CYMPO
Regional Adaptive Signal Control Technology
Assessment of Need, Benefit, and Implementation Plan

Intelligent Transportation Systems
State of the System

Prepared for:

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Central Yavapai Metropolitan Planning Organization

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Table of Contents

1.0 Introduction 1
1.1. Background 1
1.2. Study Area 1
1.2.1. State Route 69 1
1.2.2. Glassford Hill Road 2
1.2.3. Willow Creek Road 2
1.3. Purpose of the State of the System 2

2.0 Data Collection and Modeling Methodology 5
2.1. StreetLight Turning Movement Counts 5
2.2. Synchro Model Development 6

3.0 State Route 69 7
3.1. SR 69 Snapshot 7
3.2. Relevant Plans and Studies 11
3.3. Agency Information 11
3.4. Existing Land Use 11
3.5. Roadway Characteristics 13
3.6. Programmed Improvements 13
3.7. Other Factors Influencing Operations 13
3.8. Crash Analysis 13
3.9. Traffic Management Devices 17
3.10. ITS/Traffic Operations 22
3.10.1. Traffic Volumes 22
3.10.2. Signal Timing Plans 27
3.10.3. Existing Traffic Patterns/Operations 28
3.10.4. Traffic Predictability 35
3.11. Available Funding 53
3.12. System Functional Capabilities 53
3.13. Potential Signal Timing Improvements 53
3.14. Summary of Findings 57

4.0 Glassford Hill Road 59
4.1. Glassford Hill Road Snapshot 59
4.2. Relevant Plans and Studies 63
4.3. Agency Information 63
4.4. Existing Land Use 63
4.5. Roadway Characteristics 65
4.6. Programmed Improvements 65
4.7. Other Factors Influencing Operations 65
4.8. Crash Analysis 65
4.9. Traffic Management Devices 68
4.10. ITS/Traffic Operations 68
4.10.1. Traffic Volumes 68
4.10.2. Signal Timing Plans 73
4.10.3. Existing Traffic Patterns/Operations 73
4.10.4. Traffic Predictability 79
4.11. Available Funding 82

4.11.1. Construction Funding 82
4.11.2. Maintenance Funding 83
4.12. System Functional Capabilities 83
4.13. Potential Signal Timing Improvements 83
4.14. Summary of Findings 86

5.0 Willow Creek Road 87
5.1. Willow Creek Road Snapshot 87
5.2. Relevant Plans and Studies 91
5.3. Agency Information 91
5.4. Existing Land Use 91
5.5. Roadway Characteristics 93
5.6. Programmed Improvements 93
5.7. Other Factors Influencing Operations 93
5.8. Crash Analysis 93
5.9. Traffic Management Devices 96
5.10. ITS/Traffic Operations 100
5.10.1. Traffic Volumes 100
5.10.2. Signal Timing Plans 104
5.10.3. Existing Traffic Patterns/Operations 104
5.10.4. Traffic Predictability 111
5.11. Available Funding 114
5.11.1. Construction Funding 114
5.11.2. Maintenance Funding 115
5.12. System Functional Capabilities 115
5.13. Potential Signal Timing Improvements 115
5.14. Summary of Findings 119

List of Figures

Figure 1 – State Route 69 Study Area 2
Figure 2 – Glassford Hill Road Study Area 3
Figure 3 – Willow Creek Road Study Area 4
Figure 4 – StreetLight Zone Set Example 5
Figure 5 – SR 69 Vehicle Detection Types 8
Figure 6 – SR 69 Communication Types 9
Figure 7 – SR 69 Controller Types 10
Figure 8 – SR 69 Major Trip Generators 12
Figure 9 – SR 69 Crash Heat Map 15
Figure 10 – SR 69 Rear End Crash Heat Map 16
Figure 11 – SR 69 Special Count Locations 22
Figure 12 – SR 69 AM Peak Hour Turning Movement Counts 24
Figure 13 – SR 69 Mid-Day Peak Hour Turning Movement Counts 25
Figure 14 – SR 69 PM Peak Hour Turning Movement Counts 26
Figure 15 – SR 69 AM Peak Hour Levels of Service 32
Figure 16 – SR 69 Mid-Day Peak Hour Levels of Service 33
Figure 17 – SR 69 PM Peak Hour Levels of Service 34
Figure 18 – Westbound SR 69 Weekday Average Speed 35
Figure 19 – Westbound SR 69 Weekend Average Speed 36
Figure 20 – Eastbound SR 69 Weekday Average Speed 36
Figure 21 – Eastbound SR 69 Weekend Average Speed 37
Figure 22 – Westbound SR 69 Average Weekday Travel Time 37

Figure 23 – Westbound SR 69 Average Weekend Travel Time 38
Figure 24 – Eastbound SR 69 Average Weekday Travel Time 38
Figure 25 – Eastbound SR 69 Average Weekend Travel Time 39
Figure 26 – SR 69 Average Speeds During Crossroads Prescott Gun Show 40
Figure 27 – SR 69 Average Travel Time During Crossroads Prescott Gun Show 40
Figure 28 – SR 69 Average Speeds During Whiskey Off-Road Mountain Bike Race 41
Figure 29 – SR 69 Average Travel Time During Whiskey Off-Road Mountain Bike Race 41
Figure 30 – SR 69 Average Speeds During Whiskey Row Marathon 42
Figure 31 – SR 69 Average Travel Time During Whiskey Row Marathon 42
Figure 32 – SR 69 Average Speeds During Fine Art and Wine Festival 43
Figure 33 – SR 69 Average Travel Time During Fine Art and Wine Festival 43
Figure 34 – SR 69 Average Speeds During Bluegrass Festival 44
Figure 35 – SR 69 Average Travel Time During Bluegrass Festival 44
Figure 36 – SR 69 Average Speeds During 4th of July/World's Oldest Rodeo 45
Figure 37 – SR 69 Average Travel Time During 4th of July/World's Oldest Rodeo 45
Figure 38 – SR 69 Average Speeds During Prescott's Gem and Mineral Show 46
Figure 39 – SR 69 Average Travel Time During Prescott's Gem and Mineral Show 46
Figure 40 – SR 69 Average Speeds During Yavapai County Fair 47
Figure 41 – SR 69 Average Travel Time During Yavapai County Fair 47
Figure 42 – SR 69 Milepost 294.7 Eastbound 2021 Weekday Traffic Volume 48
Figure 43 – SR 69 Milepost 294.7 Eastbound 2021 Weekend Traffic Volume 48
Figure 44 – SR 69 Milepost 288 Eastbound 2021 Weekday Traffic Volume 49
Figure 45 – SR 69 Milepost 288 Eastbound 2021 Weekend Traffic Volume 49
Figure 46 – SR 69 Milepost 283 Eastbound 2021 Weekday Traffic Volume 49
Figure 47 – SR 69 Milepost 283 Eastbound 2021 Weekend Traffic Volume 50
Figure 48 – SR 69 Milepost 283 Westbound 2021 Weekday Traffic Volume 50
Figure 49 – SR 69 Milepost 283 Westbound 2021 Weekend Traffic Volume 50
Figure 50 – SR 69 Milepost 288 Westbound 2021 Weekday Traffic Volume 51
Figure 51 – SR 69 Milepost 288 Westbound 2021 Weekend Traffic Volume 51
Figure 52 – SR 69 Milepost 292.65 Westbound 2021 Weekday Traffic Volume 51
Figure 53 – SR 69 Milepost 292.65 Westbound 2021 Weekend Traffic Volume 52
Figure 54 – SR 69 Milepost 294.7 Westbound 2021 Weekday Traffic Volume 52
Figure 55 – SR 69 Milepost 294.7 Westbound 2021 Weekend Traffic Volume 52
Figure 56 – Glassford Hill Road Vehicle Detection Types 60
Figure 57 – Glassford Hill Road Communication Types 61
Figure 58 – Glassford Hill Road Controller Types 62
Figure 59 – Glassford Hill Road Major Trip Generators 64
Figure 60 – Glassford Hill Road Crash Heat Map 66
Figure 61 – Glassford Hill Road Rear End Crash Heat Map 67
Figure 62 – Glassford Hill Road AM Peak Hour Turning Movement Counts 70
Figure 63 – Glassford Hill Road Mid-Day Peak Hour Turning Movement Counts 71
Figure 64 – Glassford Hill Road PM Peak Hour Turning Movement Counts 72
Figure 65 – Glassford Hill Road AM Peak Hour Levels of Service 76
Figure 66 – Glassford Hill Road Mid-Day Peak Hour Levels of Service 77
Figure 67 – Glassford Hill Road PM Peak Hour Levels of Service 78
Figure 68 – Traffic Volumes on Glassford Hill Road: SR 69 to Pav Way 79
Figure 69 – Traffic Volumes on Glassford Hill Road: Pav Way to Florentine Road 79
Figure 70 – Traffic Volumes on Glassford Hill Road: Florentine Road to Lakeshore Drive 80
Figure 71 – Traffic Volumes on Glassford Hill Road: Lakeshore Drive to Panther Path 80
Figure 72 – Traffic Volumes on Glassford Hill Road: Panther Path to Long Look Drive 80

Figure 73 – Traffic Volumes on Glassford Hill Road: Long Look Drive to Spouse Drive 81
Figure 74 – Traffic Volumes on Glassford Hill Road: Spouse Drive to SR 89A 81
Figure 75 – Glassford Hill Road Seasonal Traffic Volumes Near Lakeshore Drive 82
Figure 76 – Glassford Hill Road Seasonal Traffic Volumes Near Santa Fe Loop Drive 82
Figure 77 – Willow Creek Road Vehicle Detection Types 88
Figure 78 – Willow Creek Road Communication Types 89
Figure 79 – Willow Creek Road Controller Types 90
Figure 80 – Willow Creek Road Major Trip Generators 92
Figure 81 – Willow Creek Road Crash Heat Map 94
Figure 82 – Willow Creek Road Rear End Crash Heat Map 95
Figure 83 – Willow Creek Road AM Peak Hour Turning Movement Counts 101
Figure 84 – Willow Creek Road Mid-Day Peak Hour Turning Movement Counts 102
Figure 85 – Willow Creek Road PM Peak Hour Turning Movement Counts 103
Figure 86 – Willow Creek Road AM Peak Hour Levels of Service 108
Figure 87 – Willow Creek Road Mid-Day Peak Hour Levels of Service 109
Figure 88 – Willow Creek Road PM Peak Hour Levels of Service 110
Figure 89 – Thanksgiving Week 2020 Traffic Volumes at Willow Creek Road and Willow Lake Road 111
Figure 90 – December 2020 Weekday Traffic Volumes at Willow Creek Road and Willow Lake Road 111
Figure 91 – December 2020 Weekend Traffic Volumes at Willow Creek Road and Willow Lake Road 112
Figure 92 – December 2020 Weekday Willow Creek Road and Willow Lake Road NB Approach Volume 112
Figure 93 – December 2020 Weekday Willow Creek Road and Willow Lake Road SB Approach Volume 112
Figure 94 – December 2020 Weekday Willow Creek Road and Willow Lake Road WB Approach Volume 113
Figure 95 – Willow Creek Road Seasonal Traffic Volumes Near Iron Springs Road/Whipple Street 113
Figure 96 – Willow Creek Road Seasonal Traffic Volumes Near Country Park Drive/Pennie Ann Drive 114
Figure 97 – Willow Creek Road Seasonal Traffic Volumes Near Willow Creek Road and Sandretto Drive 114

List of Tables

Table 1 – LOS Thresholds for Signalized Intersections 6
Table 2 – SR 69 Assessment Summary 7
Table 3 – SR 69 Number of Travel Lanes 13
Table 4 – SR 69 Programmed Number of Travel Lanes 13
Table 5 – SR 69 Traffic Management Devices 17
Table 6 – SR 69 Existing Cycle Lengths and Offsets 27
Table 7 – SR 69 Existing Conditions Delay, LOS, and v/c Ratio Analysis 28
Table 8 – SR 69 Coordination Zones 54
Table 9 – SR 69 Optimized Cycle Lengths and Offsets 54
Table 10 – SR 69 AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 55
Table 11 – SR 69 Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 56
Table 12 – SR 69 PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS 56
Table 13 – Glassford Hill Road Assessment Summary 59
Table 14 – Glassford Hill Road Number of Travel Lanes 65
Table 15 – Glassford Hill Road Traffic Management Devices 68
Table 16 – Glassford Hill Road 2017 ADT 68
Table 17 – Glassford Hill Road Existing Cycle Lengths and Offsets 73
Table 18 – Glassford Hill Road Existing Conditions Delay, LOS, and v/c Ratio Analysis 74
Table 19 – Glassford Hill Road Coordination Zones 83
Table 20 – Glassford Hill Road Optimized Cycle Lengths and Offsets 84
Table 21 – Glassford Hill Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 84
Table 22 – Glassford Hill Road Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 85
Table 23 – Glassford Hill Road PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS 85

Table 24 – Willow Creek Road Assessment Summary 87
Table 25 – Willow Creek Road Number of Travel Lanes 93
Table 26 – Willow Creek Road Traffic Management Devices 96
Table 27 – Willow Creek Road Existing Conditions Delay, LOS, and v/c Ratio Analysis 104
Table 28 – Willow Creek Road Coordination Zones 116
Table 29 – Willow Creek Road Optimized Cycle Lengths and Offsets 116
Table 30 – Willow Creek Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 117
Table 31 – Willow Creek Road Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio 118
Table 32 – Willow Creek Road PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS 118

Appendices

Appendix SS-1	SR 69 Agency Information Request Responses
Appendix SS-2	SR 69 Traffic Signal Timing Plans
Appendix SS-3	SR 69 Existing Delay and Capacity Analysis Results
Appendix SS-4	SR 69 Existing Time-Space Diagrams
Appendix SS-5	SR 69 Clearance and Pedestrian Interval Calculations
Appendix SS-6	SR 69 Optimized Plans Delay and Capacity Analysis Results
Appendix SS-7	SR 69 Optimized Plans Time-Space Diagrams
Appendix SS-8	Glassford Hill Road Agency Information Request Responses
Appendix SS-9	Glassford Hill Road Traffic Signal Timing Plans
Appendix SS-10	Glassford Hill Road Existing Delay and Capacity Analysis Results
Appendix SS-11	Glassford Hill Road Existing Time-Space Diagrams
Appendix SS-12	Glassford Hill Road Clearance and Pedestrian Interval Calculations
Appendix SS-13	Glassford Hill Road Optimized Plans Delay and Capacity Analysis Results
Appendix SS-14	Glassford Hill Road Optimized Plans Time-Space Diagrams
Appendix SS-15	Willow Creek Road Agency Information Request Responses
Appendix SS-16	Willow Creek Road Traffic Signal Timing Plans
Appendix SS-17	Willow Creek Road Existing Delay and Capacity Analysis Results
Appendix SS-18	Willow Creek Road Optimized Plans Delay and Capacity Analysis Results
Appendix SS-19	Willow Creek Road Optimized Time-Space Diagrams

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1.0 Introduction

The Central Yavapai Metropolitan Planning Organization (CYMPO) is preparing this Regional Adaptive Signal Control Technology (ASCT) Assessment of Need, Benefit, and Implementation Plan (Plan) in partnership with its member agencies and the Arizona Department of Transportation (ADOT). This Plan will address signal timings, equipment needs, and the resulting implementation and deployment plan for a system of ASCT or alternate improvements for three corridors: State Route (SR) 69, Glassford Hill Road, and Willow Creek Road. These improvements will increase the overall efficiency and operations of the three corridors for the safe and efficient movement of people, goods, and services within the CYMPO region. A phased implementation plan with near- and long-term improvements will be developed.

1.1. Background

This Plan stems from CYMPO's 2045 Regional Transportation Plan (2045 RTP). The 2045 RTP recommended an adaptive signal system as a 2030 modernization strategy for SR 69 (higher priority), Glassford Hill Road (medium priority), and Willow Creek Road (medium priority). Improving signal timing at the intersection of SR 69 and Glassford Hill Road was the highest scoring 2030 modernization project. A large proportion of the public comments received as part of the 2045 RTP development were related to traffic progression on these corridors.

1.2. Study Area

The study area for this project consists of three corridors, discussed below.

