23	401	279	52	51	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	418	291	54	53	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	442	0	660	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1118	-	428	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1118	-	317	1052
Mov Cap-2 Maneuver	-	-	-	-	350	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	390	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.9	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	350	1052	-	-	1118	-
HCM Lane V/C Ratio	0.152	0.01	-	-	0.26	-
HCM Control Delay (s)	17.1	8.5	-	-	9.3	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0	-	-	1	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	43	335	132	504	337
Future Vol, veh/h	11	43	335	132	504	337
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	45	349	138	525	351

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1575	175	0	0	487	0
Stage 1	349	-	-	-	-	-
Stage 2	1226	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	101	838	-	-	1072	-
Stage 1	685	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	838	-	-	1072	-
Mov Cap-2 Maneuver	105	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	122	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	6.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	105	838	1072	-
HCM Lane V/C Ratio	-	-	0.109	0.053	0.49	-
HCM Control Delay (s)	-	-	43.4	9.5	11.5	-
HCM Lane LOS	-	-	E	A	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	2.8	-

Intersection	
Int Delay, s/veh	28.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	6	28	3	555	22	947	15	44	185	0
Future Vol, veh/h	0	1	6	28	3	555	22	947	15	44	185	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	-	-	-	100	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	6	29	3	566	22	966	15	45	189	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	808	1304	95	1203	1297	491	189	0	0	981	0	0
Stage 1	279	279	-	1018	1018	-	-	-	-	-	-	-
Stage 2	529	1025	-	185	279	-	-	-	-	-	-	-
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	272	159	943	140	161	~ 523	1382	-	-	699	-	-
Stage 1	704	678	-	254	313	-	-	-	-	-	-	-
Stage 2	501	311	-	799	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	146	943	130	148	~ 523	1382	-	-	699	-	-
Mov Cap-2 Maneuver	-	146	-	210	244	-	-	-	-	-	-	-
Stage 1	693	635	-	250	308	-	-	-	-	-	-	-
Stage 2	-	306	-	742	635	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		87.9	0.2	2
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1382	-	-	-	213	523	699	-	-
HCM Lane V/C Ratio	0.016	-	-	-	0.149	1.083	0.064	-	-
HCM Control Delay (s)	7.6	-	-	-	24.8	91.4	10.5	-	-
HCM Lane LOS	A	-	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	17.5	0.2	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	6	28	3	555	22	947	15	44	185	0
Future Volume (veh/h)	0	1	6	28	3	555	22	947	15	44	185	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1	6	29	3	566	22	966	15	45	189	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	84	504	533	52	629	608	1579	25	259	1608	0
Arrive On Green	0.00	0.36	0.36	0.36	0.36	0.36	0.02	0.44	0.44	0.03	0.45	0.00
Sat Flow, veh/h	0	232	1389	1297	144	1585	1781	3582	56	1781	3647	0
Grp Volume(v), veh/h	0	0	7	32	0	566	22	479	502	45	189	0
Grp Sat Flow(s),veh/h/ln	0	0	1620	1441	0	1585	1781	1777	1860	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.3	1.3	0.0	37.2	0.7	22.9	22.9	1.5	3.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.6	0.0	37.2	0.7	22.9	22.9	1.5	3.4	0.0
Prop In Lane	0.00		0.86	0.91		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	589	585	0	629	608	784	820	259	1608	0
V/C Ratio(X)	0.00	0.00	0.01	0.05	0.00	0.90	0.04	0.61	0.61	0.17	0.12	0.00
Avail Cap(c_a), veh/h	0	0	642	632	0	681	713	784	820	344	1608	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	22.6	23.1	0.0	31.4	16.2	23.8	23.8	18.3	17.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	14.3	0.0	3.5	3.4	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.2	1.0	0.0	21.8	0.5	14.5	15.0	1.1	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	22.6	23.1	0.0	45.7	16.3	27.3	27.2	18.6	17.7	0.0
LnGrp LOS	A	A	C	C	A	D	B	C	C	B	B	A
Approach Vol, veh/h		7			598			1003			234	
Approach Delay, s/veh		22.6			44.5			27.0			17.9	
Approach LOS		C			D			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		46.4	8.5	56.3		46.4	9.8	55.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		44.0	9.0	49.0		44.0	9.0	49.0				
Max Q Clear Time (g_c+I1), s		39.2	2.7	5.4		2.3	3.5	24.9				
Green Ext Time (p_c), s		1.1	0.0	1.1		0.0	0.0	5.6				

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	6	28	3	555	22	947	15	44	185	0
Future Volume (vph)	0	1	6	28	3	555	22	947	15	44	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.88			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1647			1782	1583	1770	3531		1770	3539	
Flt Permitted		1.00			0.85	1.00	0.63	1.00		0.23	1.00	
Satd. Flow (perm)		1647			1578	1583	1179	3531		427	3539	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1	6	29	3	566	22	966	15	45	189	0
RTOR Reduction (vph)	0	6	0	0	0	38	0	1	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	32	528	22	980	0	45	189	0
Turn Type		NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		6			2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)		4.5			4.5	13.6	55.4	53.2		68.3	60.1	
Effective Green, g (s)		4.5			4.5	13.6	55.4	53.2		68.3	60.1	
Actuated g/C Ratio		0.05			0.05	0.16	0.65	0.63		0.81	0.71	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		87			83	365	785	2215		488	2508	
v/s Ratio Prot		0.00				c0.15	0.00	c0.28		0.01	0.05	
v/s Ratio Perm					0.02	0.18	0.02			0.06		
v/c Ratio		0.02			0.39	1.45	0.03	0.44		0.09	0.08	
Uniform Delay, d1		38.0			38.8	35.6	5.2	8.2		2.7	3.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			3.0	216.1	0.0	0.6		0.1	0.1	
Delay (s)		38.1			41.8	251.7	5.2	8.8		2.8	3.9	
Level of Service		D			D	F	A	A		A	A	
Approach Delay (s)		38.1			240.5			8.7			3.6	
Approach LOS		D			F			A			A	

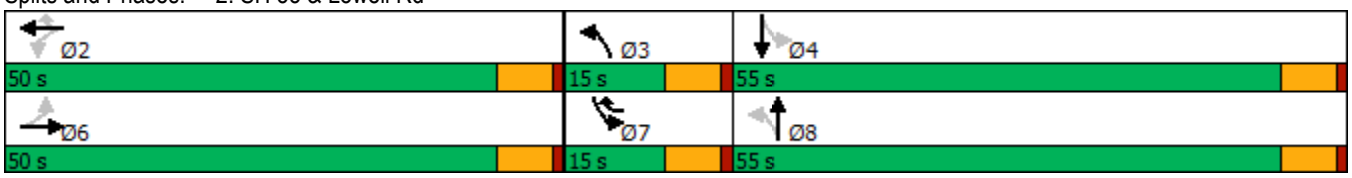
Intersection Summary			
HCM 2000 Control Delay	83.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	2	3	4	6	7	8
Movement	WBTL	NBL	SBTL	EBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	Max	None	None	Max
Maximum Split (s)	50	15	55	50	15	55
Maximum Split (%)	41.7%	12.5%	45.8%	41.7%	12.5%	45.8%
Minimum Split (s)	29	11	25	29	11	25
Yellow Time (s)	5	5	5	5	5	5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5		5
Flash Dont Walk (s)	18		14	18		14
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	50	65	0	50	65
End Time (s)	50	65	0	50	65	0
Yield/Force Off (s)	44	59	114	44	59	114
Yield/Force Off 170(s)	26	59	100	26	59	100
Local Start Time (s)	0	50	65	0	50	65
Local Yield (s)	44	59	114	44	59	114
Local Yield 170(s)	26	59	100	26	59	100

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	65

Splits and Phases: 2: SH 55 & Lowell Rd



Intersection	
Int Delay, s/veh	12.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	17	43	6	53	533	417
Future Vol, veh/h	17	43	6	53	533	417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	150
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	44	6	54	544	426

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	83	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	66	-
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	-	-	1542	-	919	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1542	-	915	1062
Mov Cap-2 Maneuver	-	-	-	-	860	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	860	1062	-	-	1542	-
HCM Lane V/C Ratio	0.632	0.401	-	-	0.004	-
HCM Control Delay (s)	16.1	10.6	-	-	7.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	4.6	2	-	-	0	-

Intersection	
Int Delay, s/veh	18.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	197	820	165	10	45	174
Future Vol, veh/h	197	820	165	10	45	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	201	837	168	10	46	178

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	349	84	0	0	178	0
Stage 1	168	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	622	958	-	-	1395	-
Stage 1	844	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	601	958	-	-	1395	-
Mov Cap-2 Maneuver	650	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	805	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	650	958	1395	-
HCM Lane V/C Ratio	-	-	0.309	0.873	0.033	-
HCM Control Delay (s)	-	-	13	28.1	7.7	-
HCM Lane LOS	-	-	B	D	A	-
HCM 95th %tile Q(veh)	-	-	1.3	11.7	0.1	-

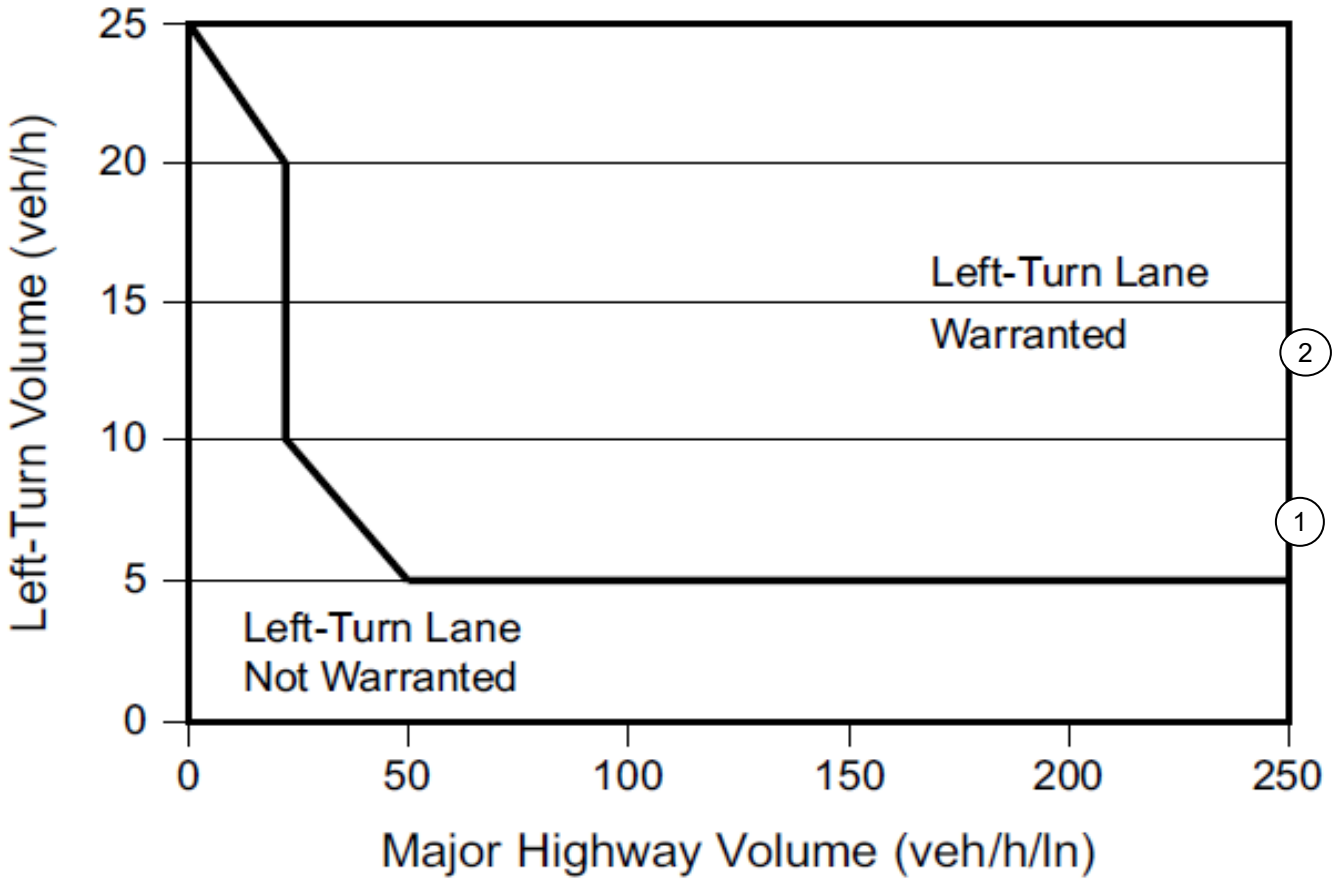
APPENDIX H: TURN LANE WARRANT WORKSHEETS

Sunnyslope Event Facility
Canyon County, Idaho

AASHTO Left-turn Lane Guidelines for Two-Lane Rural Roadways
2022 Existing Traffic

Intersection	Approach	Speed Limit [mph]	Peak Hour	Left-Turn Volume [vph]	Major Highway Volume [vphpl]	Meet Warrant?
1 Chicken Dinner Road & SH 55	EB	55	**4-5 PM**	**7**	**358**	**Yes**
			9-10 PM	4	174	No*
2 Chicken Dinner Road & SH 55	WB	55	**4-5 PM**	**13**	**355**	**Yes**
			9-10 PM	2	175	No*