1.2.1. State Route 69

The study area includes the portion of SR 69 between SR 89 and Fain Road, which is owned and operated by ADOT; except the traffic signal at Sheldon Street and Gurley Street (SR 69), which is owned and operated by the City of Prescott. The SR 69 study corridor is approximately 13 miles long and includes 23 existing and one future traffic signal, including:

- Sheldon Street
- Heather Heights
- Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros
- Yavpe Connector
- Holiday Drive
- Prescott Lakes Parkway
- Gateway Road
- Lee Boulevard
- Walker Road
- Sunrise Boulevard/Old Black Canyon Highway
- Robin Drive
- Ramada Drive
- Diamond Drive
- Sundog Ranch Road
- Stoneridge Drive
- Prescott E Highway
- Glassford Hill Road
- Lake Valley Road
- Windsong Drive
- Robert Road
- Navajo Drive
- Mendecino Drive (construction anticipated 2022)
- Enterprise Parkway
- Fain Road

All signals along the corridor have radio and/or fiber optic cable communications, with the exceptions of Sheldon Street, Enterprise Parkway, and Fain Road. Vehicle detection consists of radar and in-ground loops. The signals are remotely operated, and the signal controllers throughout the corridor are new. A traffic signal will be constructed at Mendecino Drive within the next year. SR 69 experiences average daily traffic (ADT) between 25,000 and 40,000 vehicles. This corridor is shown in **Figure 1.**

1.2.2. Glassford Hill Road

The study area includes Glassford Hill Road between SR 69 and SR 89A, which is owned and operated by the Town of Prescott Valley; except the traffic signals at Glassford Hill Road and SR 69 and Glassford Hill Road and SR 89A, which are owned and operated by ADOT. The Glassford Hill Road corridor is approximately 3.5 miles long and includes 10 traffic signals, including:

- State Route 69
- Centre Court
- Florentine Road
- Veterans Way, Previously NAZ Suns Way
- Lakeshore Drive
- Long Look Drive
- Spouse Drive
- Santa Fe Loop Road
- Granville Parkway North/Tuscany Way
- State Route 89A

Most traffic signals along the corridor have GPS clocks and video or in-ground loop vehicle detection. Glassford Hill Road experiences ADTs of 20,000 to 25,000 vehicles. There may be the potential to widen the roadway between SR 89A and Tuscany Way South, in addition to intelligent transportation system (ITS) improvements. This corridor is shown in **Figure 2.**

1.2.3. Willow Creek Road

The study area includes Willow Creek Road/Miller Valley Road/Grove Avenue between Gurley Street and the Deep Well Ranch Roundabout on SR 89, which is owned and operated by the City of Prescott; except the traffic signal at Willow Creek Road and Pioneer Parkway, which is owned by Yavapai County. The Willow Creek Road corridor is approximately nine miles long and includes 21 existing and two future traffic signals, including:

- Gurley Street
- Sheldon Street
- Schemmer Drive
- Fair Street/Hillside Avenue
- Iron Springs Road/Whipple Street
- Ainsworth Drive
- Black Drive
- Gail Gardner Way/Prescott Heights Drive
- Rosser Street
- Green Lane/Pulliam Drive
- Country Park Drive/Pennie Ann Drive
- Nicholet Trail/Smoke Tree Lane
- Crossings Drive/College Heights Road
- Montana Drive
- Willow Lake Road
- Sandretto Drive
- Commerce Drive
- Unnamed entrance to Tractor Supply Co and Prescott Honda
- Dan Carrell Drive/Heritage Park Road
- Haas Boulevard/Whispering Rock Development
- Pioneer Parkway
- Warrior Way (Deep Well Ranch Master Plan Area) (under construction)
- Lone Elk Trail (Deep Well Ranch Master Plan Area) (under construction)

Traffic signals are under construction at Warrior Way and Lone Elk Trail. A traffic signal or roundabout is planned at James Lane. Traffic signals in this corridor generally have in-ground loop vehicle detection. Signal communication is handled through twisted pair wires (intermittent gaps in conduit exist). Willow Creek Road experiences ADTs of 20,000 to 25,000 vehicles. This corridor is shown in **Figure 3**.

1.3. Purpose of the State of the System

The purpose of the State of the System Working Paper is to provide clarity and context for the existing ITS infrastructure, its capabilities and limitations, and agency maintenance practices. This paper will also identify traffic patterns and predictability, congestion, and potential available funding for construction and maintenance of ITS solutions.

Figure 1 – State Route 69 Study Area

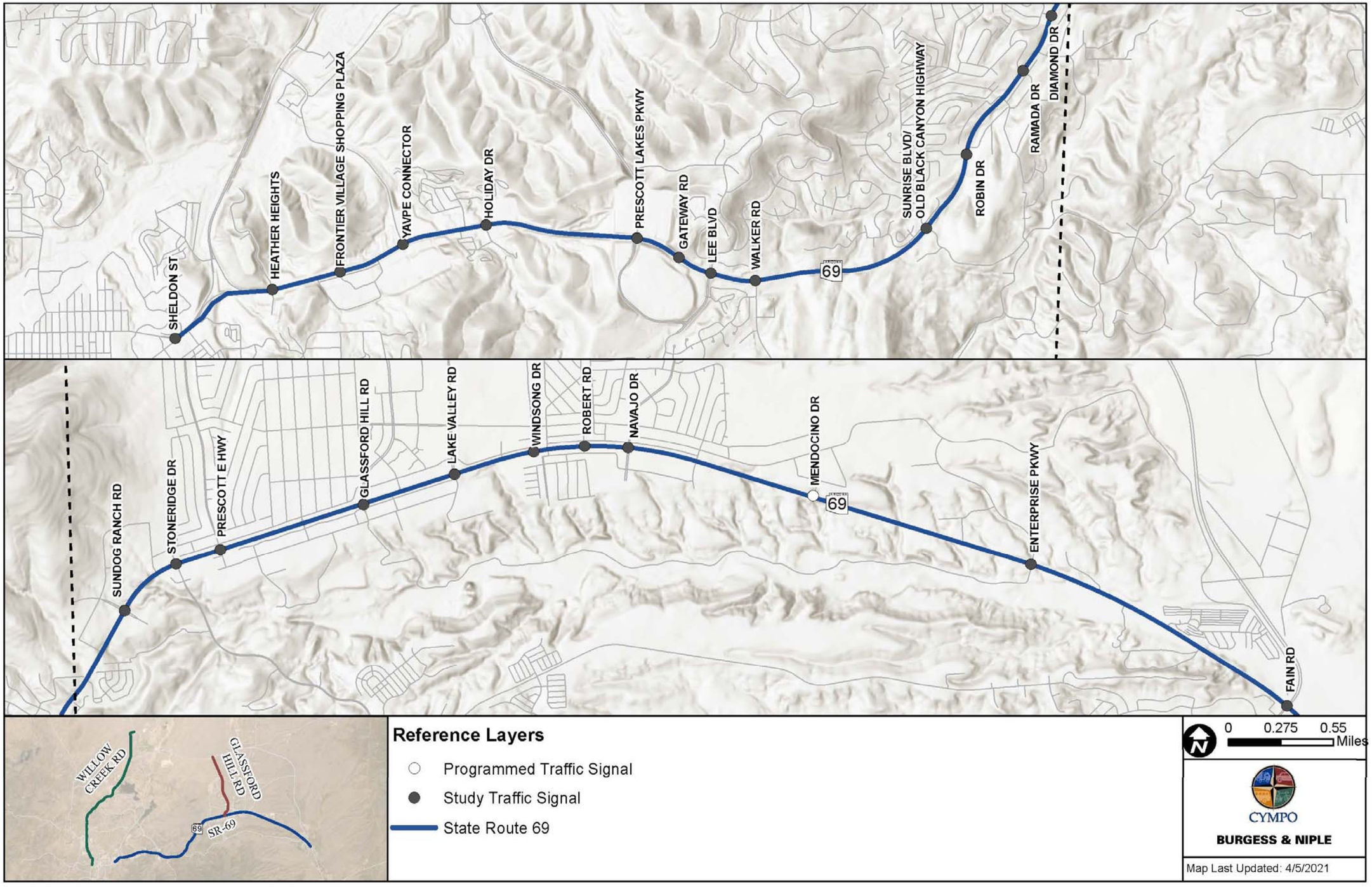


Figure 2 – Glassford Hill Road Study Area



Figure 3 – Willow Creek Road Study Area

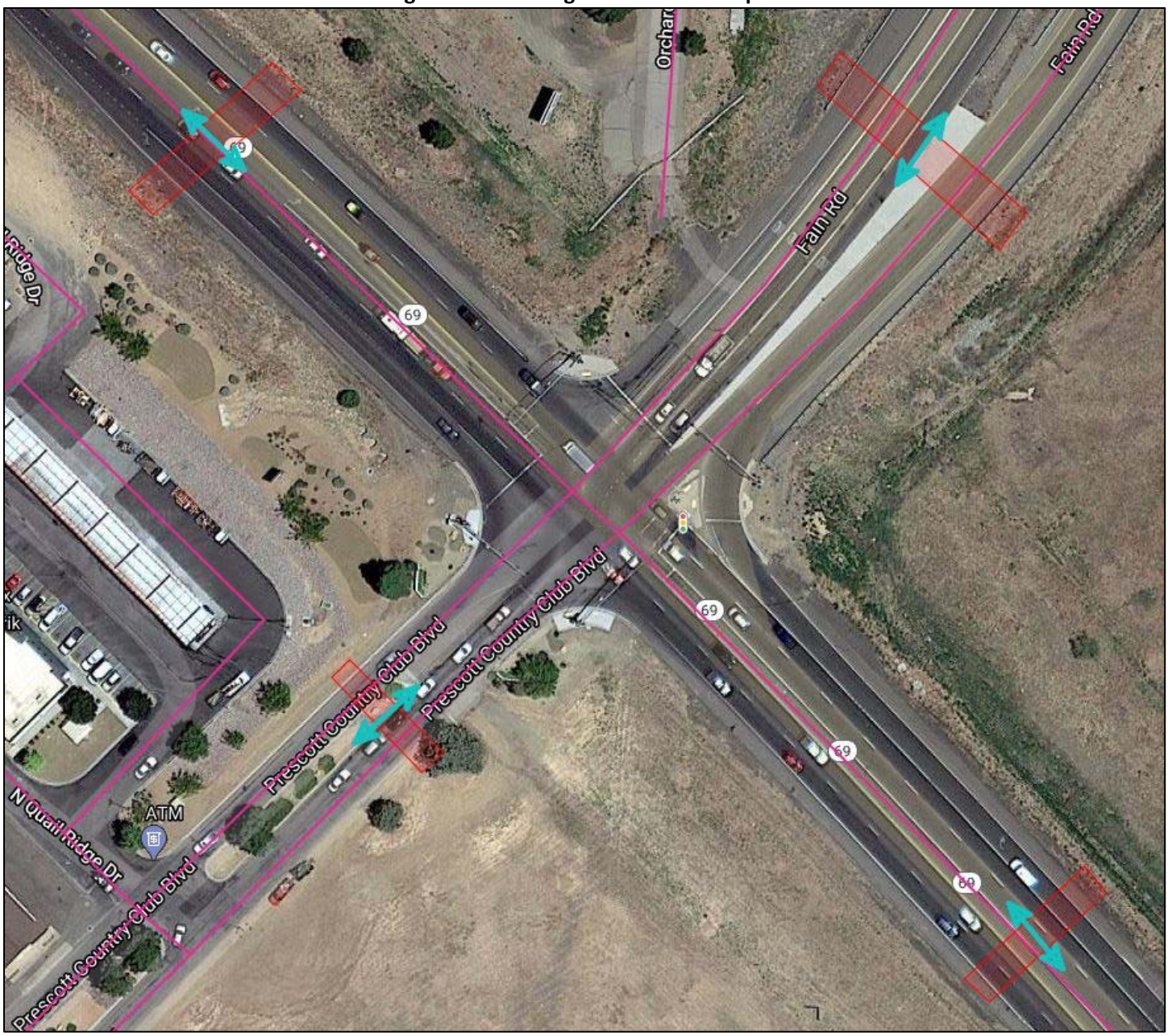


2.0 Data Collection and Modeling Methodology

2.1. StreetLight Turning Movement Counts

StreetLight uses location-based services and GPS data from smart phones paired with parcel and digital road network data to develop trip data which are validated by traffic counters and embedded sensors. To obtain turning movement counts (TMCs) using StreetLight, zones were created at each leg of an intersection to measure bi-directional traffic volumes. The zone set created at the intersection of SR 69 and Fain Road is included in **Figure 4** as an example.

Figure 4 – StreetLight Zone Set Example



Once a zone set was established, analysis dates and time periods were selected, and known ADT were entered as a means of calibration. Calibration is a process of adjusting parameters so that outputs agree with measured field conditions. The StreetLight modular analysis feature creates origin-destination (O-D) pairs assigned for each turning or through movement at the intersection and determines the corresponding traffic volumes.

2.2. Synchro Model Development

Synchro (Version 11.0) models were developed for a Level of Service (LOS) and volume to capacity (v/c) ratio analysis of existing conditions within the study area.

LOS is a qualitative measure of how well an intersection or roadway segment operates on a graded scale of A (best) to F (worst). LOS considers a variety of factors, including stability of traffic flow, opportunity for passing, and driver comfort. Operations of LOS D and better are typically considered acceptable in urban settings. Operations of LOS E or F may be flagged for improvement. For intersection analysis, LOS is determined using the total delay, in seconds, of vehicles which approach the intersection over the course of one traffic signal cycle. Intersections within the study area were analyzed using the LOS thresholds shown in **Table 1**.

Table 1 – LOS Thresholds for Signalized Intersections

Control Delay	Level of Service
≤ 10 seconds	A
10 – 20 seconds	B
20 – 35 seconds	C
35 – 55 seconds	D
55 – 80 seconds	E
> 80 seconds	F

The v/c ratio is the ratio of the vehicular demand to the capacity of the roadway. It is also known as the degree of saturation and is an indicator of the level of congestion of a roadway. A v/c ratio less than 0.85 indicates adequate roadway capacity and insignificant queues and delays. Queuing and delays may occur as the v/c ratio approaches 1.0 and a v/c ratio over 1.0 indicates the demand has exceeded capacity and excessive queues and delays are expected.

Synchro was also used in the development of time-space diagrams. Time-space diagrams depict the relationship of traffic progression through a corridor over time. They demonstrate vehicle platoon trajectory through a series of intersections. They are used to illustrate signal coordination and other potential signal timing improvements.

3.0 State Route 69

3.1. SR 69 Snapshot

ITS systems capability information requests for the SR 69 corridor were provided by the City of Prescott and ADOT. A qualitative summary of the responses is summarized in **Table 2**. The complete agency responses can be found in **Appendix SS-1**.

Key				
Strong Disadvantage	**Disadvantage**	**Neutral**	**Advantage**	**Strong Advantage**
				

Table 2 – SR 69 Assessment Summary	
Attribute	**Assessment**
Staff Availability	
Staff Experience/Training with ASCT	
Existing Detection	
Existing Communications	
Existing Controllers	
Current Optimization	
Available Budget for ITS Improvement	
Available Maintenance Budget	

Existing vehicle detection, communications, and controller types along the SR 69 corridor are illustrated in **Figure 5** through **Figure 7**. More detailed information is available in **Section 3.9**.