* Left-Turn Volume Less Than 5 vph - Not Warranted



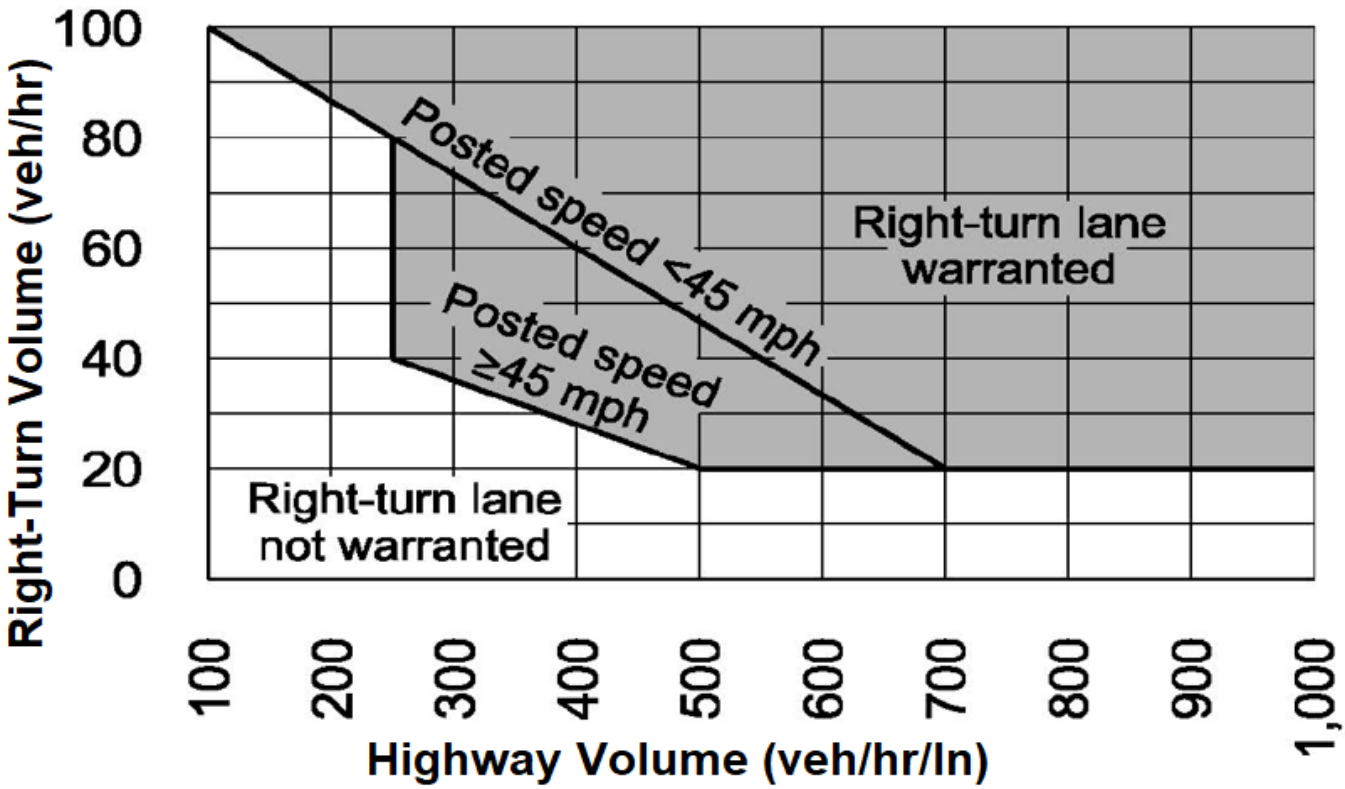
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

ITD Right-Turn Lane Analysis
2022 Existing Traffic

Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1 Chicken Dinner Road & SH 55	EB	55	4-5 PM	1	356	No*
			9-10 PM	1	180	No*
2 Chicken Dinner Road & SH 55	WB	55	4-5 PM	15	366	No*
			9-10 PM	2	172	No*
3 Lowell Road & SH 55	SB	55	4-5 PM	2	125	No*
			9-10 PM	0	58	No*
4 Lowell Road & SH 55	NB	55	4-5 PM	11	136	No*
			9-10 PM	12	67	No*

*Total approach volume less than 100 vphpl or right-turn volume less than 20 vph = Not Warranted



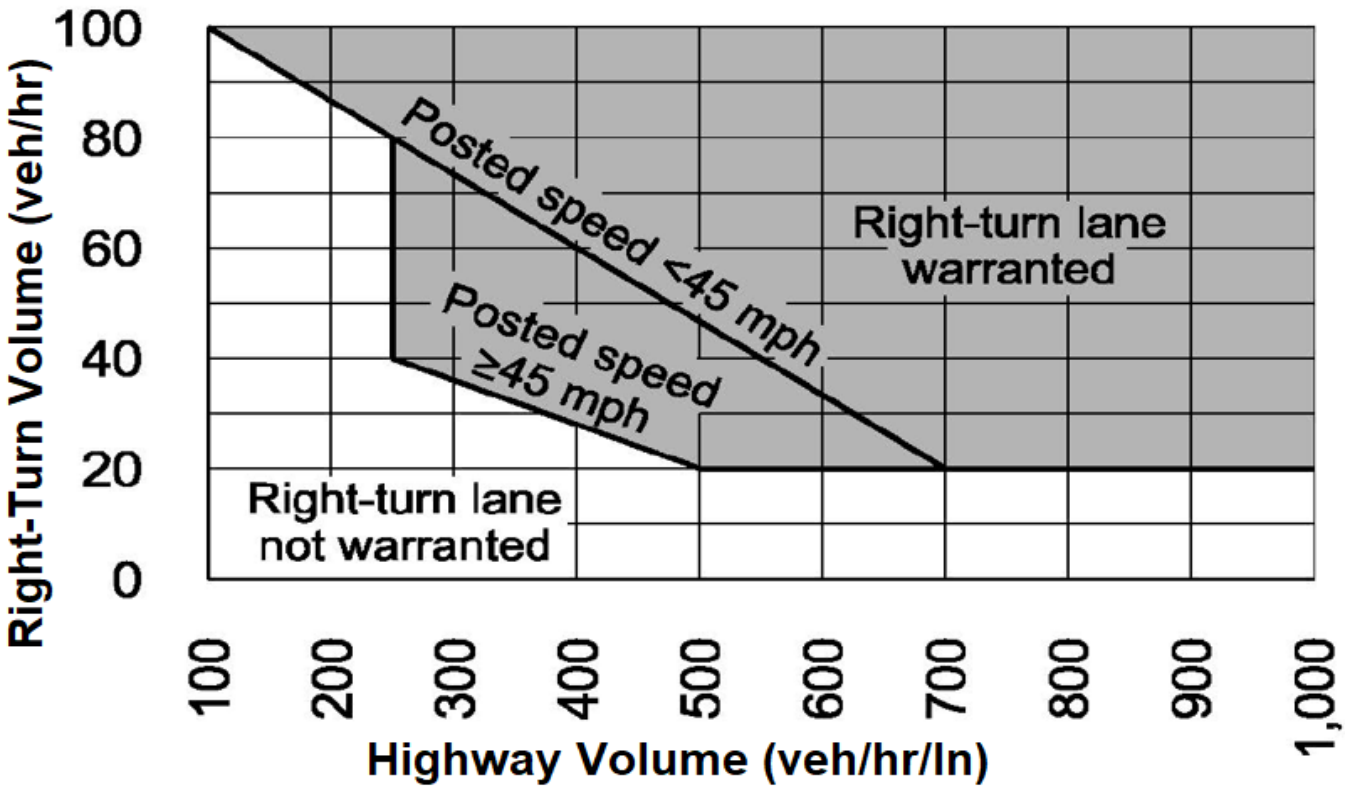
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

ITD Right-Turn Lane Analysis
2024 Background Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1	Chicken Dinner Road & SH 55	EB	55	4-5 PM	1	377	No*
				9-10 PM	1	191	No*
2	Chicken Dinner Road & SH 55	WB	55	4-5 PM	16	389	No*
				9-10 PM	2	182	No*
3	Lowell Road & SH 55	SB	55	4-5 PM	2	132	No*
				9-10 PM	0	62	No*
4	Lowell Road & SH 55	NB	55	4-5 PM	12	145	No*
				9-10 PM	13	71	No*

*Total approach volume less than 100 vphpl or right-turn volume less than 20 vph = Not Warranted



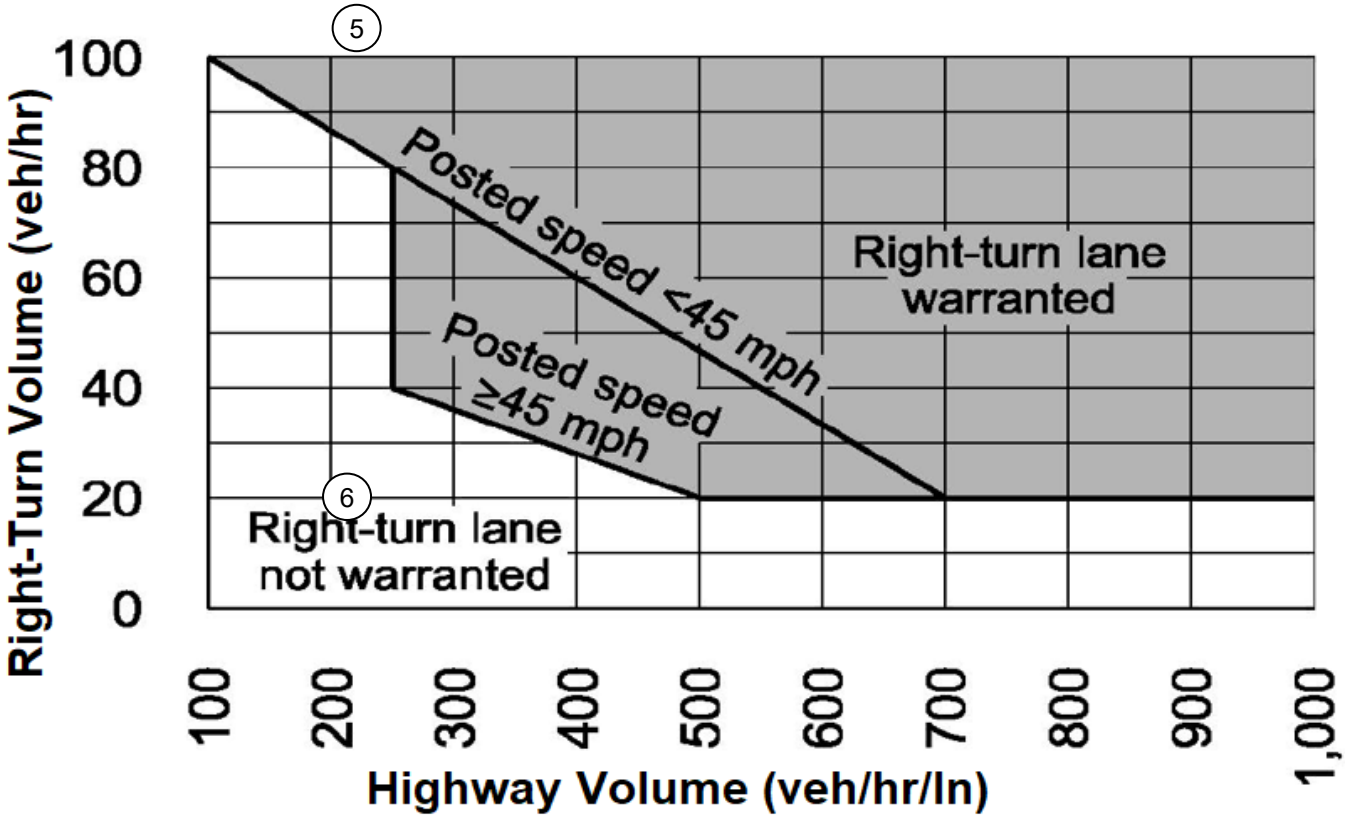
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

ITD Right-Turn Lane Analysis
2024 Total Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1	Chicken Dinner Road & SH 55	EB	55	4-5 PM	1	470	No*
				9-10 PM	1	1,523	No*
2	Chicken Dinner Road & SH 55	WB	55	4-5 PM	16	1,420	No*
				9-10 PM	2	270	No*
3	Lowell Road & SH 55	SB	55	4-5 PM	2	578	No*
				9-10 PM	0	105	No*
4	Lowell Road & SH 55	NB	55	4-5 PM	12	171	No*
				9-10 PM	13	514	No*
5	Access B & SH 55	NB	55	**4-5 PM**	**112**	**215**	**Yes**
				9-10 PM	8	143	No*
6	Access C & SH 55	NB	55	4-5 PM	20	211	No
				9-10 PM	2	76	No*

*Total approach volume less than 100 vphpl or right-turn volume less than 20 vph = Not Warranted



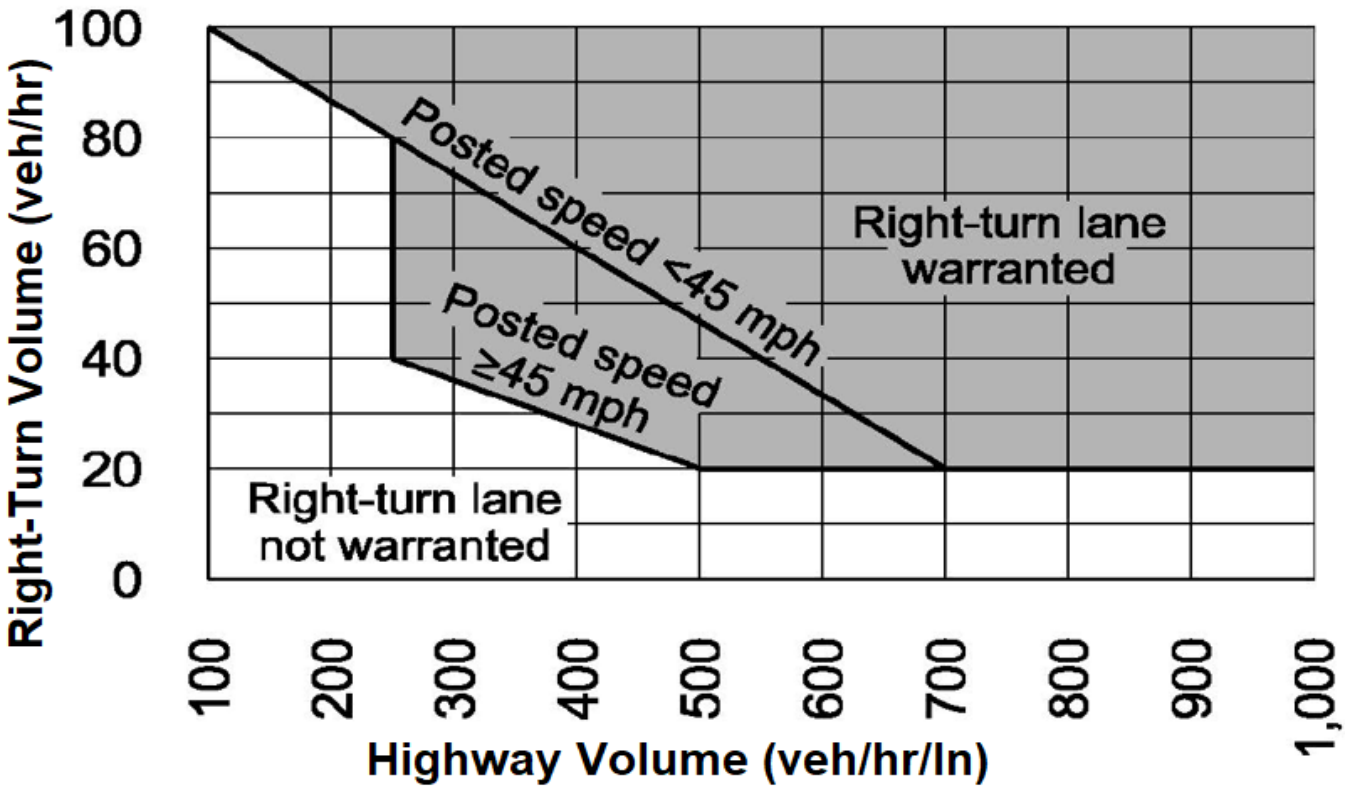
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

ITD Right-Turn Lane Analysis
2029 Background Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1	Chicken Dinner Road & SH 55	EB	55	4-5 PM	1	438	No*
				9-10 PM	1	221	No*
2	Chicken Dinner Road & SH 55	WB	55	4-5 PM	18	450	No*
				9-10 PM	2	211	No*
3	Lowell Road & SH 55	SB	55	4-5 PM	2	153	No*
				9-10 PM	0	71	No*
4	Lowell Road & SH 55	NB	55	4-5 PM	14	168	No*
				9-10 PM	15	83	No*

*Total approach volume less than 100 vphpl or right-turn volume less than 20 vph = Not Warranted



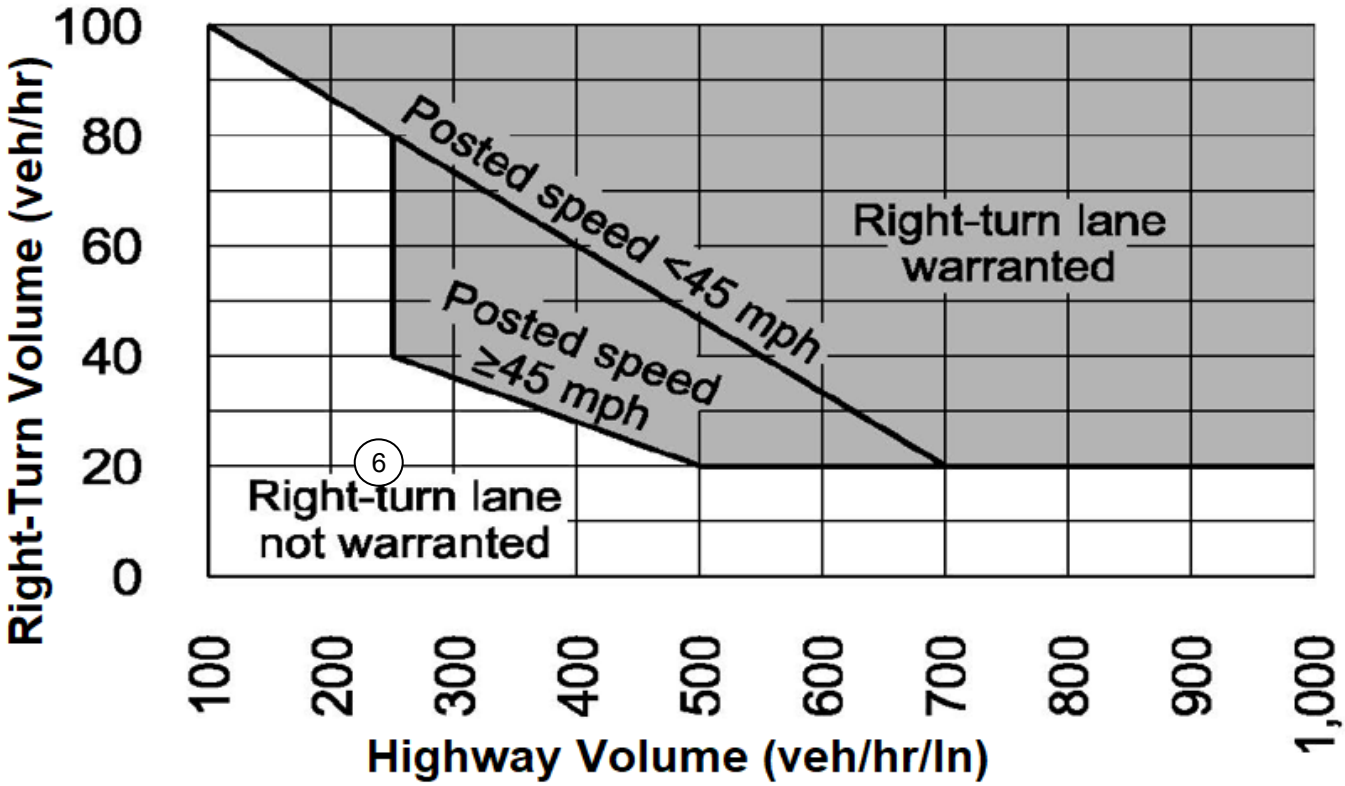
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

ITD Right-Turn Lane Analysis
2029 Total Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1	Chicken Dinner Road & SH 55	EB	55	4-5 PM	1	531	No*
				9-10 PM	1	1,553	No*
2	Chicken Dinner Road & SH 55	WB	55	4-5 PM	18	1,481	No*
				9-10 PM	2	299	No*
3	Lowell Road & SH 55	SB	55	4-5 PM	2	599	No*
				9-10 PM	0	115	No*
4	Lowell Road & SH 55	NB	55	4-5 PM	14	194	No*
				9-10 PM	15	526	No*
5	Access B & SH 55	NB	55	4-5 PM	**Warranted Under 2024 Total**		
				9-10 PM			
6	Access C & SH 55	NB	55	4-5 PM	20	234	No
				9-10 PM	2	88	No*

*Total approach volume less than 100 vphpl or right-turn volume less than 20 vph = Not Warranted



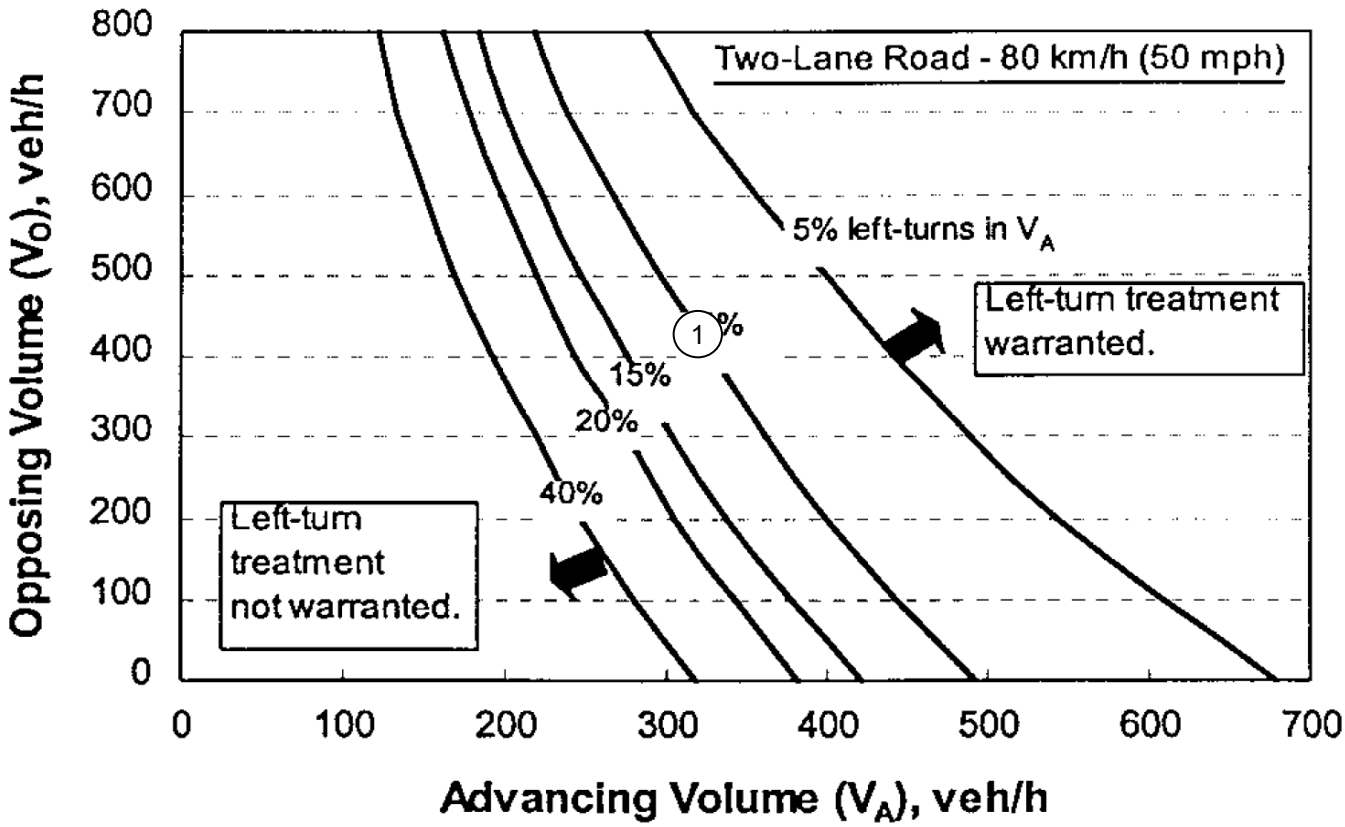
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

NCHRP 457 Left-Turn Lane Analysis for 50 mph or less Roadways
2024 Total Traffic

Intersection	Approach	Speed Limit [mph]	Peak Hour	Advancing Volume [vph]	Opposing Volume [vph]	Left-Turn Volume (%)	Meet Warrant?
1 Access A & Lowell Road	WB	45	**4-5 PM**	**325**	**421**	**85.8%**	**Yes**
			9-10 PM	54	58	11.1%	No*