Figure 5 – SR 69 Vehicle Detection Types

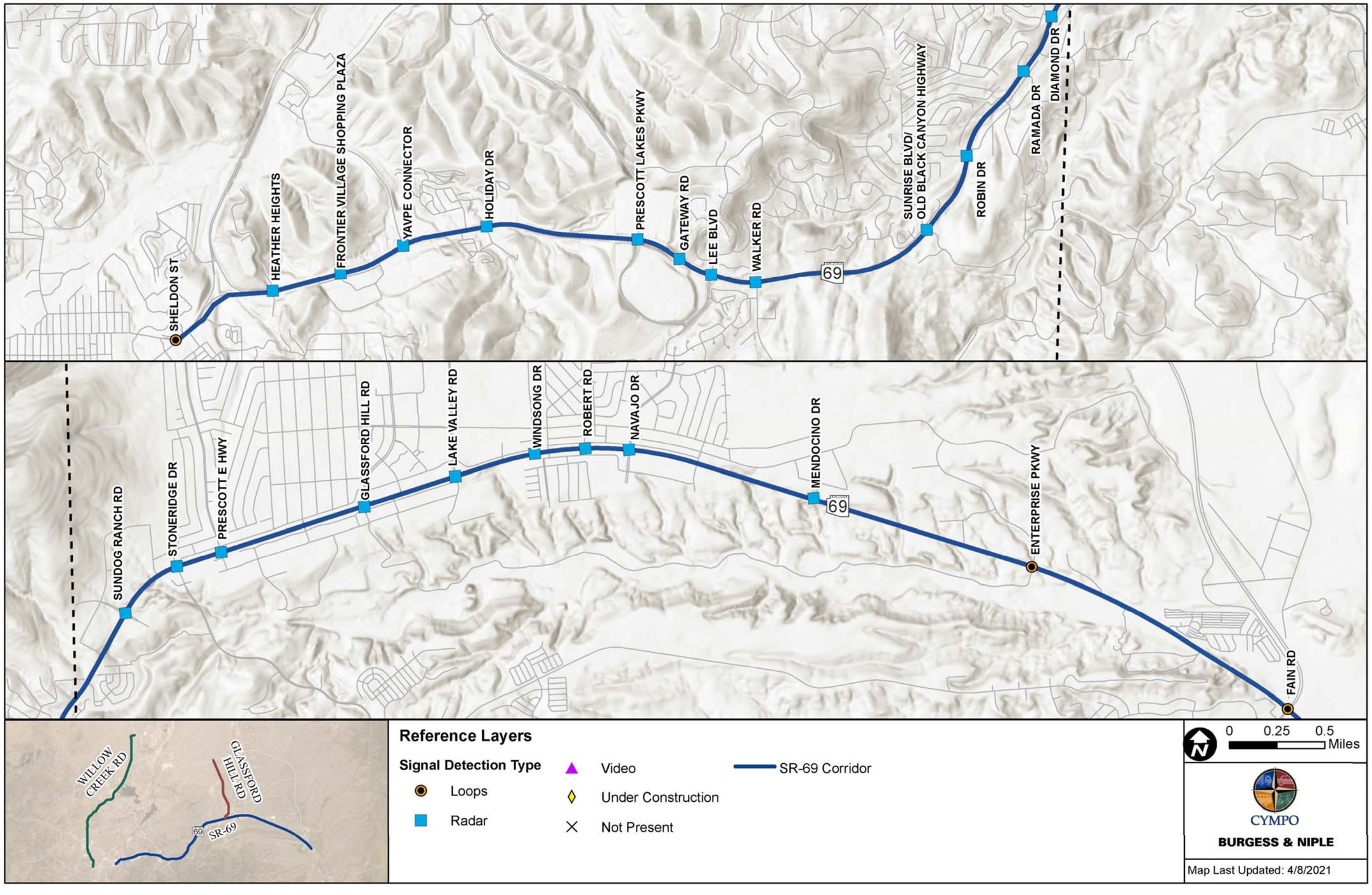


Figure 6 – SR 69 Communication Types

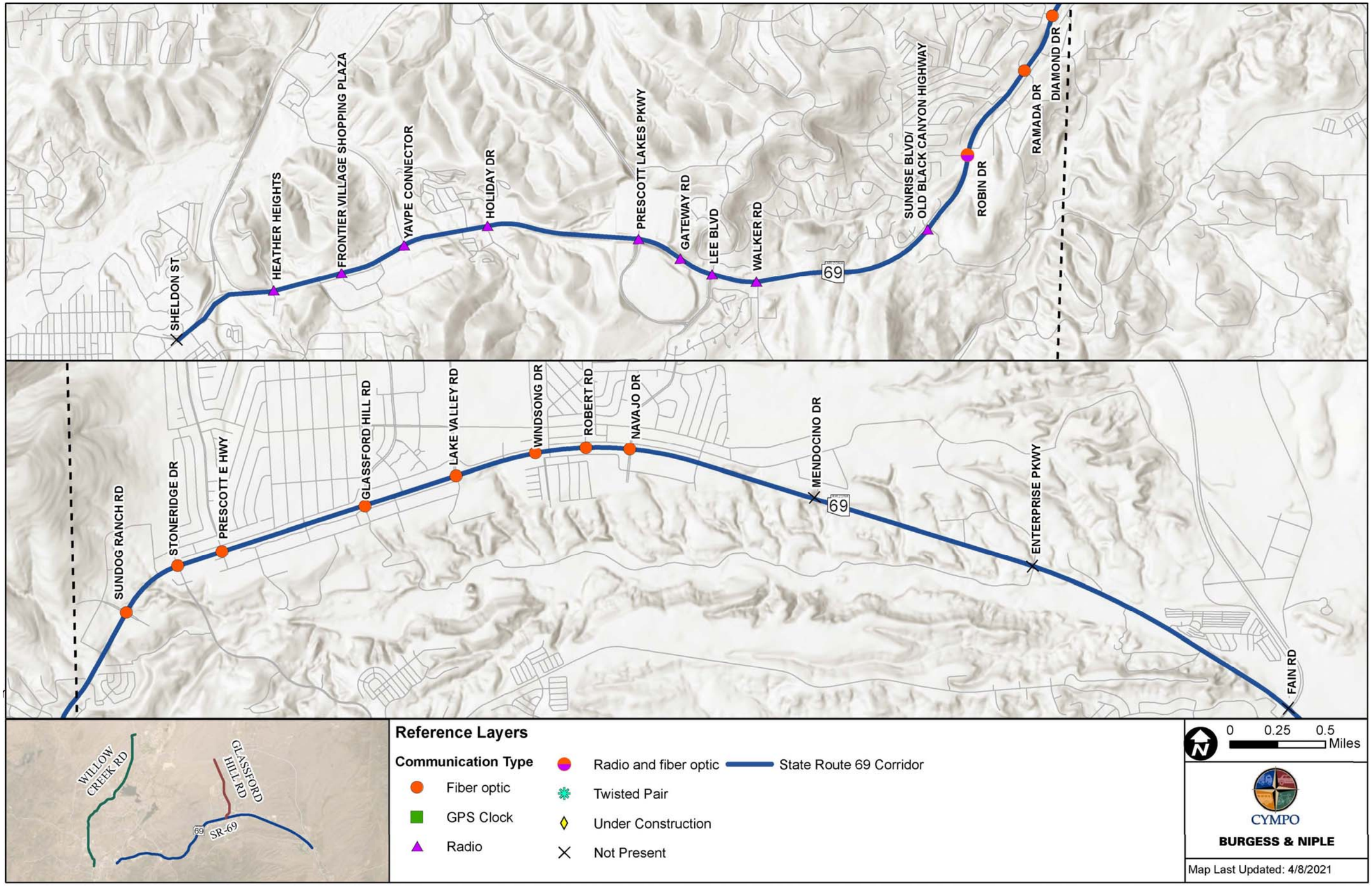
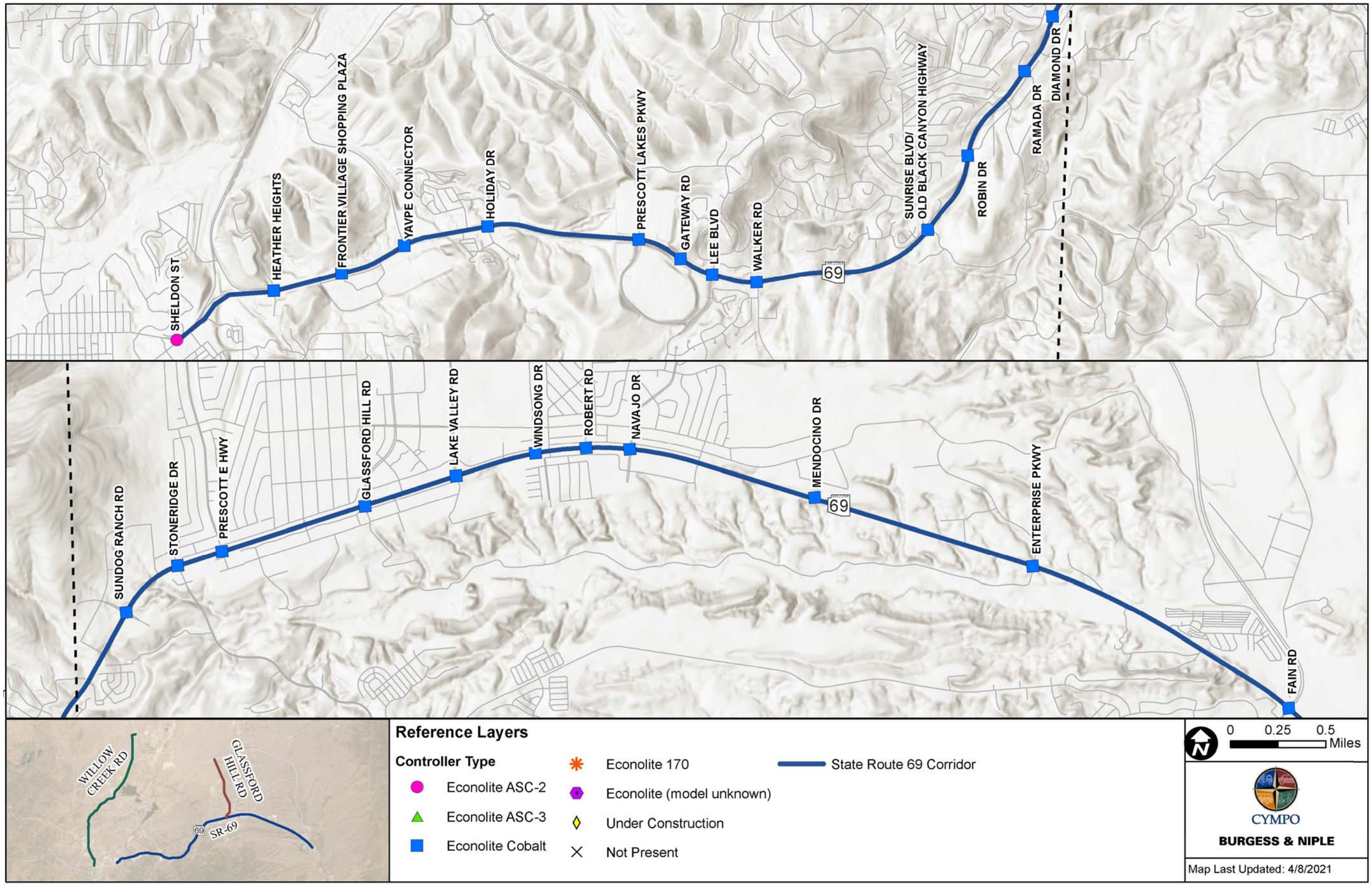


Figure 7 – SR 69 Controller Types



3.2. Relevant Plans and Studies

No relevant plans or studies were identified for the SR 69 corridor.

3.3. Agency Information

Traffic signals along SR 69 are connected to a central system (MaxView), operated in the Phoenix traffic management center (TMC). The corridor has both fiber optic cable and radio communications. ADOT has three full-time staff dedicated to maintaining traffic signals and lighting within the Northwest Engineering District. Staff have Level 2 International Municipal Signal Association (ISMA) certification, indicating well-rounded experience with prevalent signal technologies. Staff is not using automated traffic signal performance measures (ATSPM).

ADOT has staff dedicated to maintaining ITS infrastructure in the region. Current staffing levels are adequate to maintain an advanced ITS system along SR 69.

3.4. Existing Land Use

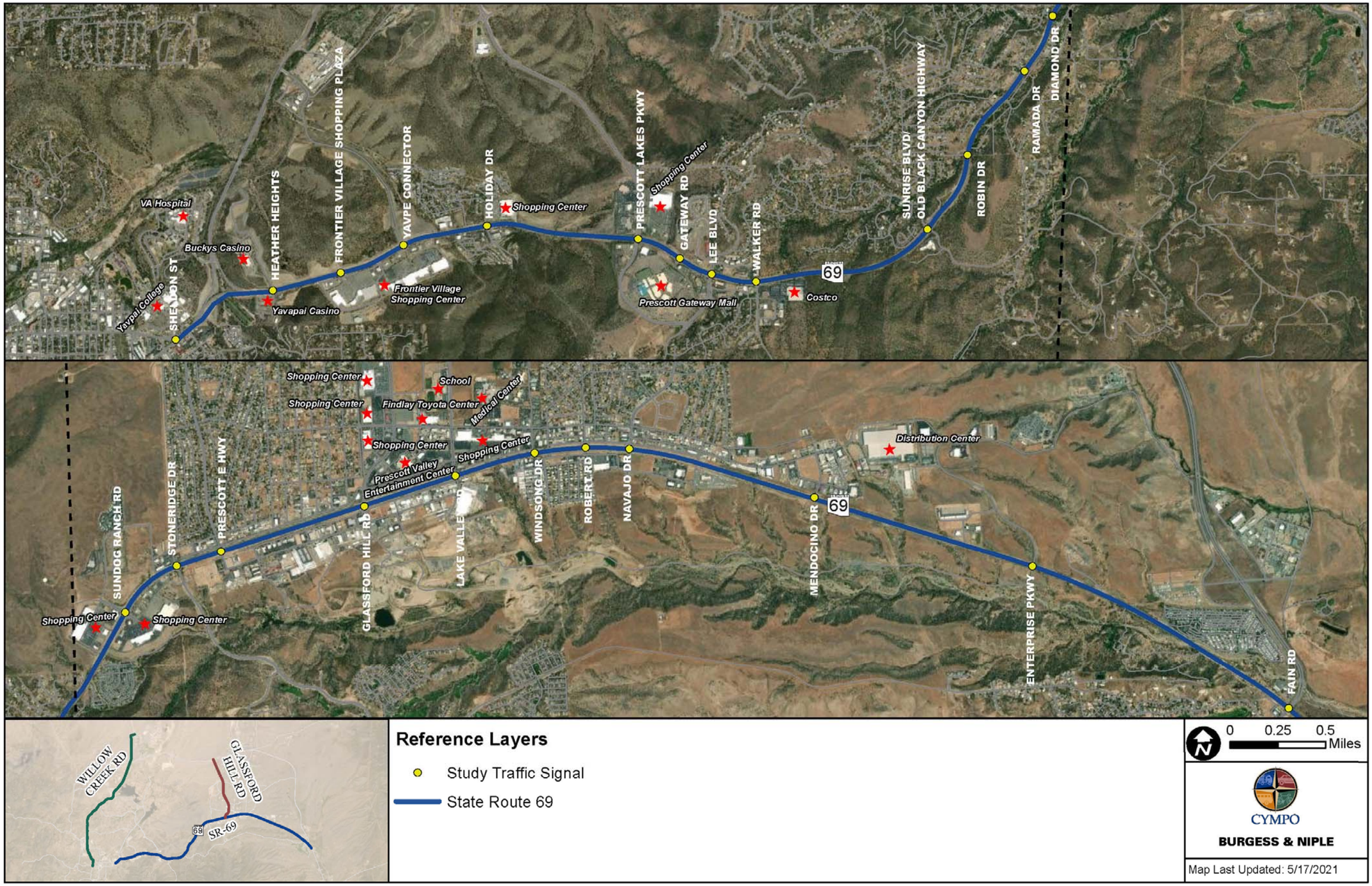
The current land use in the surrounding area is primarily residential, with scattered commercial, industrial, and recreational land. The commercial uses including retail stores, malls, hotels, and restaurants are mostly located directly off SR 69.

Schools, shopping centers, parks, hospitals, and special event locations are illustrated in **Figure 8**. Some of key developments in the area include the following:

- Yavapai College is located near the intersection of SR 69 and Sheldon Street.
- Two hospitals are located near the study area. Fort Whipple VA Hospital is located at the system interchange of SR 69 and SR 89, and Yavapai Regional Medical Center is located near the intersection of SR 69 and Windsong Drive.
- Two casinos are located at the intersection of SR 69 and Heather Heights. Bucky's Casino Blackjack is located to the north, and Yavapai is located to the south.
- Frontier Village Shopping Plaza is located at SR 69 and its unnamed entrance near Einstein Bros. Prescott Gateway Mall is located at SR 69 and Gateway Road.

Typically, residential uses result in high weekday morning and evening travel with moderate weekday mid-day travel and high weekend afternoon travel. Commercial areas generally experience the highest travel volumes during the weekday evening hours and weekend afternoon hours. Emergency vehicles traveling to hospitals in the area may affect traffic signal timing due to emergency vehicle preemption (EVP).

Figure 8 – SR 69 Major Trip Generators



3.5. Roadway Characteristics

SR 69 is typically a four-lane section with a center two-way left-turn lane (TWLTL). There are right-turn lanes at driveways to various businesses and signals throughout the corridor. The number of travel lanes along segments of the corridor are listed in **Table 3**. The posted speed limit is 45 mph along majority of the SR 69 corridor. However, the speed limit is reduced incrementally to 30 mph at the west end and increases to 55 mph at the east end of the study corridor.

Table 3 – SR 69 Number of Travel Lanes	
Roadway Segment	**Number of Lanes**
Sheldon Street to Yavpe Connector	6
Yavpe Connector to Prescott Lakes Parkway	4
Prescott Lakes Parkway to Lee Boulevard	6
Lee Boulevard to Walker Road	5
Walker Road to Sundog Ranch Road	4
Sundog Ranch Road to Prescott E Highway	6
Prescott E Highway to Glassford Hill Road	5
Glassford Hill Road to Fain Road	4

3.6. Programmed Improvements

The following programmed improvements were identified along SR 69 within the study area.

- **SR 69: Prescott Lakes Parkway to Frontier Village:** As identified in the 2021-2025 Five-Year Transportation Facilities Program, ADOT is in the final design phase of a road widening project for SR 69 between the Frontier Village Shopping Plaza entrance to Prescott Lakes Parkway. The project includes widening the roadway from four to six lanes. Construction is programmed for fiscal year 2022.
- **Traffic Signal at Mendecino Drive:** Construction of intersection upgrades was completed in September 2020 for the future traffic signal at SR 69 and Mendecino Drive. The traffic signal is programmed to be installed by 2022.
- **Turn Lane Construction:** A traffic impact analysis (TIA) was performed for the Circle K development at SR 69 and Glassford Hill Road. An additional eastbound right-turn lane along SR 69 near the study area and left-turn lane extension for the northbound approach at the intersection of SR 69 and Glassford Hill Road were recommended. Construction of the Circle K was completed in February 2021.

The number of travel lanes along SR 69 adjusted according to the programmed improvements are listed in **Table 4**.

Table 4 – SR 69 Programmed Number of Travel Lanes	
Roadway Segment	**Number of Lanes**
Sheldon Street to Lee Boulevard	6
Lee Boulevard to Walker Road	5
Walker Road to Sundog Ranch Road	4
Sundog Ranch Road to Prescott E Highway	6
Prescott E Highway to Glassford Hill Road	5
Glassford Hill Road to Fain Road	4

3.7. Other Factors Influencing Operations

The eastern portion of SR 69 typically has low density access point spacing with less than 10 access points per mile. There are more access points approaching the downtown area.