*Advancing and Opposing Volume < 250 vph = Not Warranted



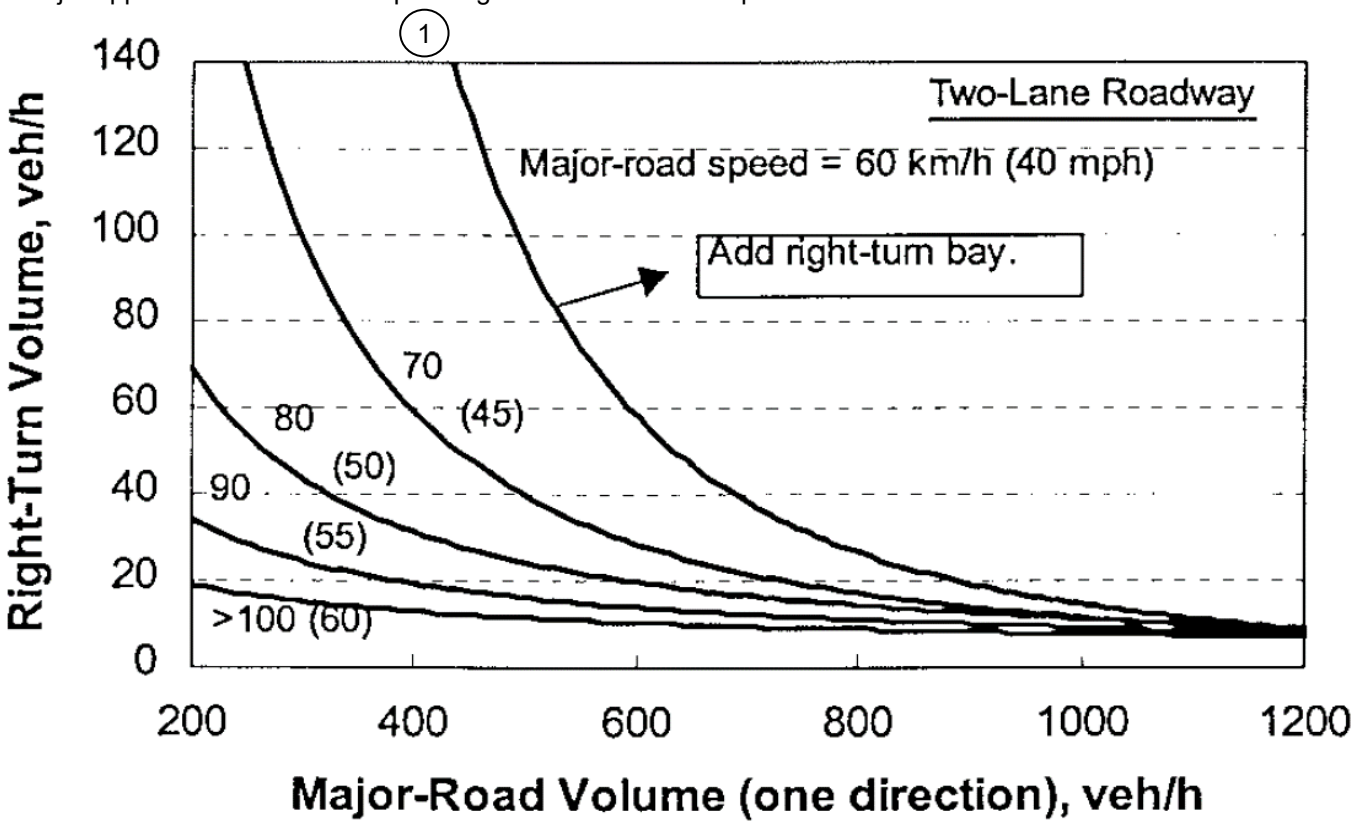
1 4-5 PM 1 9-10 PM

Sunnyslope Event Facility
Canyon County, Idaho

NCHRP 457 Right-Turn Lane Analysis
2024 Total Traffic

Intersection	Approach	Speed Limit [mph]	Peak Hour	Right-Turn Volume [vph]	Major Road Volume [vph]	Meet Warrant?
1 Access A & Lowell Road	EB	45	**4-5 PM**	**401**	**421**	**Yes**
			9-10 PM	43	58	No*

*Major approach volume < 200 vph or right-turn volume < 10 vph = Not Warranted



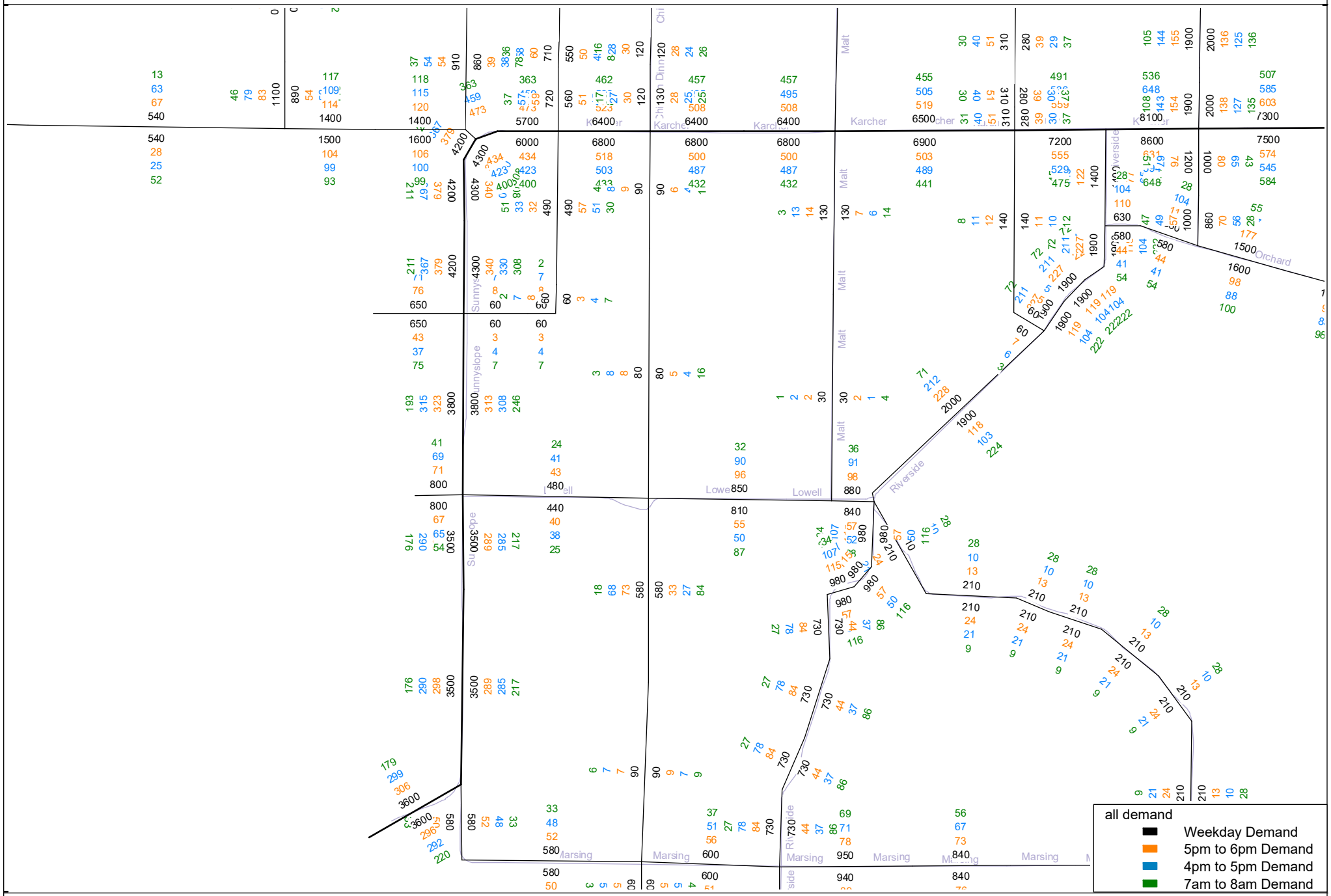
1 4-5 PM

1 9-10 PM

APPENDIX I: COMPASS TRAFFIC FORECASTS

2021 Build: 2021 Demographics and 2021 Funded Network

7/20/2021



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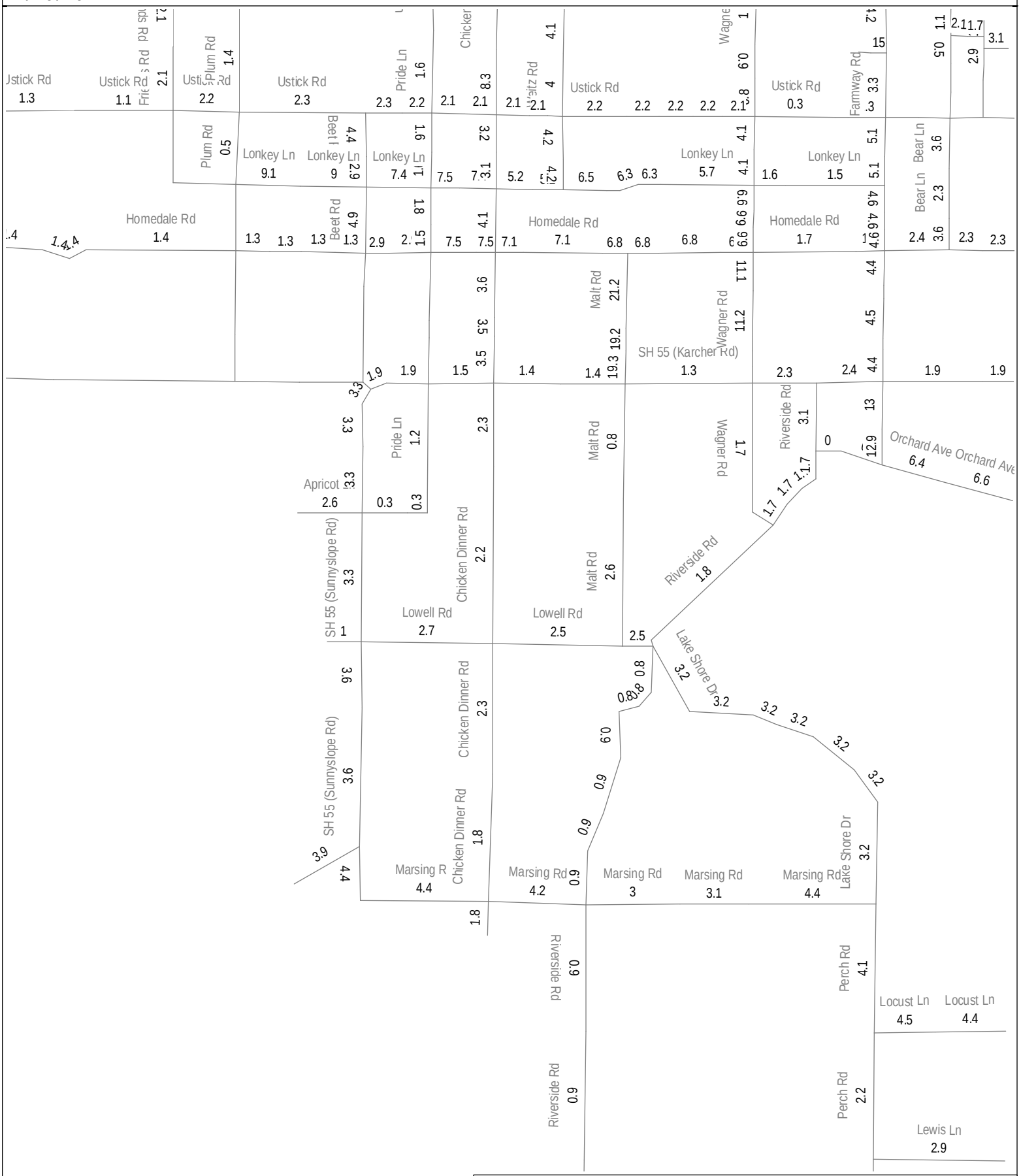
New Regional Model calibrated to 2011/12 conditions - completed in January 2015

cube

(Licensed to Community Planning Association)

2021 Peak Hour to 2025 Peak Hour Compounded Annual Growth Rates

7/20/2021



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COMPASS reserves the right to rerun the model for any reason deemed necessary.

cube

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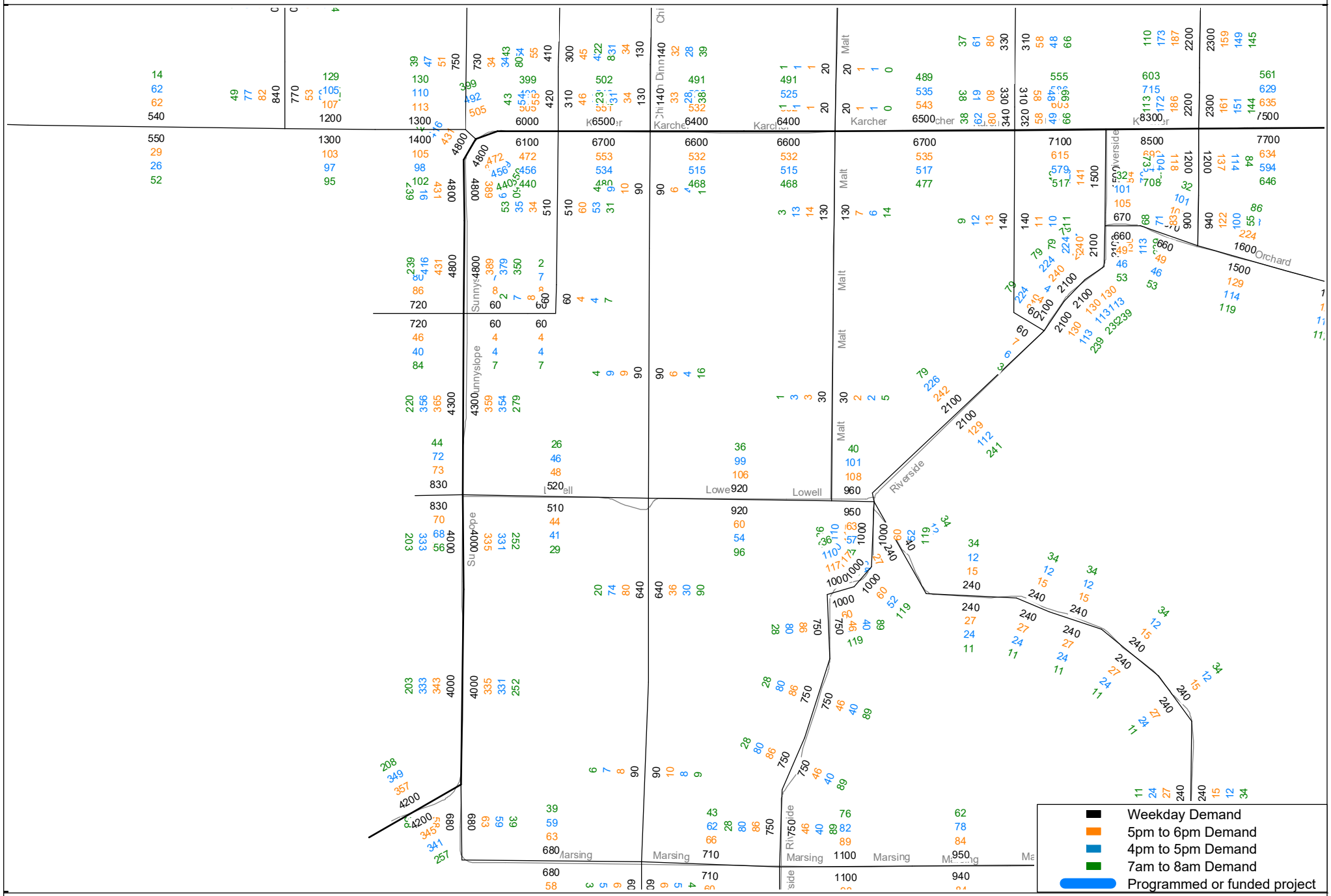
2025 Build: Daily, 5pm to 6pm Peak, 4pm to 5pm Peak and 7am to 8am Peak Demand
7/20/2021