3.8. Crash Analysis

A high-level crash analysis was conducted for the SR 69 corridor. As shown in the heat map in **Figure 9**, most crashes in the corridor occur at intersections, with the greatest number at Glassford Hill Road and Prescott Lakes Parkway. Rear

end crashes are often indicative of congestion; the heat map in **Figure 10** displays rear end crashes. Glassford Hill Road and Lake Valley Road are the most prominent.

Figure 9 – SR 69 Crash Heat Map

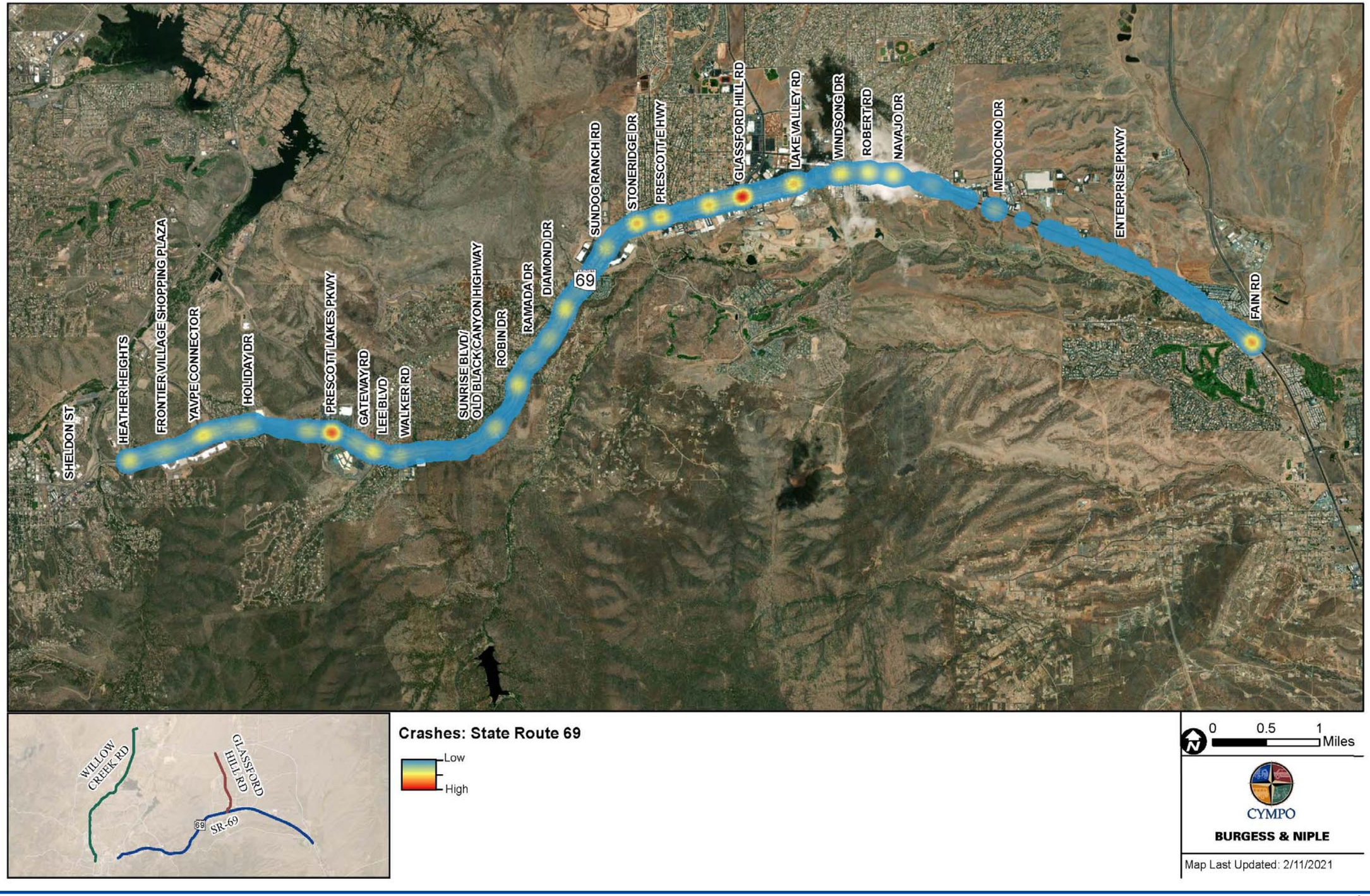
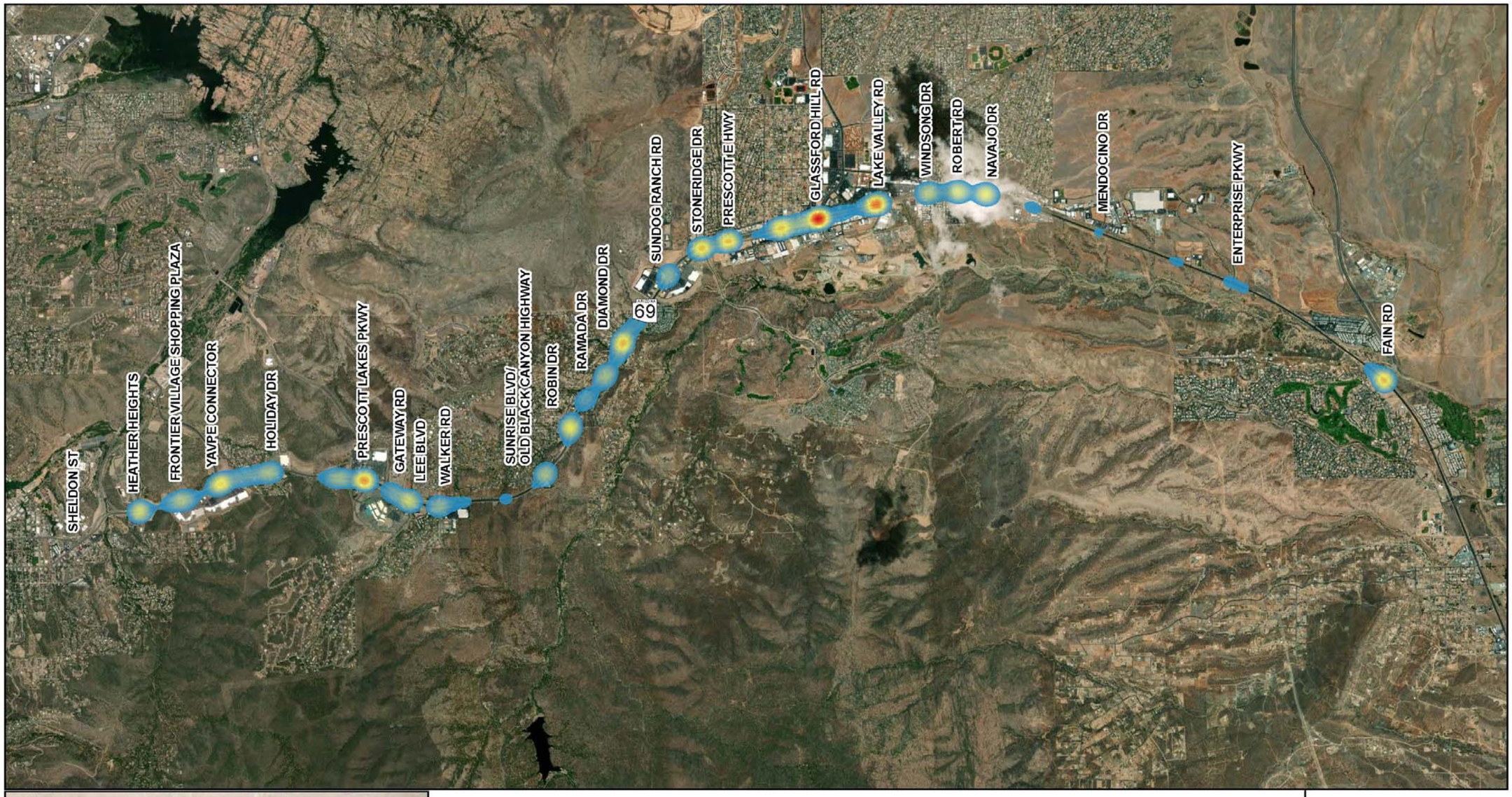


Figure 10 – SR 69 Rear End Crash Heat Map



3.9. Traffic Management Devices

The traffic management devices along SR 69 are identified in **Table 5** based on the information requests provided by the City of Prescott and ADOT.

Table 5 also lists the distance to the nearest traffic signal as it can be challenging to coordinate signals spaced large distances apart due to side street friction and other factors. Pedestrian crossings can influence coordination if pedestrian actuation is frequent. The Manual on Uniform Traffic Control Devices (MUTCD) recommends coordination between signalized intersections within a half-mile of one another that operate on a common cycle length along a major route. However, the capability to coordinate traffic signals over distance varies by corridor and the ability to sustain vehicle platoons as they progress. The Federal Highway Administration (FHWA) recommends coordinating traffic signals up to mile apart.

Table 5 – SR 69 Traffic Management Devices

SR 69 Intersecting Roadway	Detection	Communication	Controller Make/ Model	Spacing to Next Signal (miles)	Other
Sheldon Street*	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: N/A **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: N/A	▪ Connected to Central System: No ▪ Communications Capable: No ▪ National Transportation Communications for ITS Protocol (NTCIP) Capable: No ▪ Ethernet Capable: No ▪ Communications Media: None	Econolite/ ASC-2	▪ East: 0.6 ▪ West: N/A	
Heather Heights	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.4 ▪ West: 0.6	▪ Excessive Pedestrian use
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.4 ▪ West: 0.4	▪ Excessive Pedestrian use ▪ No EVP

Table 5 – SR 69 Traffic Management Devices					
SR 69 Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Yavpe Connector	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.5 ▪ West: 0.4	▪ Excessive Pedestrian use ▪ No EVP
Holiday Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.8 ▪ West: 0.5	▪ Excessive Pedestrian use ▪ No EVP
Prescott Lakes Parkway	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.3 ▪ West: 0.8	▪ Excessive Pedestrian use
Gateway Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.2 ▪ West: 0.3	▪ No mast arm, SB Approach ▪ Excessive Pedestrian use
Lee Boulevard	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.2 ▪ West: 0.2	▪ Excessive Pedestrian use

Table 5 – SR 69 Traffic Management Devices					
SR 69 Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Walker Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 1.0 ▪ West: 0.2	▪ No mast arm, SB approach ▪ No street lighting, NB approach ▪ Excessive Pedestrian use
Sunrise Boulevard/Old Black Canyon Highway	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.5 ▪ West: 1.0	▪ Excessive Pedestrian use ▪ No EVP
Robin Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.5 ▪ West: 0.5	▪ No mast arm, NB approach ▪ No street lighting, SB approach ▪ No Pedestrian ▪ No EVP
Ramada Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.3 ▪ West: 0.5	▪ No mast arm, NB approach ▪ No street lighting, SB approach ▪ No Pedestrian ▪ No EVP
Diamond Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber, Radio (Ubiquity)	Econolite/ Cobalt	▪ East: 0.7 ▪ West: 0.3	▪ No mast arm, NB approach ▪ No street lighting, SB approach ▪ No Pedestrian ▪ No EVP

Table 5 – SR 69 Traffic Management Devices					
SR 69 Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Sundog Ranch Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.4 ▪ West: 0.7	▪ Excessive Pedestrian use ▪ No EVP
Stoneridge Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.2 ▪ West: 0.4	▪ Excessive Pedestrian use ▪ No EVP
Prescott E Highway	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.8 ▪ West: 0.2	▪ Excessive Pedestrian use ▪ No EVP
Glassford Hill Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.5 ▪ West: 0.8	▪ Excessive Pedestrian use ▪ No EVP
Lake Valley Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.4 ▪ West: 0.5	▪ Excessive Pedestrian use ▪ No EVP

Table 5 – SR 69 Traffic Management Devices					
SR 69 Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Windsong Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.3 ▪ West: 0.4	▪ Excessive Pedestrian use ▪ No EVP
Robert Road	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 0.2 ▪ West: 0.3	▪ Excessive Pedestrian use ▪ No EVP
Navajo Drive	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar	▪ Connected to Central System: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Fiber	Econolite/ Cobalt	▪ East: 1.0 ▪ West: 0.2	▪ Excessive Pedestrian use ▪ No EVP
Mendecino Drive (Programmed Signal)	Radar	▪ Connected to Central System: No ▪ Communications Capable: Unknown ▪ NTCIP Capable: Unknown ▪ Ethernet Capable: Unknown ▪ Communications Media: None	Econolite/ Cobalt	▪ East: 1.2 ▪ West: 1.0	
Enterprise Parkway	**Main Street** ▪ Thru Lanes Adv Det.: Loop ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: No ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: None	Econolite/ Cobalt	▪ East: 1.5 ▪ West: 1.2	▪ No EVP

Table 5 – SR 69 Traffic Management Devices					
SR 69 Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Fain Road	**Main Street** ▪ Thru Lanes Adv Det.: Loop ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: No ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: None	Econolite/ Cobalt	▪ East: N/A ▪ West: 1.5	▪ Excessive Pedestrian use ▪ No EVP
*City of Prescott owns and operates traffic signal					

3.10. ITS/Traffic Operations

3.10.1. Traffic Volumes

Traffic volumes for this study were derived using a combination of historic volume trends, turning movement counts and data derived using Streetlight platform.

TMC data was collected at the SR 69 and Glassford Hill Road intersection as part of the Glassford Hill Road Intersection Safety Study completed in February 2018. The count data was collected for the AM peak and PM peak hours during the week of December 11, 2017. Growth factors were applied to these volumes to estimate 2020 traffic volumes.

12-hr and 24-hr special traffic counts were measured at four milepost locations along the SR 69 corridor. The counts were collected by ADOT from February 16-23, 2021. 12-hr counts were obtained on February 16, 22 and 23, 2021. 24-hr counts were collected on February 17-21, 2021. The count locations are illustrated in **Figure 11**. Both directions of travel were documented at all four milepost locations, with the exception of westbound travel at milepost 292.65. Note that volumes may be lower than typical due to the COVID-19 pandemic which is known to have reduced vehicle miles traveled (VMT). However, recent trends in traffic volumes in the region and around the state indicate that the daily volumes are back up to the pre-pandemic levels.

Figure 11 – SR 69 Special Count Locations



Pre-pandemic (2020) TMC data was collected from the StreetLight database for all signalized intersections along the SR 69 corridor, with the exception of SR 69 and Glassford Hill Road. Hourly analysis was conducted for January 1-31, 2020. Average Tuesday-Thursday counts during this time period were used to generate the weekday TMCs. The TMCs were

calibrated using 24-hr special counts provided by ADOT (measured on Thursday, February 18, 2021) obtained at various mileposts along the SR 69 corridor.

The TMCs for the AM, mid-day, and PM peak hours are illustrated in **Figure 12** through **Figure 14**.

Figure 12 – SR 69 AM Peak Hour Turning Movement Counts

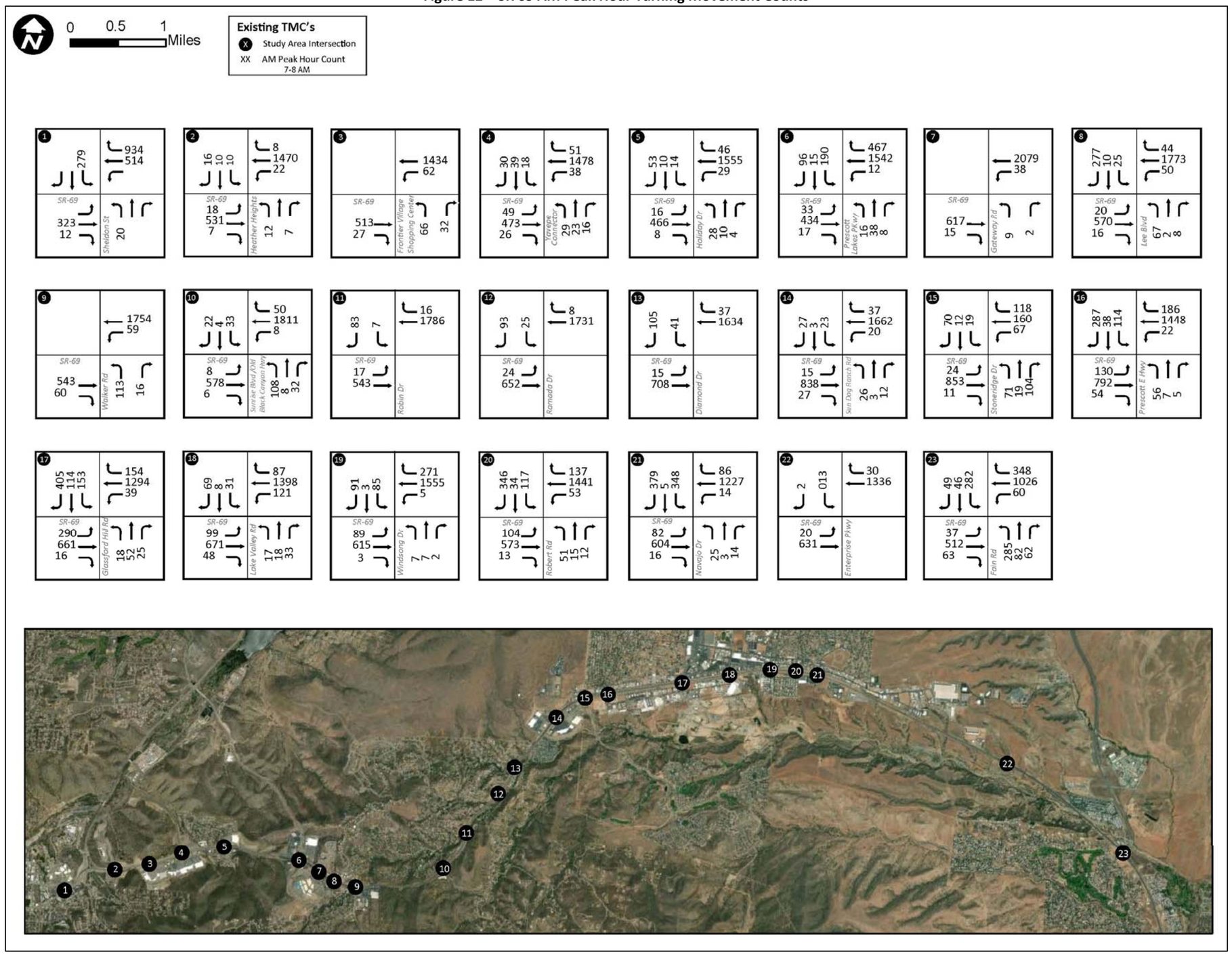


Figure 13 – SR 69 Mid-Day Peak Hour Turning Movement Counts

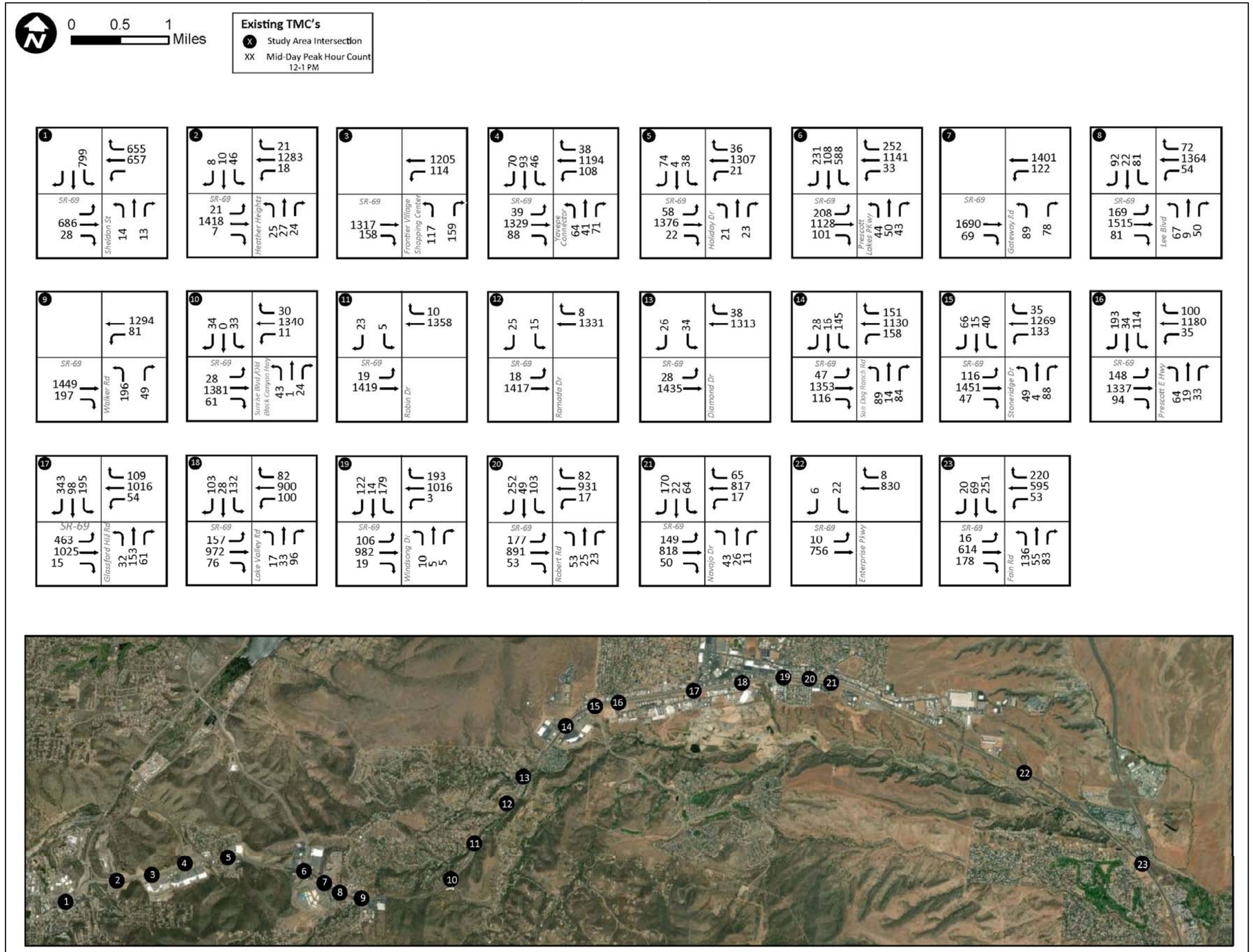
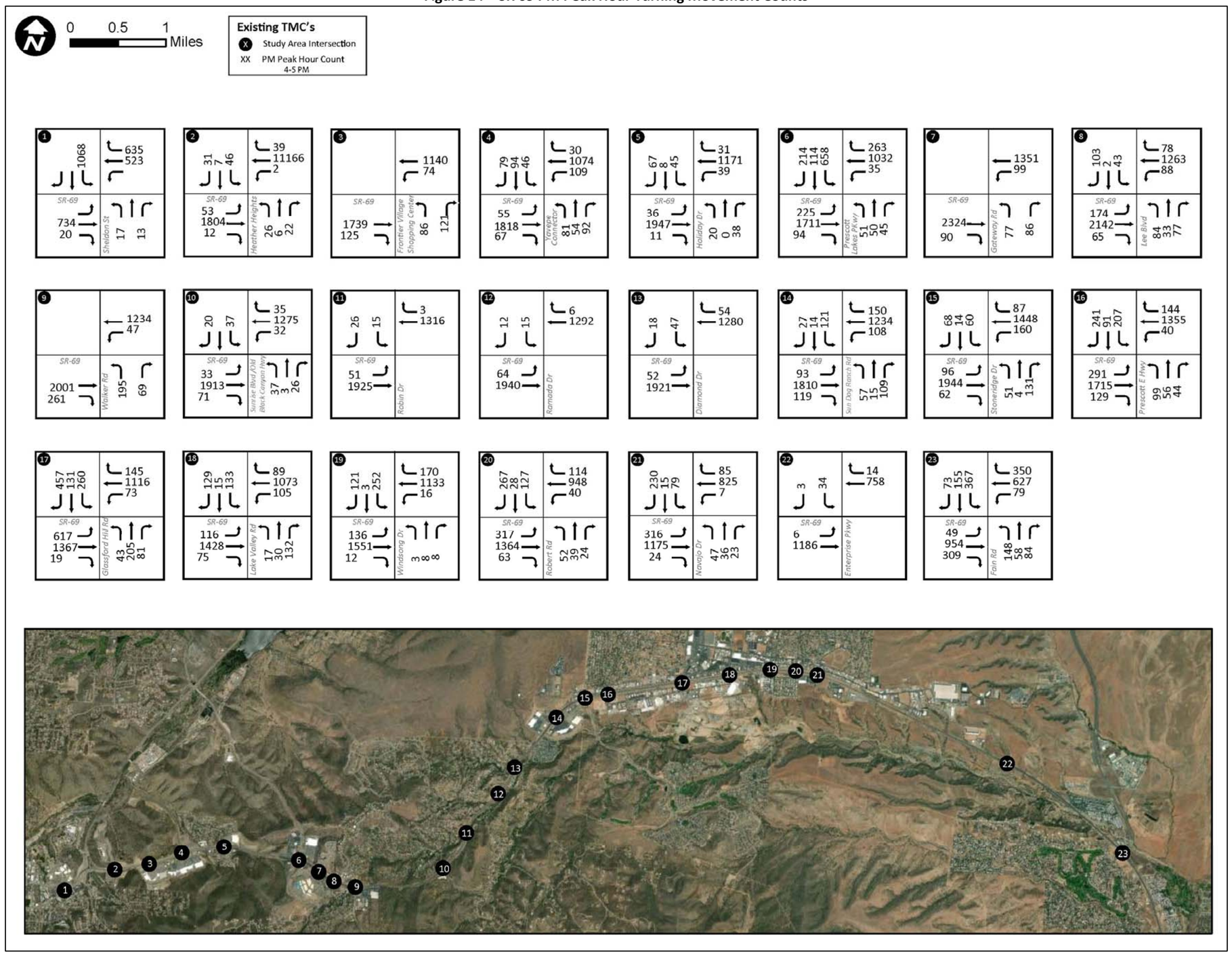


Figure 14 – SR 69 PM Peak Hour Turning Movement Counts



3.10.2. Signal Timing Plans

The traffic signal timing plans for the 23 existing signalized intersections were provided by the City of Prescott and ADOT. The plans were last updated between 2013 and 2015. Traffic signal coordination was last optimized 2-5 years ago. The plans are included in **Appendix SS-2**.

The traffic signals along the SR 69 corridor are actuated, and most are coordinated. The uncoordinated signals include the intersections of Sheldon Street, Enterprise Parkway, and Fain Road along the study corridor.

Left turn movements are protected at both major and minor street approaches at most intersections along the corridor. An exception is the intersection at SR 69 and Lake Valley Road, which provides protected/permissive minor street left turn movements. Additionally, left turns are prohibited at Sheldon Street and Gurley Street for the northeast and southwest (Gurley Street) approaches. Permissive left turn movements at minor street approaches are provided at the following intersections:

- SR 69 and Heather Heights
- SR 69 and Lee Boulevard
- SR 69 and Sunrise Boulevard/Old Black Canyon Highway
- SR 69 and Prescott E Highway
- SR 69 and Windsong Drive
- SR 69 and Robert Road
- SR 69 and Navajo Drive

Channelized free-right turn lanes are available at the westbound approach of Sheldon Street, Yavpe Connector, and Fain Road along SR 69.

The intersection of SR 69 and the unnamed entrance to the Frontier Village Shopping Plaza is currently a three-legged intersection. However, traffic signal infrastructure is in place and timing plan implemented for a four-legged intersection in preparation for future development on the north side of SR 69.

The timing plan at the intersection at SR 69 and Holiday Drive includes an additional day plan to account for higher traffic volumes due to Sunday church.

A summary of the existing traffic signal cycle lengths and offsets is included in **Table 6**.

Table 6 – SR 69 Existing Cycle Lengths and Offsets

SR 69 Intersecting Roadway	AM Peak		Mid-Day Peak		PM Peak	
	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)
Sheldon Street	-	-	-	-	-	-
Heather Heights	135	0	135	0	135	0
Unnamed entrance to Frontier Village Shopping Plaza	135	105	135	79	135	30
Yavpe Connector	135	75	135	76	135	59
Holiday Drive	135	40	135	9	135	94
Prescott Lakes Parkway	120	8	120	0	120	5
Gateway Road	120	100	120	4	120	10
Lee Boulevard	120	89	120	48	120	28
Walker Road	120	75	120	35	120	47
Sunrise Boulevard/Old Black Canyon Highway	120	32	135	32	135	33

Table 6 – SR 69 Existing Cycle Lengths and Offsets						
SR 69 Intersecting Roadway	AM Peak		Mid-Day Peak		PM Peak	
	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)
Robin Drive	120	116	135	31	135	69
Ramada Drive	120	73	135	108	135	112
Diamond Drive	120	49	135	49	135	34
Sundog Ranch Road	120	117	135	0	135	0
Stoneridge Drive	120	86	135	14	135	29
Prescott E Highway	120	65	135	19	135	72
Glassford Hill Road	120	119	135	66	135	110
Lake Valley Road	120	77	135	134	135	18
Windsong Drive	120	42	135	5	135	63
Robert Road	120	19	135	80	135	85
Navajo Drive	120	0	135	99	135	104
Enterprise Parkway	-	-	-	-	-	-
Fain Road	-	-	-	-	-	-

3.10.3. Existing Traffic Patterns/Operations

The traffic volumes and signal timing plans were entered into Synchro to emulate the existing conditions and to determine the delays, LOS, and maximum v/c ratios by intersection approach. The LOS analysis was conducted using Synchro's built-in methodology due to its capability to assess unique signal timing and geometric configurations. A summary of the LOS and v/c ratio analysis results are included in **Table 7**. SR 69 was noted as the east-west roadway in the results table at all intersections. Pedestrian volumes were not considered in the analysis. Detailed results can be found in **Appendix SS-3**.

Table 7 – SR 69 Existing Conditions Delay, LOS, and v/c Ratio Analysis										
SR 69 Intersecting Roadway	Approach	AM Peak			Mid-Day Peak			PM Peak		
		Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio
Sheldon Street	EB	9.3	A	0.18	16.6	B	0.42	22.5	C	0.50
	WB	4.2	A	0.40	9.6	A	0.55	10.7	B	0.50
	NB	21.6	C	0.11	19.3	B	0.10	24.8	C	0.15
	SB	14.4	B	0.24	17.9	B	0.49	18.6	B	0.56
	Overall	**6.6**	**A**	**0.40**	**13.8**	**B**	**0.55**	**16.6**	**B**	**0.56**
Heather Heights	EB	7.4	A	0.15	8.7	A	0.40	10.8	B	0.50
	WB	3.3	A	0.39	2.1	A	0.36	6.9	A	0.34
	NB	35.4	D	0.09	40.1	D	0.18	41.3	D	0.19
	SB	38.3	D	0.14	55.1	E	0.33	44.7	D	0.33
	Overall	**5.3**	**A**	**0.39**	**7.3**	**A**	**0.40**	**10.7**	**B**	**0.50**
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	EB	3.0	A	0.13	8.3	A	0.37	4.0	A	0.49
	WB	3.6	A	0.40	6.6	A	0.58	6.5	A	0.45
	NB	43.5	D	0.33	28.9	C	0.50	27.4	C	0.39
	SB	-	-	-	-	-	-	-	-	-
	Overall	**5.3**	**A**	**0.40**	**9.4**	**A**	**0.58**	**6.3**	**A**	**0.49**

Table 7 – SR 69 Existing Conditions Delay, LOS, and v/c Ratio Analysis										
SR 69 Intersecting Roadway	Approach	AM Peak			Mid-Day Peak			PM Peak		
		Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio
Yavpe Connector	EB	10.7	B	0.31	7.4	A	0.47	13.2	B	0.67
	WB	5.3	A	0.44	22.5	C	0.51	24.5	C	0.52
	NB	50.1	D	0.23	39.4	D	0.37	39.9	D	0.44
	SB	46.2	D	0.41	50.4	D	0.65	48.7	D	0.65
	Overall	**9.5**	**A**	**0.44**	**18.4**	**B**	**0.65**	**20.8**	**C**	**0.67**
Holiday Drive	EB	7.9	A	0.21	17.6	B	0.57	15.5	B	0.83
	WB	11.4	B	0.61	13.6	B	0.57	13.4	B	0.50
	NB	64.2	E	0.33	33.4	C	0.27	24.5	C	0.26
	SB	22.5	C	0.29	28.3	C	0.41	31.4	C	0.32
	Overall	**12.0**	**B**	**0.61**	**16.4**	**B**	**0.57**	**15.4**	**B**	**0.83**
Prescott Lakes Parkway	EB	12.8	B	0.14	25.5	C	0.53	26.2	C	0.67
	WB	14.5	B	0.64	23.8	C	0.61	35.8	D	0.51
	NB	52.1	D	0.36	41.8	D	0.43	42.1	D	0.43
	SB	40.8	D	0.59	47.8	D	0.92	120.3	F	1.26
	Overall	**17.8**	**B**	**0.64**	**30.7**	**C**	**0.92**	**50.2**	**D**	**1.26**
Gateway Road	EB	1.7	A	0.16	11.0	B	0.51	9.3	A	0.68
	WB	1.7	A	0.46	11.0	B	0.53	5.3	A	0.47
	NB	50.3	D	0.05	51.2	D	0.43	52.6	D	0.39
	SB	-	-	-	-	-	-	-	-	-
	Overall	**1.9**	**A**	**0.46**	**13.0**	**B**	**0.53**	**9.6**	**A**	**0.68**
Lee Boulevard	EB	7.9	A	0.24	22.7	C	0.78	14.2	B	0.79
	WB	9.0	A	0.52	17.8	B	0.51	15.7	B	0.65
	NB	58.7	E	0.55	39.0	D	0.52	43.3	D	0.62
	SB	22.5	C	0.74	40.7	D	0.62	25.9	C	0.42
	Overall	**11.6**	**B**	**0.74**	**22.2**	**C**	**0.78**	**16.5**	**B**	**0.79**
Walker Road	EB	5.9	A	0.16	3.3	A	0.47	1.3	A	0.62
	WB	7.9	A	0.66	8.5	A	0.55	6.9	A	0.48
	NB	52.1	D	0.41	49.6	D	0.59	46.7	D	0.59
	SB	-	-	-	-	-	-	-	-	-
	Overall	**9.6**	**A**	**0.66**	**9.0**	**A**	**0.59**	**6.4**	**A**	**0.62**
Sunrise Boulevard/Old Black Canyon Highway	EB	3.5	A	0.24	7.2	A	0.51	12.2	B	0.73
	WB	5.8	A	0.74	1.3	A	0.51	10.6	B	0.50
	NB	58.6	E	0.75	51.6	D	0.51	46.0	D	0.45
	SB	31.8	C	0.29	35.6	D	0.37	47.0	D	0.41
	Overall	**8.8**	**A**	**0.75**	**6.1**	**A**	**0.51**	**12.8**	**B**	**0.73**
Robin Drive	EB	4.2	A	0.23	2.9	A	0.48	2.9	A	0.65
	WB	2.0	A	0.70	10.2	B	0.49	19.0	B	0.50
	NB	-	-	-	-	-	-	-	-	-
	SB	21.7	C	0.47	31.5	C	0.21	39.0	D	0.23
	Overall	**3.3**	**A**	**0.70**	**6.7**	**A**	**0.49**	**9.7**	**A**	**0.65**