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New Regional Model calibrated to 2011/12 conditions - completed in January 2015

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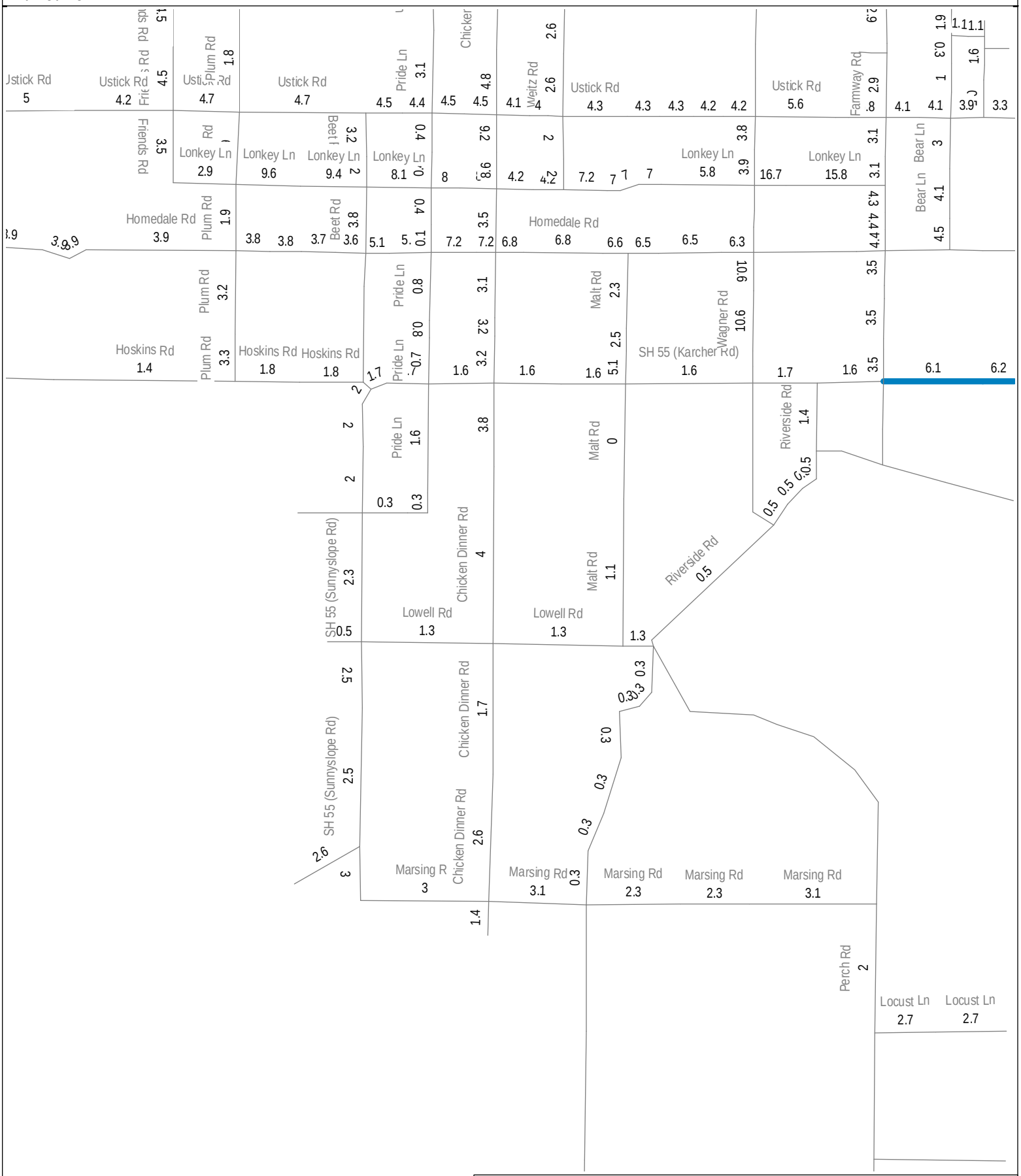
2025 Peak Hour to 2030 Peak Hour Compounded Annual Growth Rates

7/20/2021



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COMPASS reserves the right to rerun the model for any reason deemed necessary.

cube

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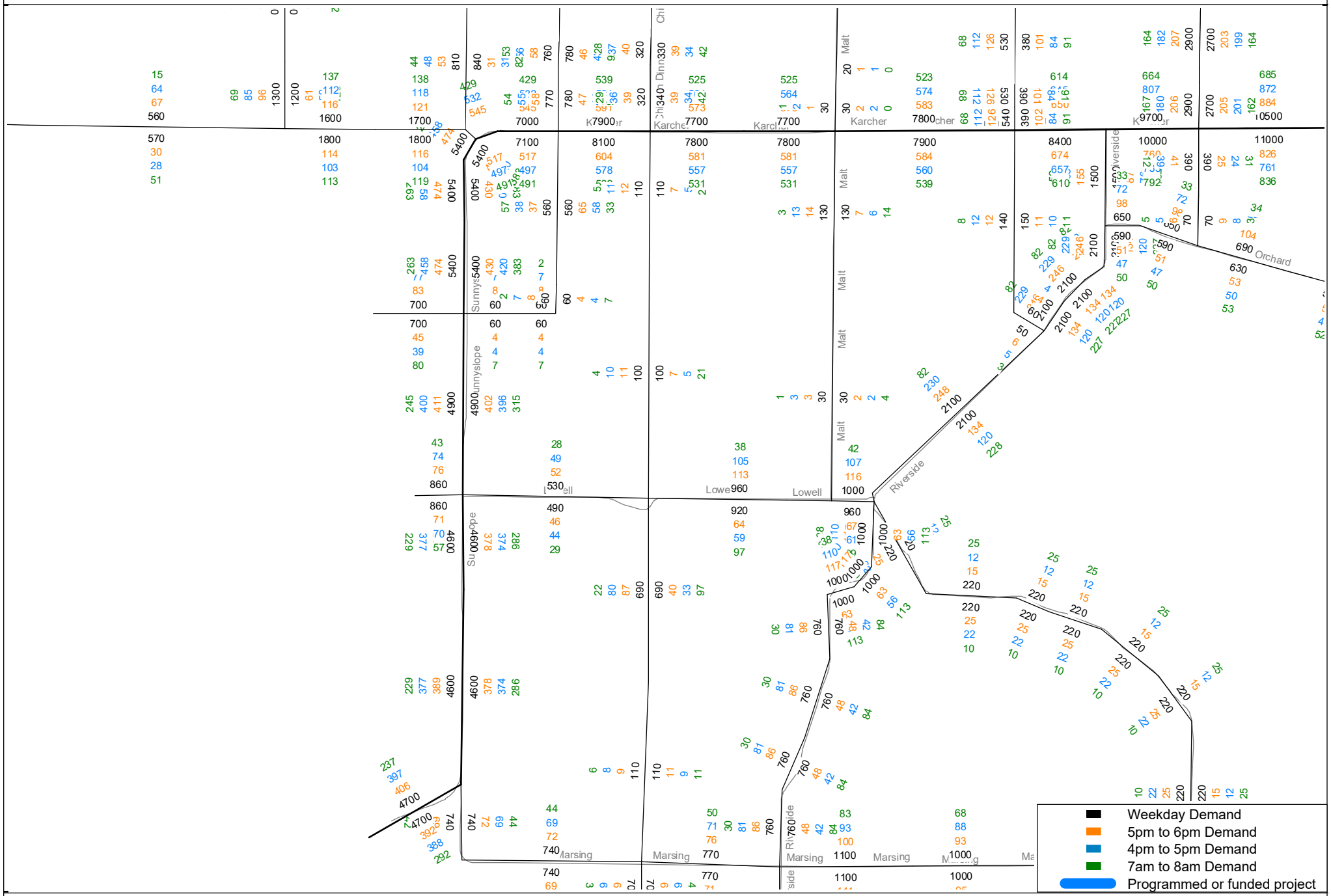
2030 Build: Daily, 5pm to 6pm Peak, 4pm to 5pm Peak and 7am to 8am Peak Demand
7/20/2021



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Roadway assumptions per CIM 2040 2.0 (Dec 2018) and reconciled demograhic data set as of April 2019

cube

(Licensed to Community Planning Association)

APPENDIX J: TRIP GENERATION DATA

There are 5,000 seats proposed in the Fitzhugh Music Venue. It was assumed that there will be 2.5 people per vehicle entering the site; therefore, there would be a maximum of 2,000 vehicles entering the music venue. Based on existing data provided by the developer, the arrival rate for an event occurs over a 2-hour period with approximately an equal number of arrivals during the period. Events are to begin at 7:30 PM. Given our peak hour of traffic, it is not expected a peak hour of arrivals would occur during the peak hour; however, to provide a conservative analysis, this analysis assumes 1,000 attendees arrive during the peak hour. While no data for drop offs is available, it was assumed 5% of vehicles would be drop offs.

The trips shown in **Table 4** are the site generated trips for the attributed site developments for the AM and PM peak hour(s). Development of these trips are provided in **Appendix C**.

Table 4: Trip Generation

Description	Capacity	AM Peak		PM Peak	
		Enter	Exit	Enter	Exit
Music Venue	5,000 attendees	155	0	1,223	50
	Total	**155**	**0**	**1,223**	**50**

Trips generated by the site are different from total site trips that add to the adjacent roadway. Pass-by and internal capture trips can account for a significant portion of a site's generated traffic and are removed from site traffic per ITE methodology. Internal capture trips are trips that use only internal roadways traveling from one land use to another within the site. Passy-by trips are attracted to the site from traffic passing on the adjacent street. Primary trips, made for the specific purpose of visiting the development, are considered new traffic added to the street system. The net primary trips are determined by subtracting internal and pass-by trips for each land use. No internal capture trips or pass-by trips are anticipated for this development.

APPENDIX C | TRIP GENERATION CALCULATIONS

***considering worst case scenario, weekday sold out concert/large event**

Staff	Description	Low	Max	Increase
Operations	Ushers, event staff, janitorial, bag check	55	70	81
Production	Stage Hands, Artist hospitality, PA, runner, sound, lighting vendors	25	30	35
Food & Beverage	Morning Prep Staff, Chateau Restaurant staff, Windery Deck Staff, Suite & Box Seat Staff	60	90	103
Concessions	Bartended, BOH, FOH	-	39	45
Box Office	-	2	5	6
Security	Third Party	2	4	5
Standard Office	Non-Concert/Event	10	15	17
On Site	Events (non-concert)	12	75	86

Increase (per Bill)	
1.15	0.15

		Estimated Trips	
		Enter	Exit
AM Peak	8:00-9:00	155	-
PM Peak	4:30-5:30	1223	50
Off Peak			

Seats	People/Veh	Vehicles	Enter	Exit
5,000	2.5	2000	1000	50

Assumption on Entering Attendees

0.50	5:00-5:30
0.25	5:30-6:00
0.25	6:00-6:30
0.25	6:30-7:00

Assumption on Exiting Vehicles (drop offs)

0.050

Sunnyslope Event Facility
Canyon County, Idaho

Land Use	Size	Unit	Period	Total Trips	Entering	Exiting
Event Center	5,000	Attendees	4-5 PM Arrival Hour (vph)	1,431	1,316	115
			9-10 PM Departure Hour (vph)	2,070	104	1,966

ARRIVAL			
	Attendees	5000	
	Maximum cars	2300	
50% arrival within 4-5pm		1150	enter
Staff arrival within 4-5pm		223	enter
5%	drop offs	58	exit
5%	Shuttle	58	enter
5%	Rideshare	58	exit
	Enter	1316	
	Exit	115	

DEPARTURE			
	Attendees	5000	
	Maximum cars	2300	
90% departure within 9-10pm		2070	exit
Staff departure within 9-10pm		0	exit
5%	Shuttle	104	exit
5%	Rideshare	104	enter
	Exit	1966	
	Enter	104	