Table 7 – SR 69 Existing Conditions Delay, LOS, and v/c Ratio Analysis										
SR 69 Intersecting Roadway	Approach	AM Peak			Mid-Day Peak			PM Peak		
		Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio
Ramada Drive	EB	5.3	A	0.24	2.1	A	0.48	3.6	A	0.65
	WB	3.5	A	0.70	11.4	B	0.48	13.0	B	0.49
	NB	-	-	-	-	-	-	-	-	-
	SB	26.8	C	0.50	39.4	D	0.23	48.4	D	0.15
	Overall	**5.1**	**A**	**0.70**	**7.1**	**A**	**0.48**	**7.6**	**A**	**0.65**
Diamond Drive	EB	4.3	A	0.26	7.2	A	0.50	11.3	B	0.68
	WB	7.1	A	0.64	3.2	A	0.50	6.0	A	0.50
	NB	-	-	-	-	-	-	-	-	-
	SB	30.3	C	0.52	49.2	D	0.33	57.9	E	0.42
	Overall	**7.7**	**A**	**0.64**	**6.2**	**A**	**0.50**	**10.1**	**B**	**0.68**
Sundog Ranch Road	EB	7.5	A	0.23	22.0	C	0.49	31.6	C	0.64
	WB	2.4	A	0.45	23.8	C	0.61	20.6	C	0.51
	NB	40.3	D	0.17	38.3	D	0.43	33.5	C	0.55
	SB	27.2	C	0.13	58.5	E	0.59	56.8	E	0.54
	Overall	**5.1**	**A**	**0.45**	**25.8**	**C**	**0.61**	**28.5**	**C**	**0.64**
Stoneridge Drive	EB	11.5	B	0.28	13.3	B	0.72	13.9	B	0.69
	WB	6.7	A	0.54	14.0	B	0.74	33.6	C	0.75
	NB	32.1	C	0.41	24.3	C	0.35	20.2	C	0.35
	SB	20.8	C	0.34	33.2	C	0.36	38.0	D	0.40
	Overall	**10.2**	**B**	**0.54**	**14.8**	**B**	**0.74**	**23.1**	**C**	**0.75**
Prescott E Highway	EB	15.2	B	0.56	9.7	A	0.62	26.8	C	0.76
	WB	5.0	A	0.48	9.6	A	0.40	23.4	C	0.53
	NB	47.9	D	0.37	42.8	D	0.43	39.4	D	0.44
	SB	30.8	C	0.72	40.2	D	0.76	44.2	D	0.88
	Overall	**12.7**	**B**	**0.72**	**13.9**	**B**	**0.76**	**28.3**	**C**	**0.88**
Glassford Hill Road	EB	25.9	C	0.72	34.5	C	0.85	40.0	D	0.89
	WB	9.4	A	0.54	21.8	C	0.47	56.6	E	0.65
	NB	42.1	D	0.30	61.4	E	0.68	70.0	E	0.82
	SB	31.4	C	0.62	39.0	D	0.66	44.3	D	0.74
	Overall	**19.9**	**B**	**0.72**	**33.6**	**C**	**0.85**	**47.9**	**D**	**0.89**
Lake Valley Road	EB	17.0	B	0.68	19.6	B	0.77	17.9	B	0.74
	WB	10.0	B	0.73	26.3	C	0.71	30.7	C	0.72
	NB	28.6	C	0.23	37.3	D	0.58	33.4	C	0.66
	SB	22.3	C	0.35	36.4	D	0.52	33.1	C	0.52
	Overall	**13.2**	**B**	**0.73**	**24.8**	**C**	**0.77**	**24.8**	**C**	**0.74**
Windsong Drive	EB	15.6	B	0.60	13.2	B	0.67	16.9	C	0.72
	WB	5.8	A	0.73	24.6	C	0.53	30.5	C	0.66
	NB	43.1	D	0.10	35.1	D	0.07	27.5	C	0.05
	SB	41.9	D	0.66	53.0	D	0.85	64.5	E	0.93
	Overall	**10.9**	**B**	**0.73**	**23.3**	**C**	**0.85**	**27.4**	**C**	**0.93**

Table 7 – SR 69 Existing Conditions Delay, LOS, and v/c Ratio Analysis										
SR 69 Intersecting Roadway	Approach	AM Peak			Mid-Day Peak			PM Peak		
		Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio
Robert Road	EB	15.3	B	0.66	19.3	B	0.79	16.8	B	0.80
	WB	13.3	B	0.71	12.6	B	0.46	22.6	C	0.59
	NB	41.7	D	0.30	46.6	D	0.36	44.4	D	0.30
	SB	27.0	C	0.70	34.7	C	0.70	34.0	C	0.75
	Overall	**16.9**	**B**	**0.71**	**20.1**	**C**	**0.79**	**21.8**	**C**	**0.80**
Navajo Drive	EB	13.6	B	0.58	16.4	B	0.74	16.0	B	0.75
	WB	12.8	B	0.56	12.3	B	0.38	22.3	C	0.49
	NB	34.1	C	0.21	55.3	E	0.40	47.8	D	0.38
	SB	24.9	C	0.79	35.2	D	0.60	32.1	C	0.65
	Overall	**15.6**	**B**	**0.79**	**18.3**	**B**	**0.74**	**21.0**	**C**	**0.75**
Enterprise Parkway	EB	3.1	A	0.22	3.1	A	0.27	4.1	A	0.44
	WB	8.8	A	0.51	5.2	A	0.31	5.3	A	0.29
	NB	-	-	-	-	-	-	-	-	-
	SB	20.4	C	0.10	22.8	C	0.04	31.0	C	0.08
	Overall	**7.2**	**A**	**0.51**	**4.5**	**A**	**0.31**	**5.1**	**A**	**0.44**
Fain Road	EB	23.6	C	0.42	19.7	B	0.53	26.8	C	0.78
	WB	25.7	C	0.82	16.4	B	0.45	18.4	B	0.50
	NB	42.9	D	0.73	39.5	D	0.61	46.0	D	0.66
	SB	39.1	D	0.64	36.8	D	0.55	42.1	D	0.70
	Overall	**29.6**	**C**	**0.82**	**23.4**	**C**	**0.61**	**28.6**	**C**	**0.78**

In general, the LOS analysis determined that most of the intersection approaches at each intersection along the SR 69 corridor operate at an acceptable level, LOS D or better, in the existing conditions. The exceptions-intersection approaches operating at LOS E or LOS F-follow:

- Holiday Drive northbound approach during the AM peak hour: LOS E
- Lee Boulevard northbound approach during the AM peak hour: LOS E
- Sunrise Boulevard/Old Black Canyon Highway northbound approach during the AM peak hour: LOS E
- Heather Heights southbound approach during the mid-day peak hour: LOS E
- Sundog Ranch Road southbound approach during the mid-day peak hour: LOS E
- Glassford Hill Road northbound approach during the mid-day peak hour: LOS E
- Navajo Drive northbound approach during the mid-day peak hour: LOS E
- Prescott Lakes Parkway southbound approach during the PM peak hour: LOS F
- Diamond Drive southbound approach during the PM peak hour: LOS E
- Sundog Ranch Road southbound approach during the PM peak hour: LOS E
- Glassford Hill Road westbound approach during the PM peak hour: LOS E
- Glassford Hill Road northbound approach during the PM peak hour: LOS E
- Windsong Drive southbound approach during the PM peak hour: LOS E

Furthermore, the LOS analysis determined that all overall intersections along the corridor operate at an acceptable level, LOS D or better, in the existing conditions. AM, mid-day, and PM peak hour overall intersection LOS summaries are shown in **Figure 15** through **Figure 17**.