APPENDIX K: MUTCD SIGNAL WARRANT ANALYSIS WORKSHEETS

Warrant 3: Peak Hour

3: Lowell Rd & SH 55 (2024 Total)

Sunnyslope Event Facility
Canyon County, Idaho

Intersection Information:

	Major Street	Minor Street
Street Name	Sunnyslope Rd (SH 55)	Lowell Rd
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	55	45

Warrant 3 Met? **Yes**

Details

Low Population? No

Condition A Met? No

Notes 0 Hours met (1 required)

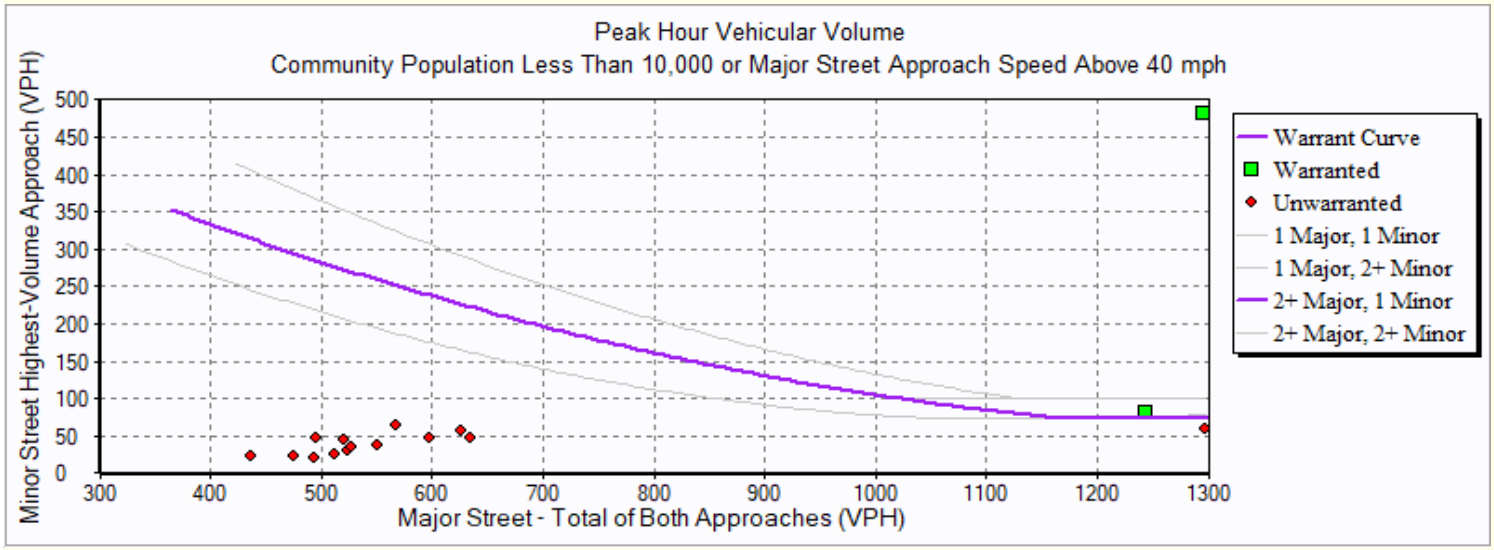
Condition B Met? Yes

Notes 2 Hours met (1 required)

Minor Approach Time Delay Condition Met? Not Met

Minor Approach Volume Condition Met? Met

Total Entering Intersection Volume Condition Met? Not Met



Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	59	4
1:00	48	1
2:00	41	1
3:00	63	2
4:00	121	4
5:00	278	9
6:00	436	24
7:00	493	20
8:00	475	23
9:00	512	25
10:00	524	30
11:00	527	34
12:00	550	38
13:00	521	45
14:00	597	47
15:00	634	47
16:00	1,762	60
17:00	1,244	82
18:00	627	56
19:00	495	47
20:00	568	64
21:00	1,296	483
22:00	258	36
23:00	89	4

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 N. Orchard Street, Boise ID 83706
(208) 373-0550

Brad Little, Governor
Jess Byrne, Director

January 4, 2023

By e-mail: *jenna.petroll@canyoncounty.id.gov*

Jenna Petroll
Case Planner
Canyon County
111 N. 11th Ave ROOM 310
Caldwell, ID 83605

Subject: Case No. CU2022-0034-APL

Dear Ms. Petroll:

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at: *https://www.deq.idaho.gov/public-information/assistance-and-resources/outreach-and-education/.*

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. **AIR QUALITY**

   - Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).

     For questions, contact David Luft, Air Quality Manager, at (208) 373-0550.

   - IDAPA 58.01.01.201 requires an owner or operator of a facility to obtain an air quality permit to construct prior to the commencement of construction or modification of any facility that will be a source of air pollution in quantities above established levels. DEQ asks that cities and counties require a proposed facility to contact DEQ for an applicability determination on their proposal to ensure they remain in compliance with the rules.

     For questions, contact the DEQ Air Quality Permitting Hotline at 1-877-573-7648.

2. **WASTEWATER AND RECYCLED WATER**

   - DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.

- IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.

- All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.

- DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.

- DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

  For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

3. DRINKING WATER

- DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.

- IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.

- All projects for construction or modification of public drinking water systems require preconstruction approval.

- DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at: https://www.deq.idaho.gov/water-quality/drinking-water/. For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.

- If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.

- DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.

- DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

4. SURFACE WATER

- Please contact DEQ to determine whether this project will require an Idaho Pollutant Discharge Elimination System (IPDES) Permit. A Construction General Permit from DEQ may be required if this project will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land.

- For questions, contact James Craft, IPDES Compliance Supervisor, at (208) 373-0144.
- If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.
- The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call (208) 334-2190 for more information. Information is also available on the IDWR website at: https://idwr.idaho.gov/streams/stream-channel-alteration-permits.html
- The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.

  For questions, contact Lance Holloway, Surface Water Manager, at (208) 373-0550.

5. SOLID WASTE, HAZARDOUS WASTE AND GROUND WATER CONTAMINATION

- **Solid Waste.** No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards (IDAPA 58.01.06), Rules and Regulations for Hazardous Waste (IDAPA 58.01.05), and Rules and Regulations for the Prevention of Air Pollution (IDAPA 58.01.01). Inert and other approved materials are also defined in the Solid Waste Management Regulations and Standards
- **Hazardous Waste.** The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.

- **Water Quality Standards.** Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852). Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.

- **Ground Water Contamination.** DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

  For questions, contact Rebecca Blankenau, Waste & Remediation Manager, at (208) 373-0550.

6. ADDITIONAL NOTES

- If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at (208) 373-0550, or visit the DEQ website https://www.deq.idaho.gov/waste-management-and-remediation/storage-tanks/leaking-underground-storage-tanks-in-idaho/ for assistance.

- If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any of our technical staff at (208) 373-0550.

Sincerely,

Aaron Scheff

Aaron Scheff
Regional Administrator

EDMS#: 2021AEK

February 10, 2023

To: Canyon County Commissioners
From: Destination Caldwell Board of Directors

Re: Letter of Record
Land Use Hearing
Sunnyslope Outdoor Venue Project

To Whom it May Concern,

Destination Caldwell is a 501(c) (3) organization that creates high-impact projects which leverage our rich agricultural heritage and vibrant community spirit to build a prosperous future for Caldwell. Within our mission are four pillars, one of which being:

1.) Agricultural Initiative: This includes support of agritourism, advocacy of our critical farmlands, and partnership with the Sunnyslope Wine Region. These actions are a critical part of the Destination brand promise.

Agritourism is defined in Destination Caldwell's founding documents as "the crossroads of tourism and agriculture."

Agritourism:

- Attracts members of the public to visit agricultural operations for recreation, entertainment, or educational experiences
- Is designed to increase income for the owner
- Emphasizes local goods and services
- Promotes the value of agriculture to our community in economic development, land use decisions, and public policy
- Highlights the connection of agriculture to the unique Destination Caldwell brand promise

Examples of agritourism include, but are not limited to:

- You pick operations or farm stands
- Demonstration farms
- Winery tours and wine tasting
- You pick flower farms
- Farmers' markets
- Rural bed & breakfasts
- Horseback riding or riding arenas
- Hospitality services (farm stays, guided tours or outfitter services)

- School tours
- Crop sign I.D. program
- Petting and feeding zoos
- Micro-brewery tours
- Exotic animal farm
- Corn mazes
- Cooking classes based on local agricultural products
- Hayrides
- Dude ranches
- Pumpkin picking patches
- Wagon or sleigh rides
- Agricultural museums
- Cut-your-own Christmas tree farms
- Outdoor recreation (fishing, hunting, wildlife study, horseback riding)
- Harvest festivals
- Hunting/working dog trials/training
- Wildlife viewing & photography
- Fee fishing or hunting

As Destination Caldwell has defined agritourism, elected officials can decide if the proposed Project falls under the provided definition. Destination Caldwell understands that with all emerging industry, there are concerns from impacted parties on affects to agricultural land, the rural environment, and the quality of life of the community that will live within the Project impact. Destination Caldwell upholds the importance of supporting and regulating emerging industries in a manner that balances the quality of life that makes Caldwell so special, while fostering responsible growth.

Sincerely,

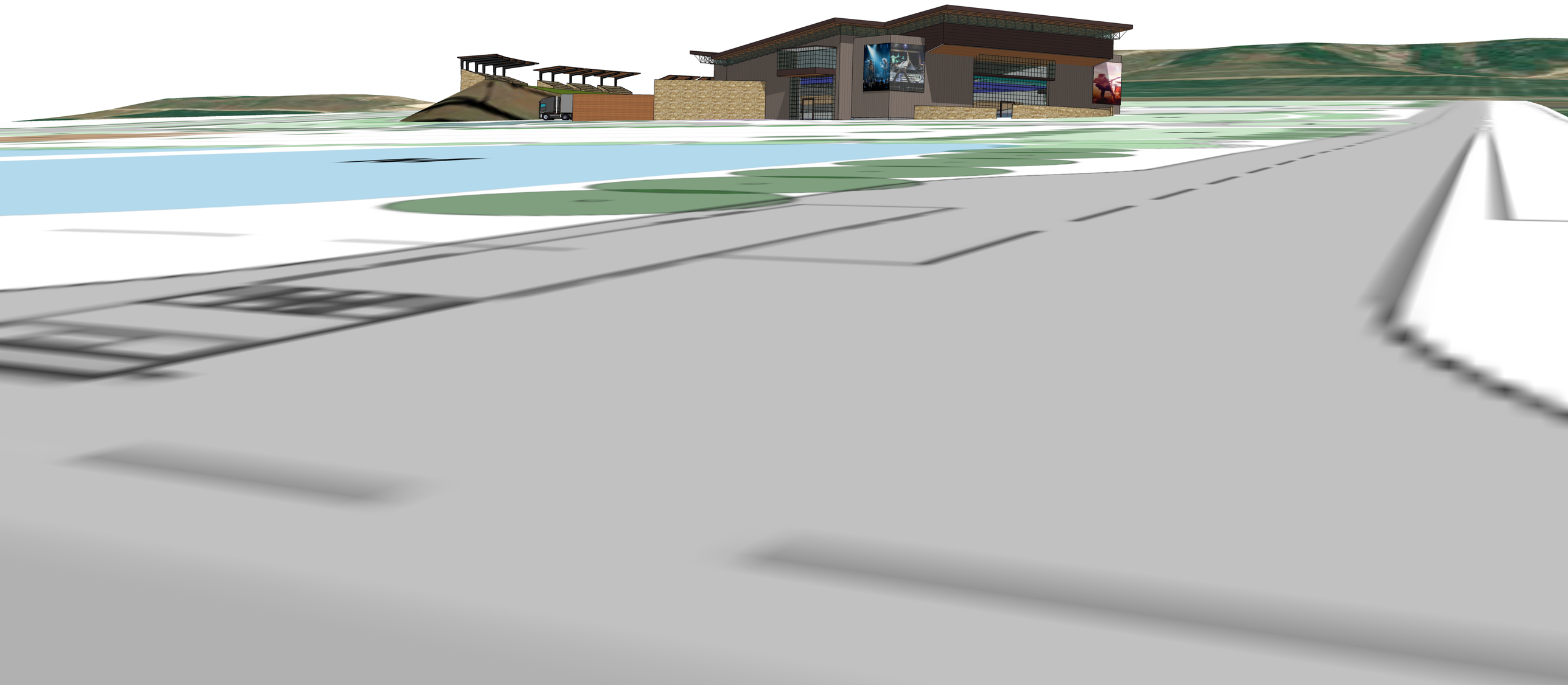
Reagan Rossi
President
Destination Caldwell Board of Directors
119 S. 7th Ave. Caldwell, Idaho 83605
Office: 208-649-5010
www.destinationcaldwell.com
www.indiancreekplaza.com

Background on Renderings

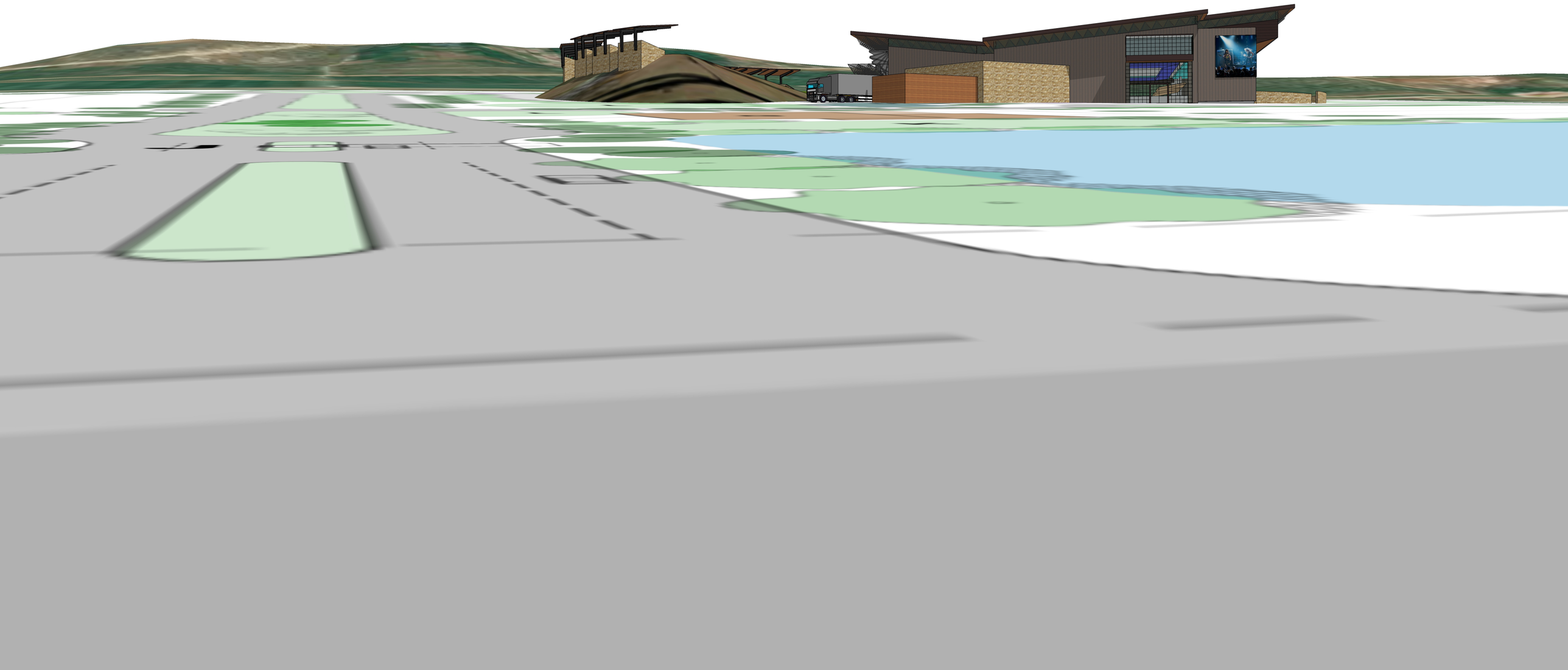
Following the direction of Planning Staff, we have provided renderings of the proposed venue. Staff recommended 5 different locations for us to provide viewpoints of what the site will look like. The numbers in the map below correspond to the numbered Views provided in the PDF.

We worked with our architect to create the visuals. This was done using a combination of different programs that allowed us to design a prototype of the venue, which was then layered onto Google Earth using the existing topography. It is important to note that while this prototype represents a fairly accurate model from a massing standpoint, the details of the architectural design have not been completed at this time.

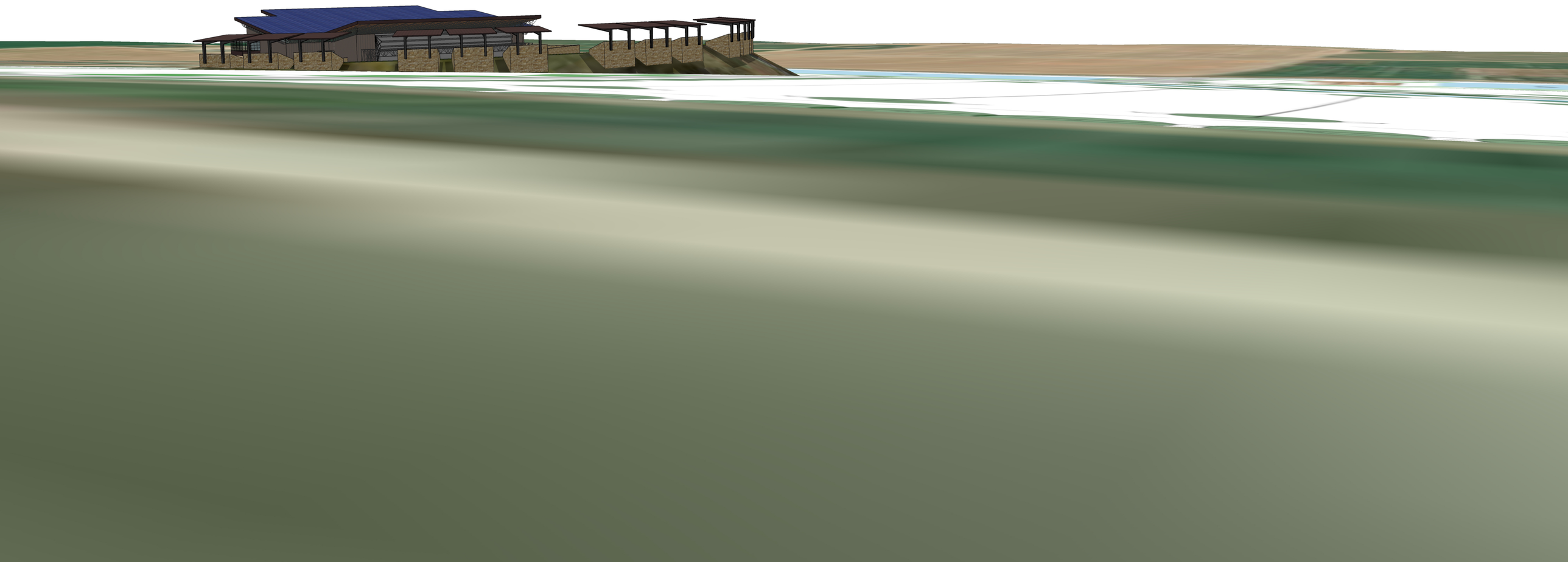
View 1



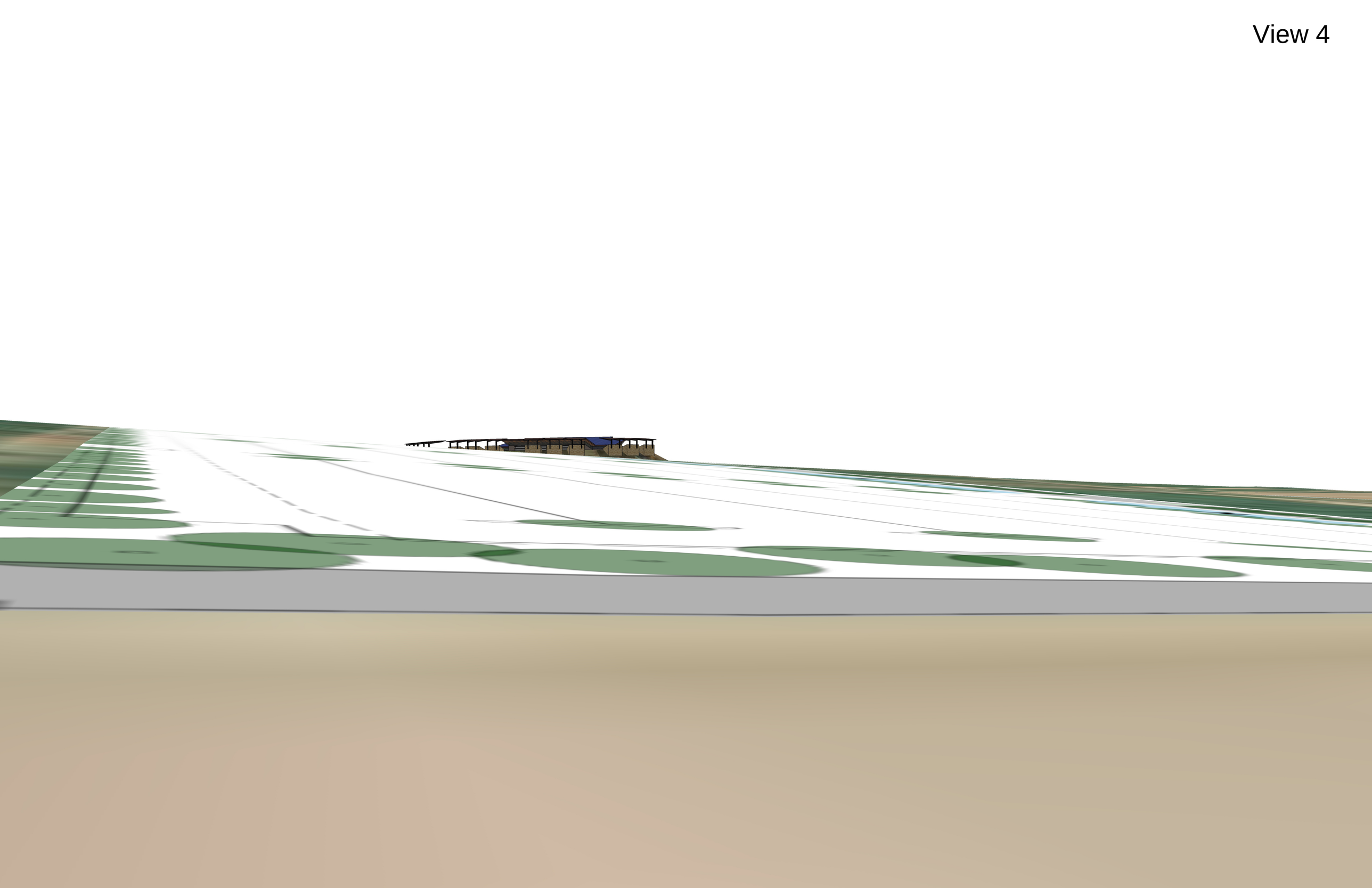
View 2



View 3



View 4



View 5

Jenna Petroll

From: Marsing Rural Fire <marsingruralfire@gmail.com>
Sent: Thursday, February 16, 2023 2:42 PM
To: Jenna Petroll
Subject: Re: [External] FW: Jerry - follow up to call, response time

Jenna

Our latest call to the south edge of the proposed event center was 12 minutes and 19 firemen. So i believe our response times are adequate.

Jerry Mayer, Chief
Marsing Rural Fire District

On Wed, Feb 15, 2023 at 2:29 PM Jenna Petroll <Jenna.Petroll@canyoncounty.id.gov> wrote:

> Good Afternoon Jerry,
>
> Bill LeClerc forwarded this email from you regarding response times for the Sunnyslope area. Would you say the stated response time of 10 – 18 minutes is adequate for this type of use?
>
> Thank you,
>
> *Jenna Petroll*
>
> **Planner II**
>
> **Planning and Zoning Division**
>
> **Canyon County Development Services**
>
> **jenna.petroll@canyoncounty.id.gov**
>
> **208-454-6632**
>
> ***Development Services Department (DSD)***

NEW public office hours

Effective Jan. 3, 2023

Monday, Tuesday, Thursday and Friday

8am – 5pm

Wednesday

1pm – 5pm

****We will not be closed during lunch hour ****

From: wleclerc@lexorbuilders.com <wleclerc@lexorbuilders.com>
Sent: Monday, February 6, 2023 3:29 PM
To: Jenna Petroll <Jenna.Petroll@canyoncounty.id.gov>
Subject: [External] FW: Jerry - follow up to call, response time

---

From: Marsing Rural Fire <marsingruralfire@gmail.com>
Sent: Monday, February 6, 2023 2:24 PM
To: wleclerc@lexorbuilders.com
Subject: Re: Jerry - follow up to call, response time

To whom it may concern

Marsing Rural Fire District has provided documentation to show our response times in this area to between 10 and 18 minutes.

Respectfully

Jerry Mayer, Chief

Marsing Rural Fire District

On Mon, Jan 30, 2023 at 2:15 PM <wleclerc@lexorbuilders.com> wrote:

Hi Jerry – I spoke with the Canyon County Planning Staff today and they suggested that I reach out to you to get an Agency Comment email in regard to the project we're trying to get approved.

This is in regards to the special events facility that we're planning to develop at Lowell Road/Highway 55. I have shared the call response times with them, but they said having an Agency Comment letter from you as well that notes that emergency services can be provided would be helpful.

I can give you a call to discuss if that is easier.

Bill LeClerc

From: Marsing Rural Fire <marsingruralfire@gmail.com>
Sent: Monday, December 19, 2022 9:22 AM
To: William LeClerc <wleclerc@lexorbuilders.com>
Subject: Re: Jerry - follow up to call, response time

Bill

Here you go.