Figure 15 – SR 69 AM Peak Hour Levels of Service

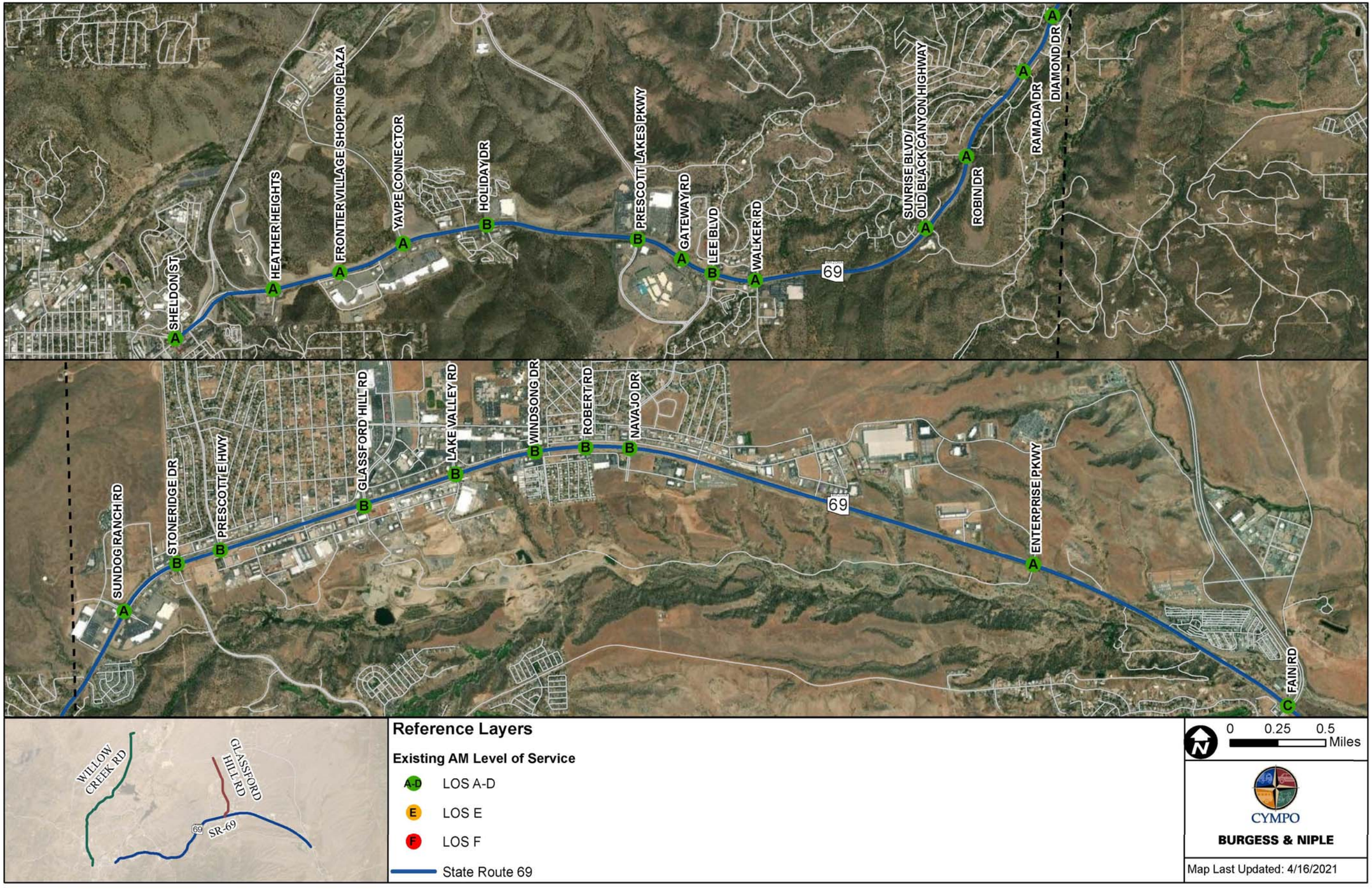


Figure 16 – SR 69 Mid-Day Peak Hour Levels of Service

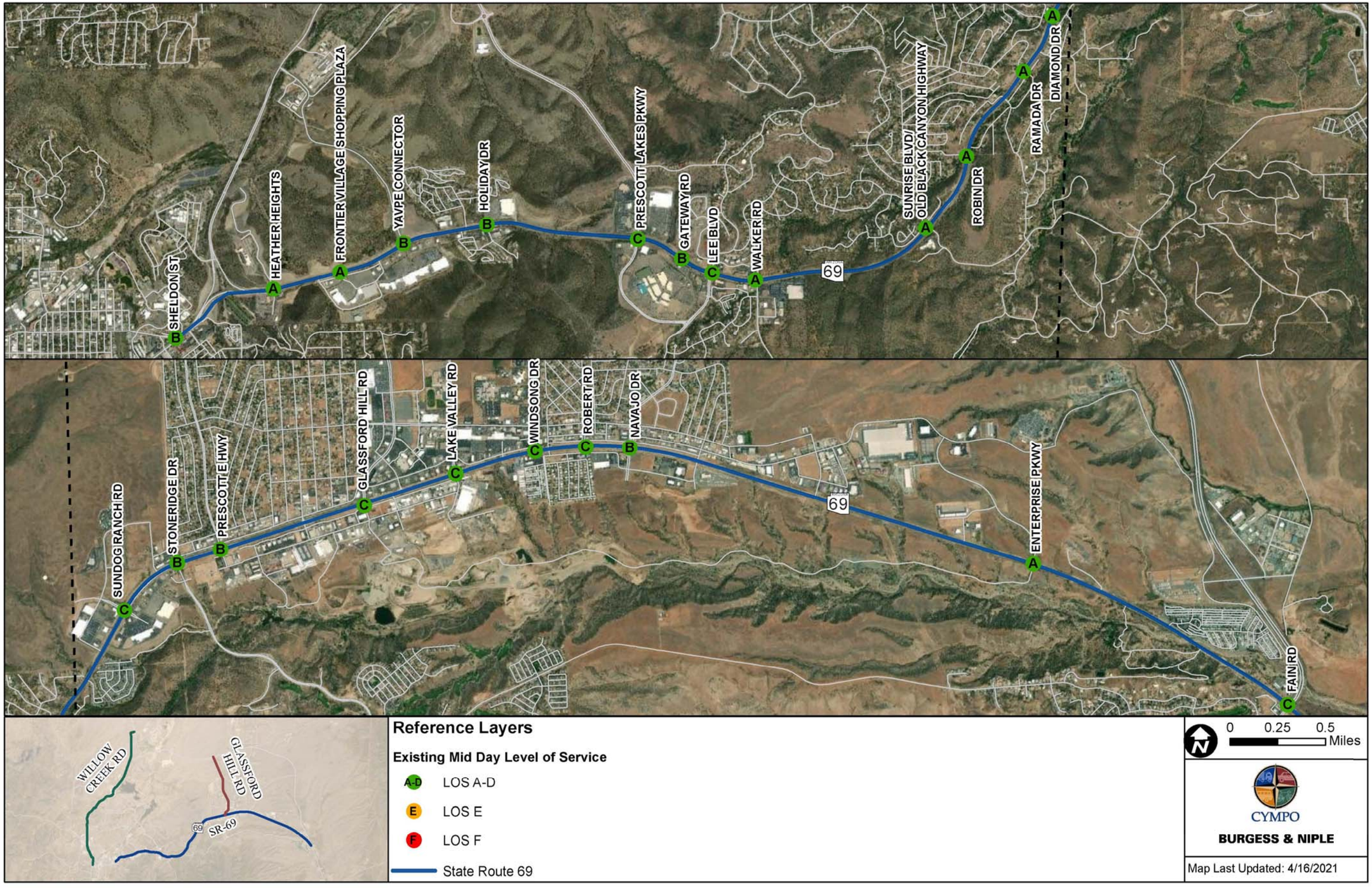
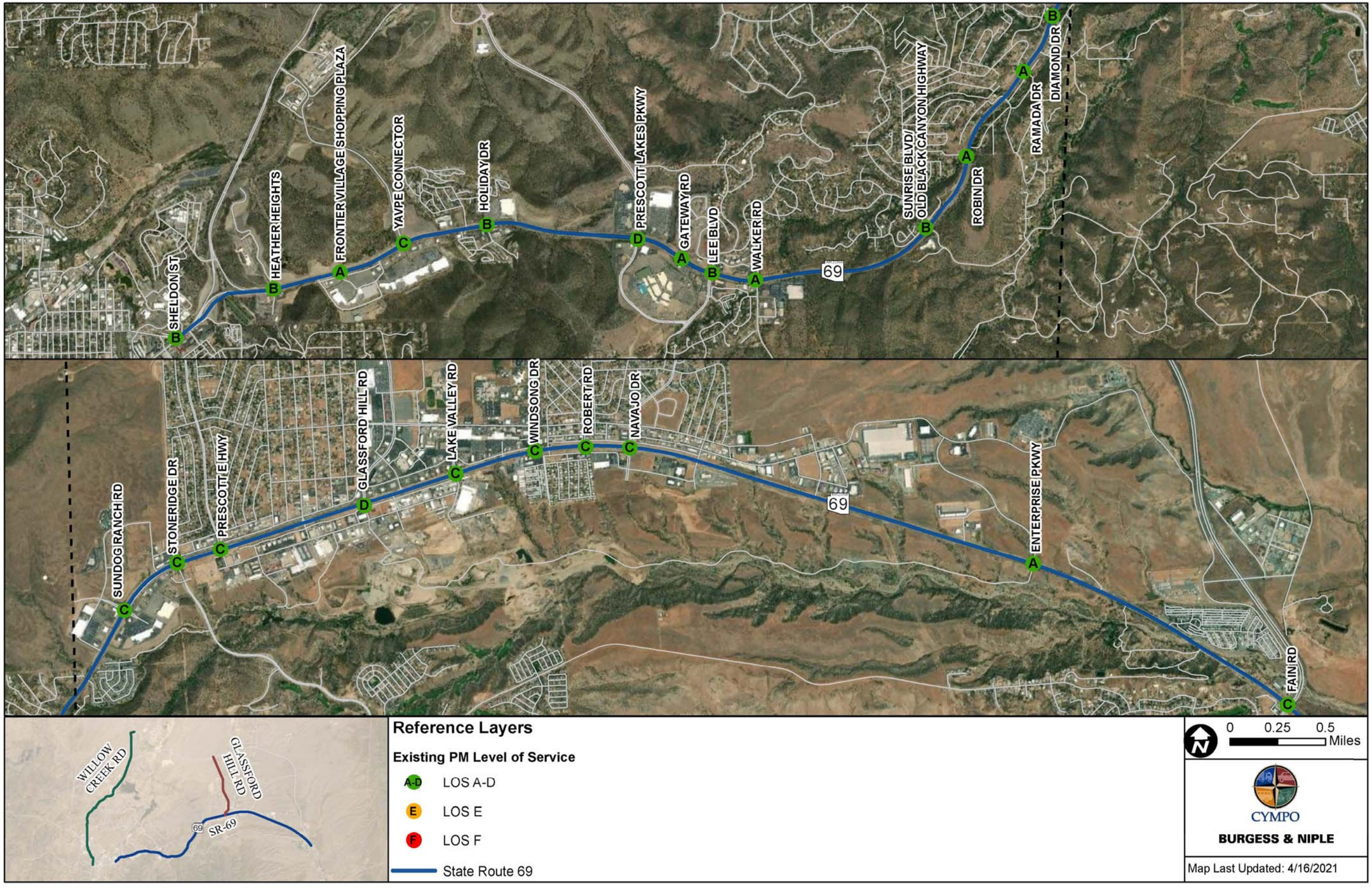


Figure 17 – SR 69 PM Peak Hour Levels of Service



Time-space diagrams along the SR 69 corridor were observed to evaluate the existing signal coordination and to identify potential signal timing improvements. Overall, the time-space diagrams in the existing conditions indicate minimal interruptions of traffic flow through the corridor during the AM, mid-day, and PM peak hours. Coordination favors westbound traffic during the morning hours and eastbound traffic during the evening hours. However, a few interruptions are present, generally in the direction of the unfavored traffic flow, suggesting that traffic signal optimization may be beneficial for operations along the corridor. The time-space diagrams are included in **Appendix SS-4**.

3.10.4. Traffic Predictability

The INRIX database was used to analyze the historic average speeds and travel time along SR 69 from Walker Road to Fain Road. The data were examined to observe variability or predictability by time-of-day and by day-of-week. Data for two typical weeks were averaged, the weeks of February 17 and October 20, 2019. The results are shown in **Figure 18** through **Figure 25**.