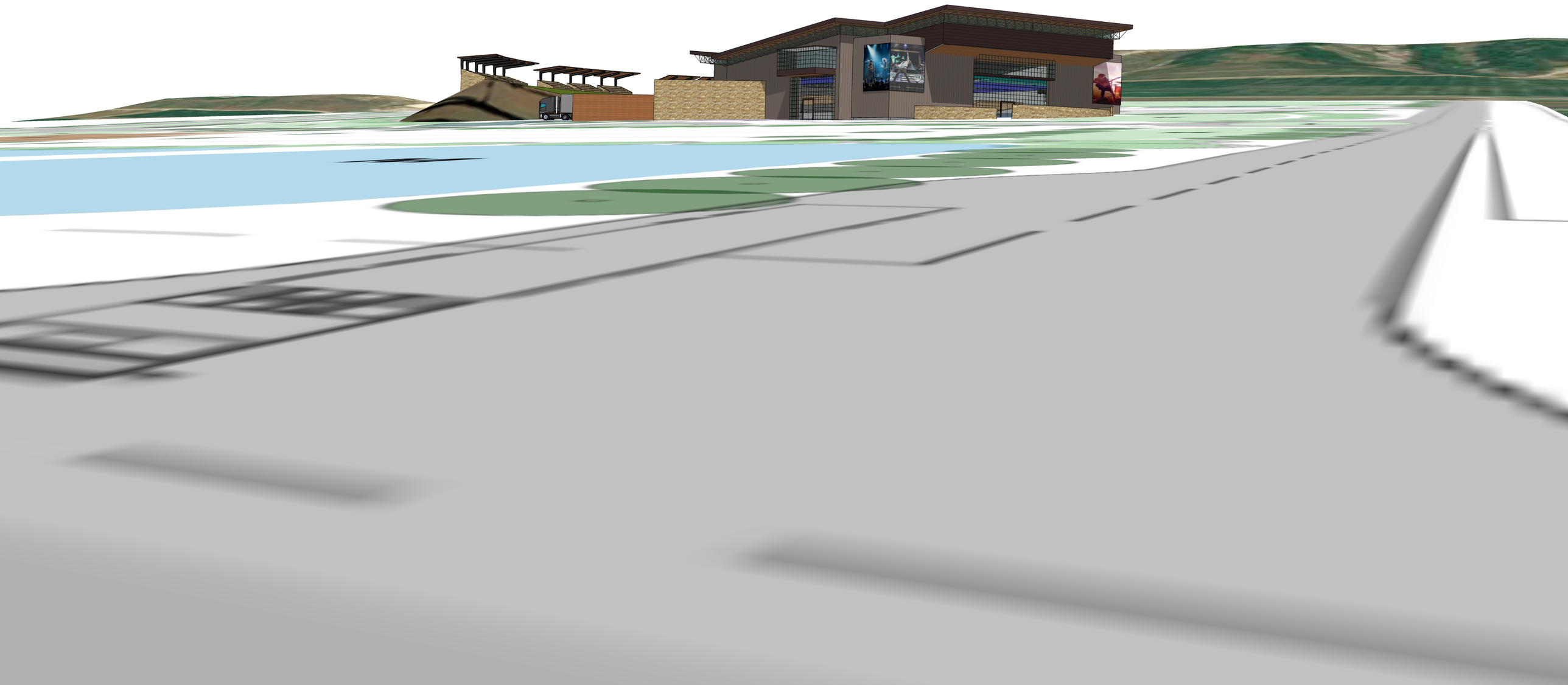
Jerry Mayer

Marsing Rural Fire District

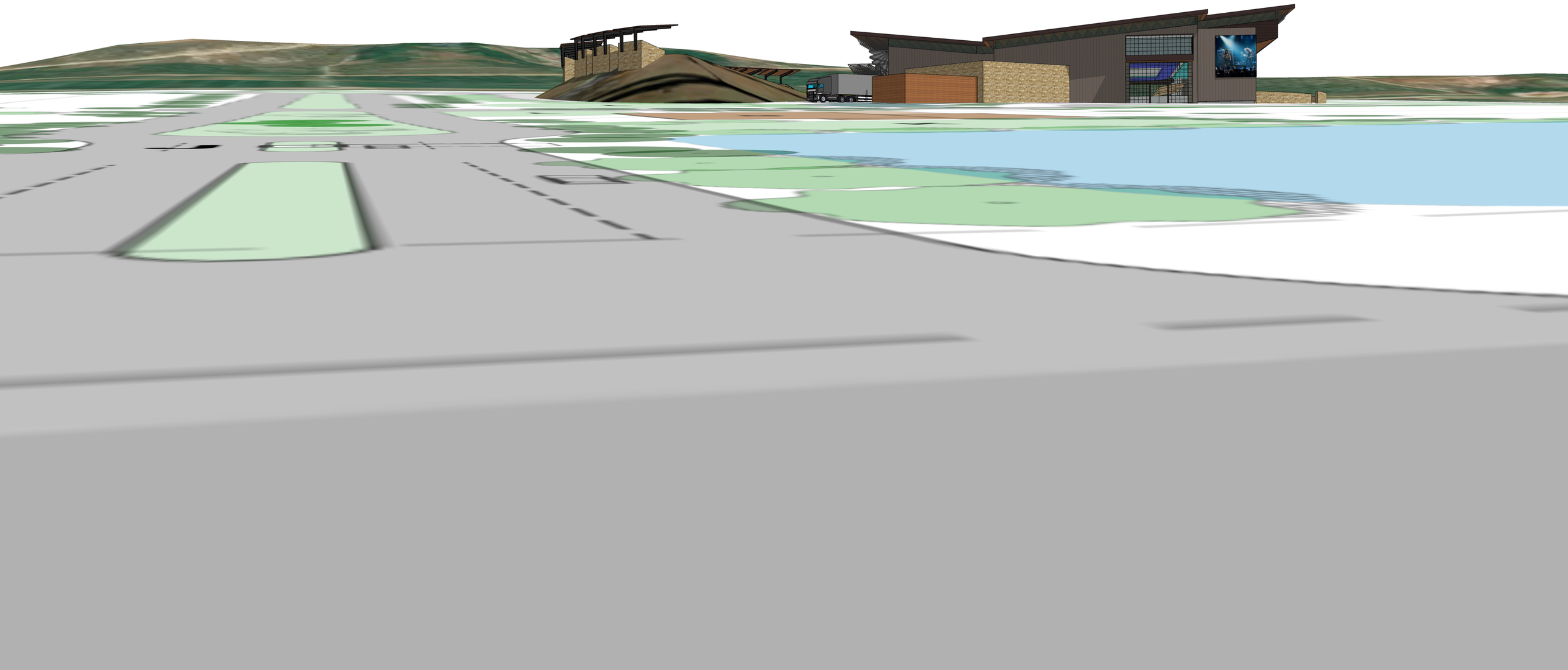
On Thu, Dec 15, 2022 at 4:43 PM William LeClerc <wleclerc@lexorbuilders.com> wrote:

> Hi Jerry - appreciate your time earlier on the phone discussing response times for our project. Please let me know what you are able to dig up.
>
> Best
> Bill LeClerc
> 978-877-1798
>
> Sent from my iPhone

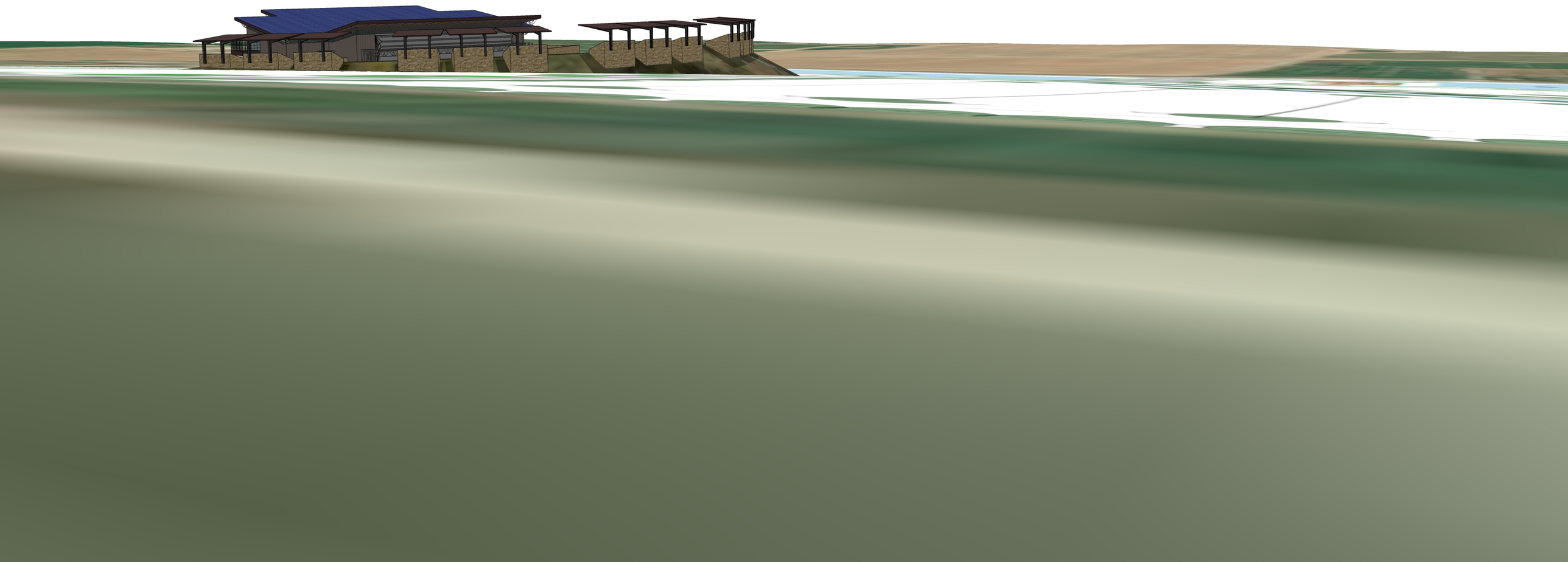
View 1



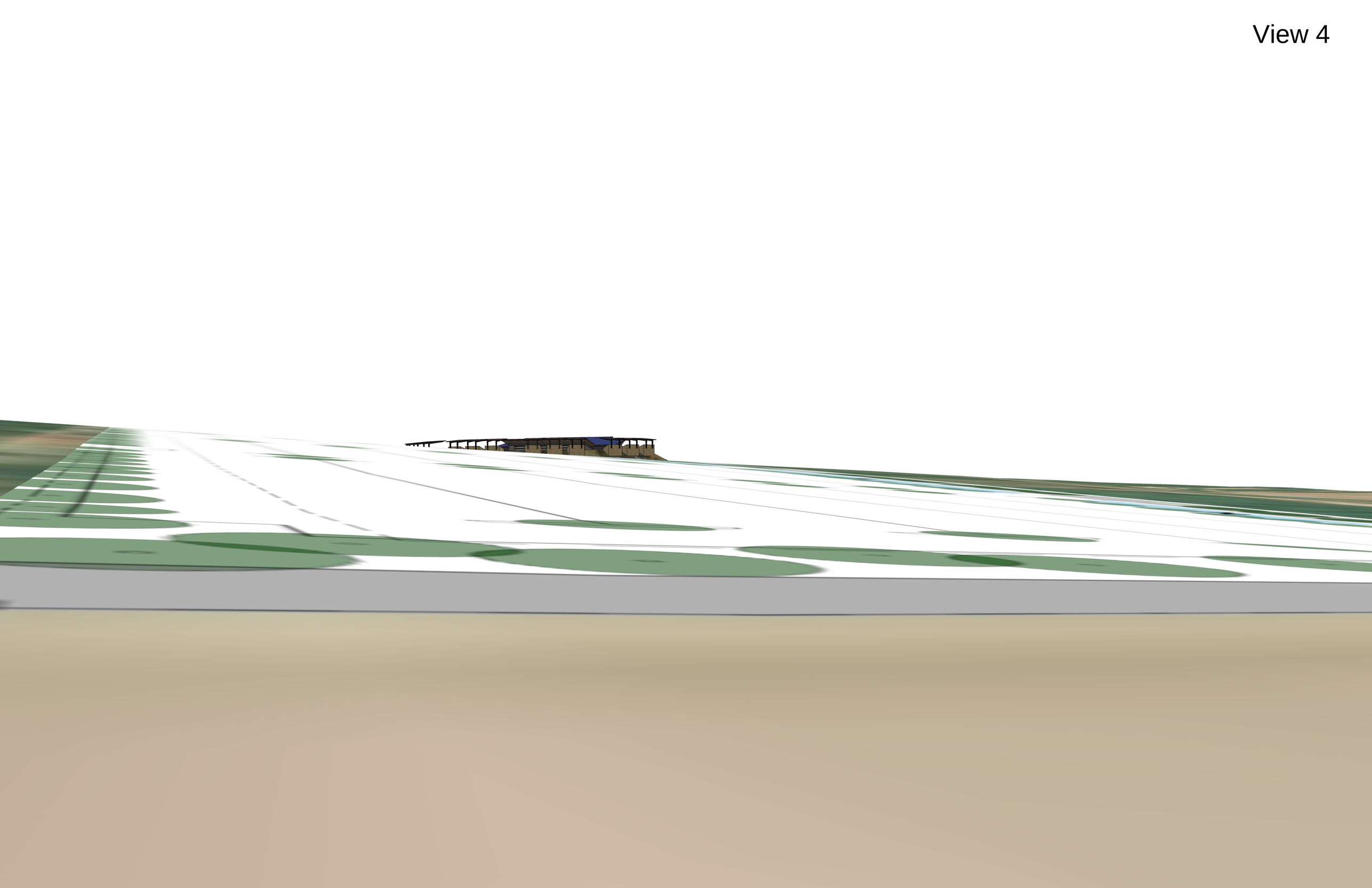
View 2



View 3



View 4



View 5