Figure 18 – Westbound SR 69 Weekday Average Speed

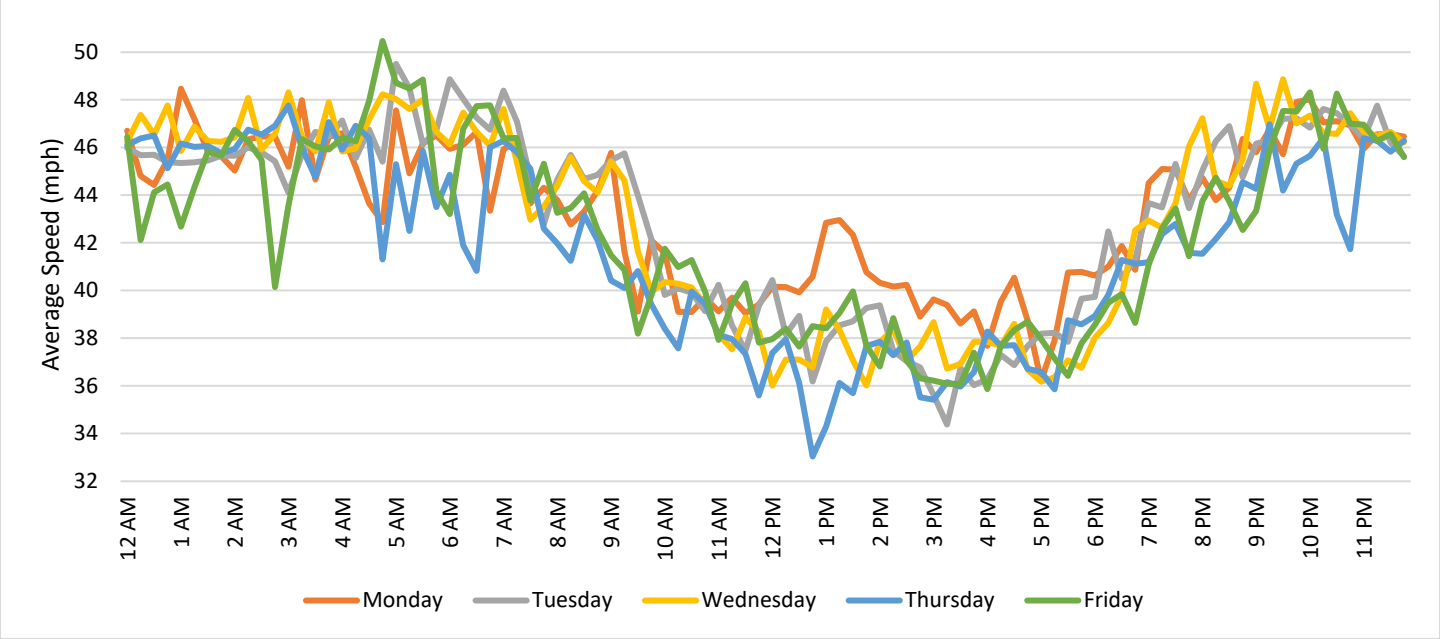


Figure 19 – Westbound SR 69 Weekend Average Speed

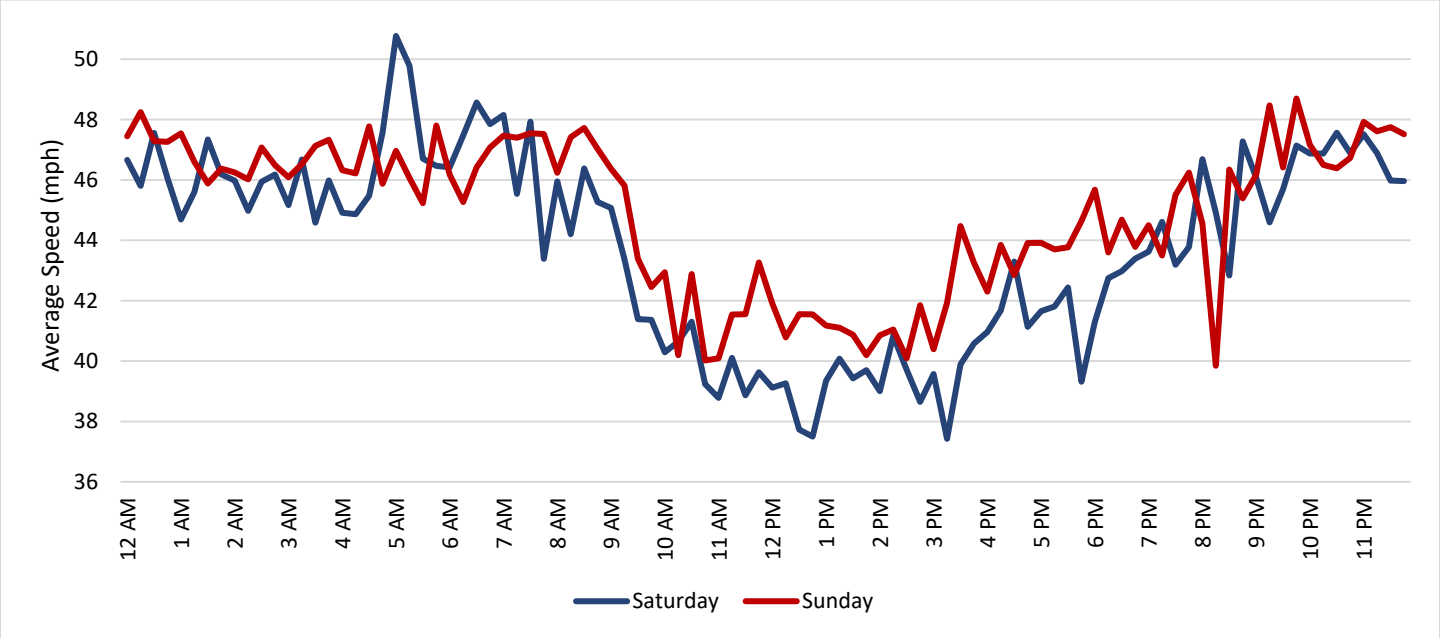


Figure 20 – Eastbound SR 69 Weekday Average Speed

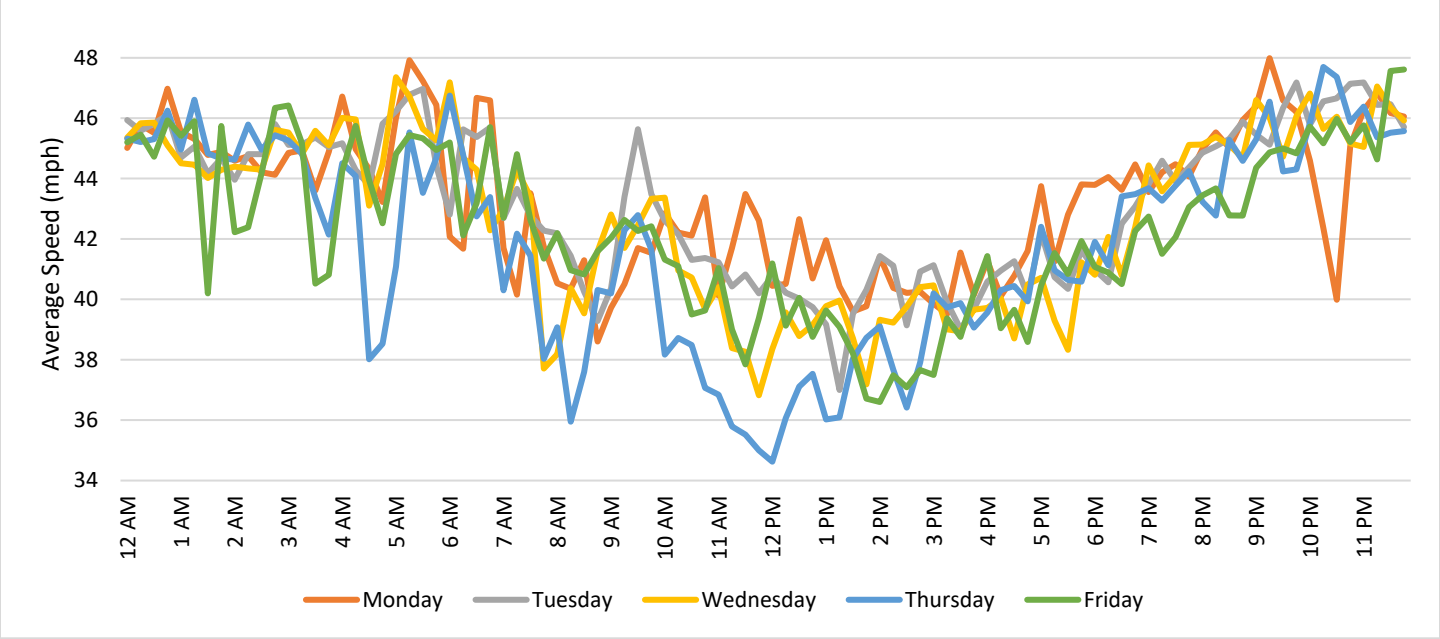


Figure 21 – Eastbound SR 69 Weekend Average Speed

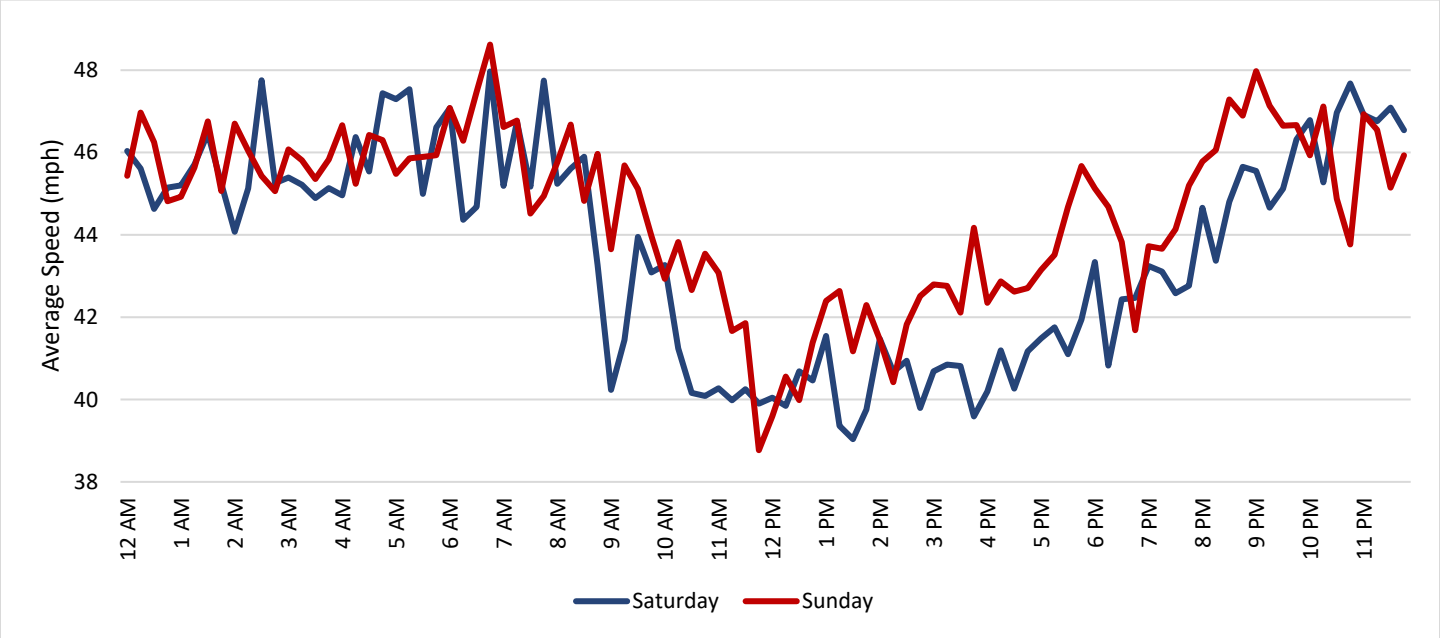


Figure 22 – Westbound SR 69 Average Weekday Travel Time

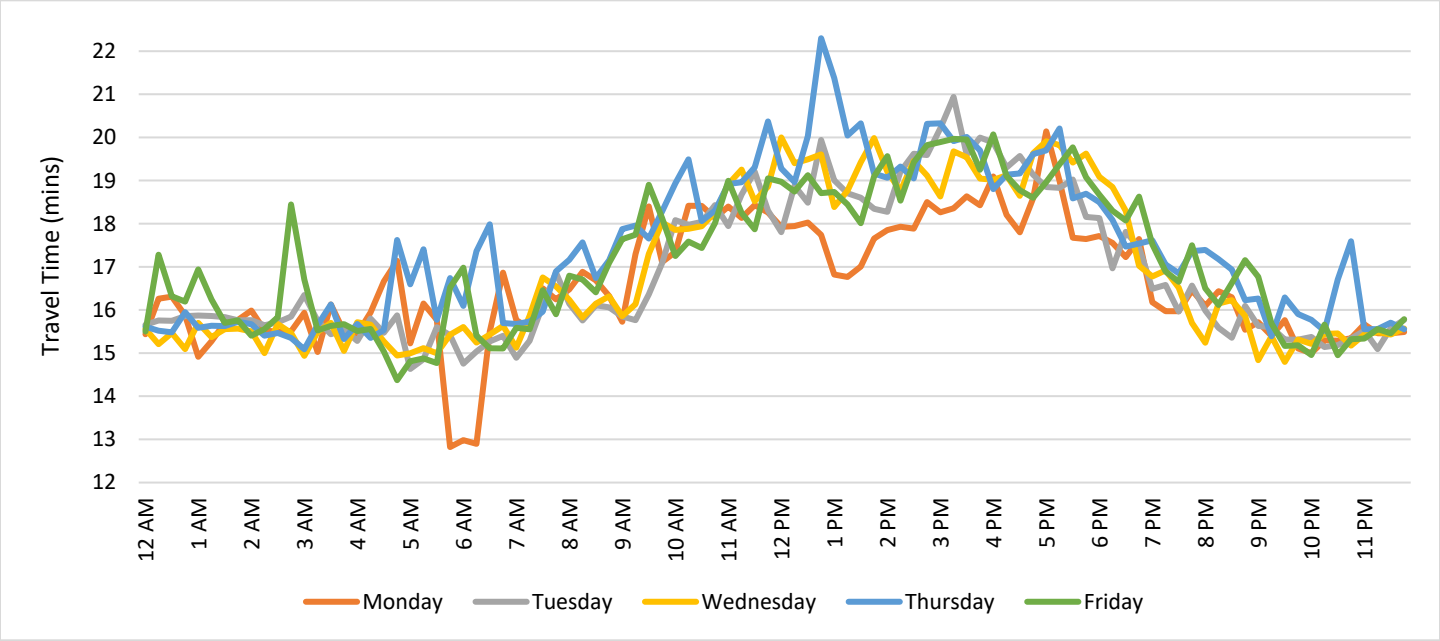


Figure 23 – Westbound SR 69 Average Weekend Travel Time

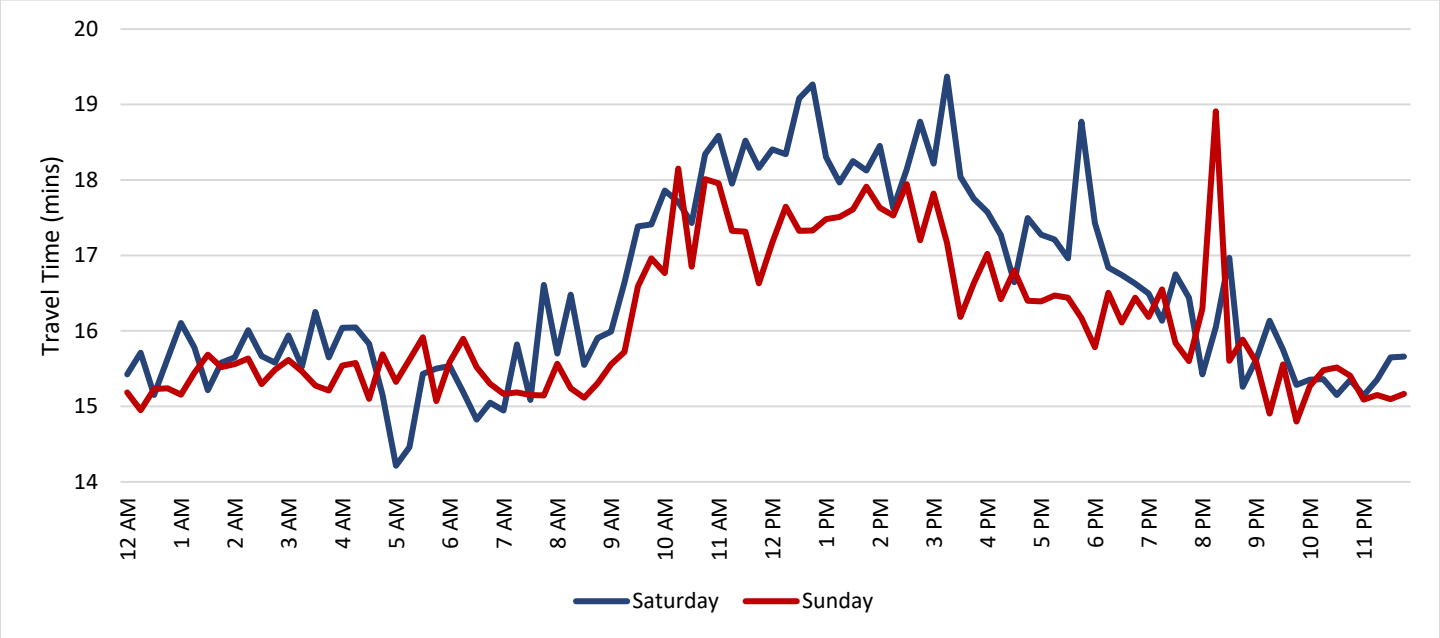


Figure 24 – Eastbound SR 69 Average Weekday Travel Time

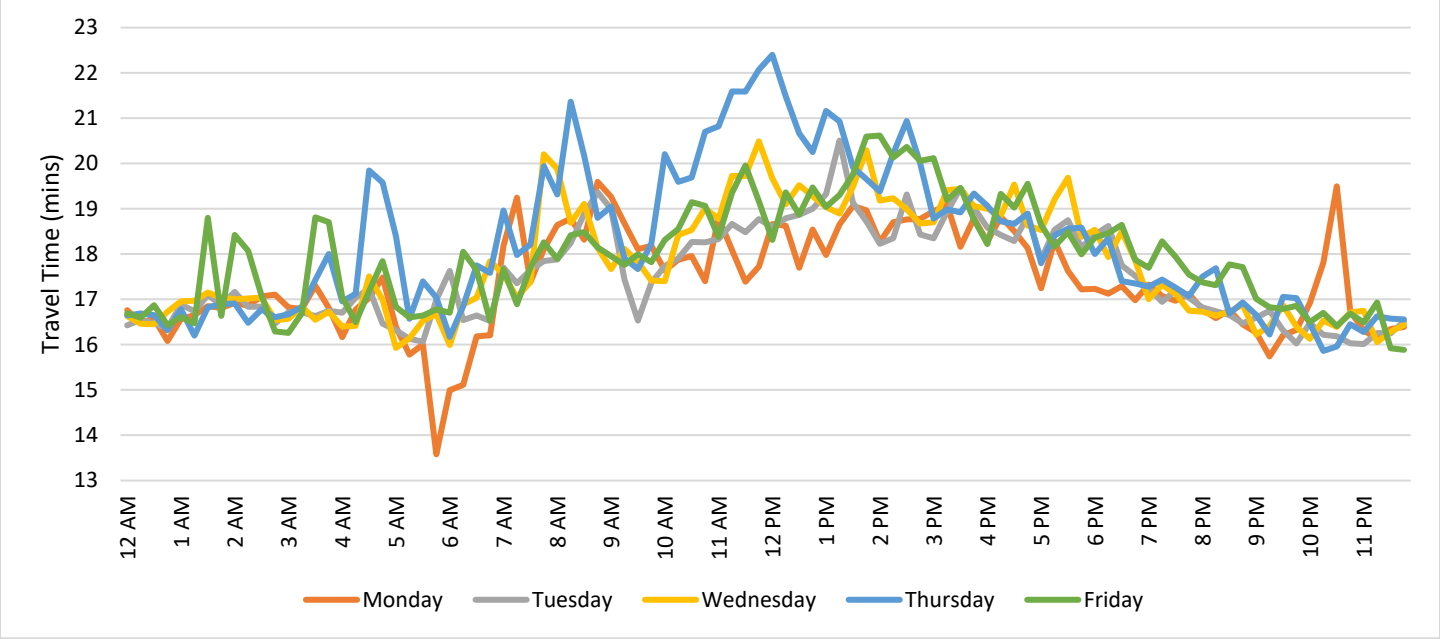


Figure 25 – Eastbound SR 69 Average Weekend Travel Time

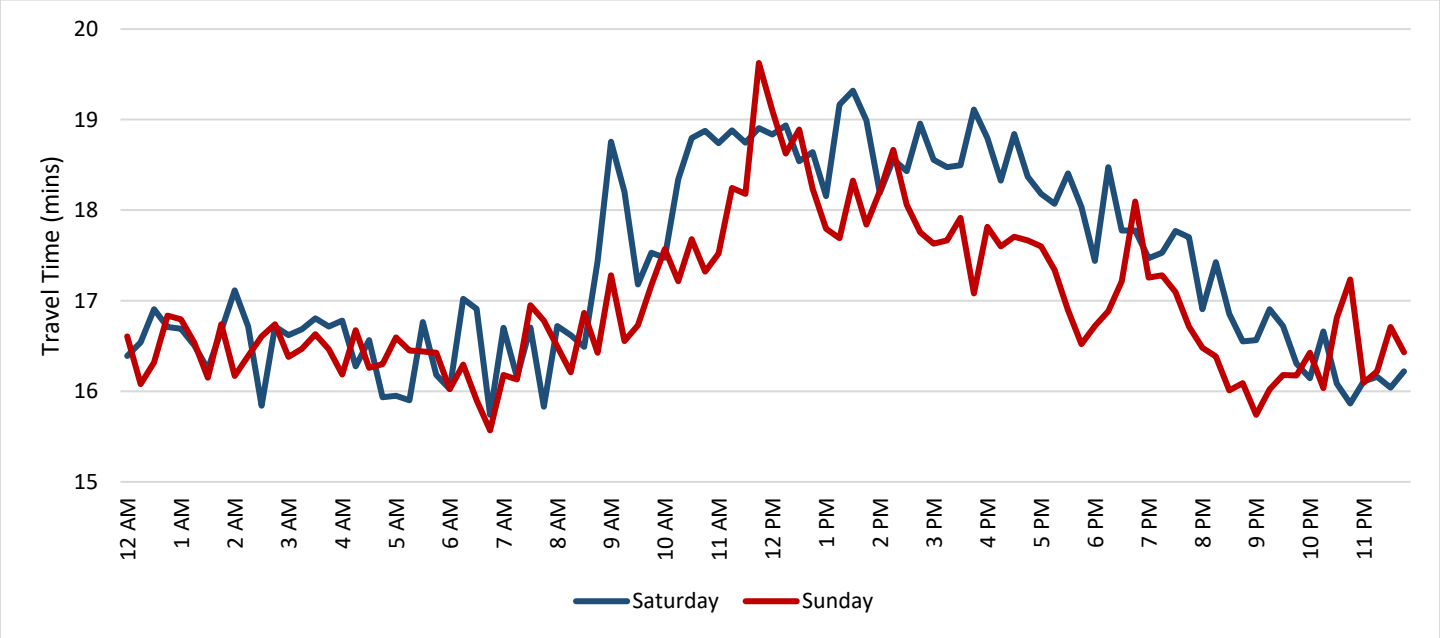


Figure 18 through **Figure 25** illustrate variation of average speed and travel time by both time-of-day and day-of-week. There is higher variability by time-of-day than by day-of-week. While the parameters tend to experience variability through the morning, afternoon, and evening hours within a single day, they are reasonably predictable at corresponding times during weekdays and corresponding times during weekends.

The INRIX database was also used to gather average speed and travel time data during the weekends of special events that occurred in 2019 to evaluate any effects the events may have on travel patterns. The specials events that were considered include:

- Crossroads of the West Prescott Gun Show (April 12-23, 2019) – Event occurs several times during the year and is held at the Findlay Toyota Center in Prescott Valley.
- Whiskey Off-Road Mountain Bike Race (April 26-28, 2019) – Race routes begin and end in downtown Prescott. Portions of Forest Roads and trails are closed during the event. The event includes several races, a community concert, and equipment expo and typically attracts many people to the downtown Prescott area.
- Prescott YMCA Whiskey Row Marathon (May 4, 2019) – Race routes begin and end in downtown Prescott. The course opens for early marathon runners at 5 AM and closes for all runners at noon. Main intersections are police controlled during the event.
- Fine Art and Wine Festival (May 11-12, 2019) – Occurs annually over Mother's Day weekend at the Yavapai County Courthouse Plaza in downtown Prescott.
- Bluegrass Festival (June 20-23, 2019) – An annual free event that takes place at the Yavapai County Courthouse Plaza in downtown Prescott.
- Prescott Frontier Days World's Oldest Rodeo (July 1-7, 2019) – This week-long event occurs over the 4th of July and attracts approximately 27,000 spectators. Special events include eight rodeo performances, rodeo dances, parade, arts and crafts show, and cowboy church. The rodeo is held at the Prescott Rodeo Grounds.
- Prescott's Gem and Mineral Show (August 2-4, 2019) – An annual event held at the Findlay Toyota Center in Prescott Valley.
- Yavapai County Fair (September 4-8, 2019) – Held at the Prescott Rodeo Grounds. The event includes special performances, rodeo, youth livestock auction, livestock camp and show, and food, commercial, and entertainment vendors.

The speed and travel time of special event weekends were compared to the typical weekends of February 17 and October 20, 2019. Eastbound and westbound results were averaged for bi-directional results. The results are illustrated in **Figure 26** through **Figure 41**. Note that the dotted lines in the figures represent typical weekend speed or travel time.

Figure 26 – SR 69 Average Speeds During Crossroads Prescott Gun Show

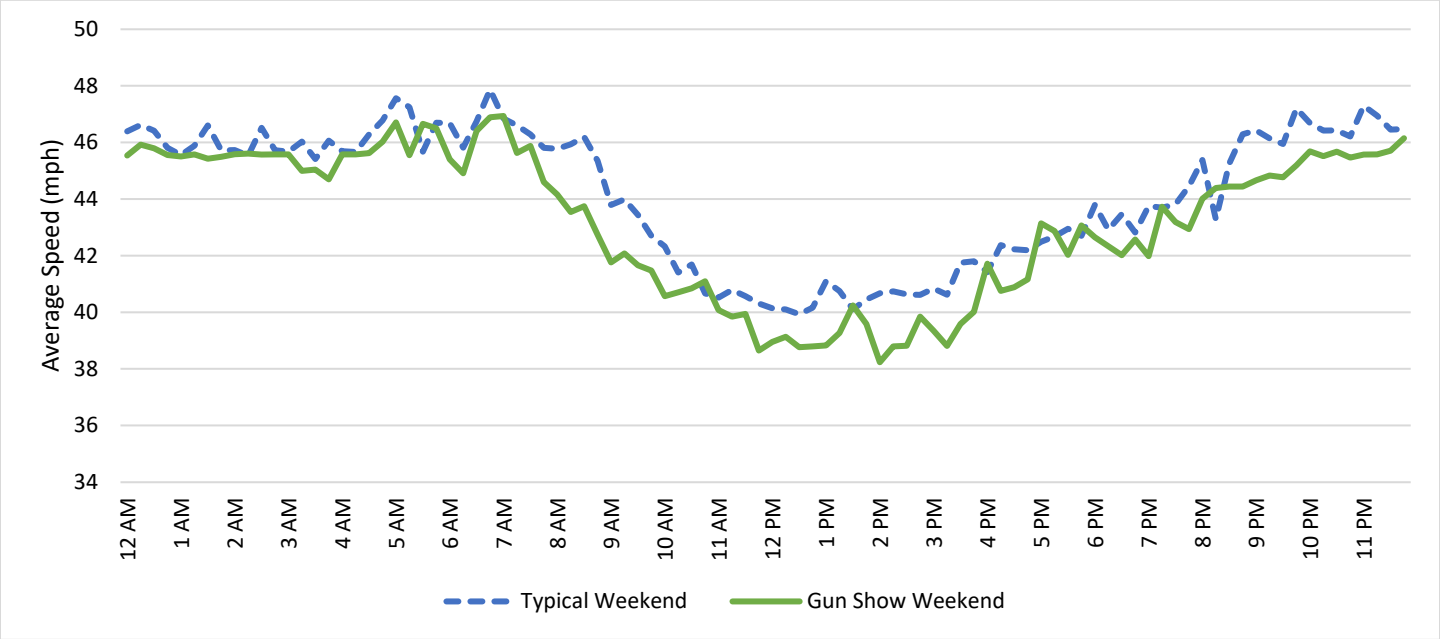


Figure 27 – SR 69 Average Travel Time During Crossroads Prescott Gun Show

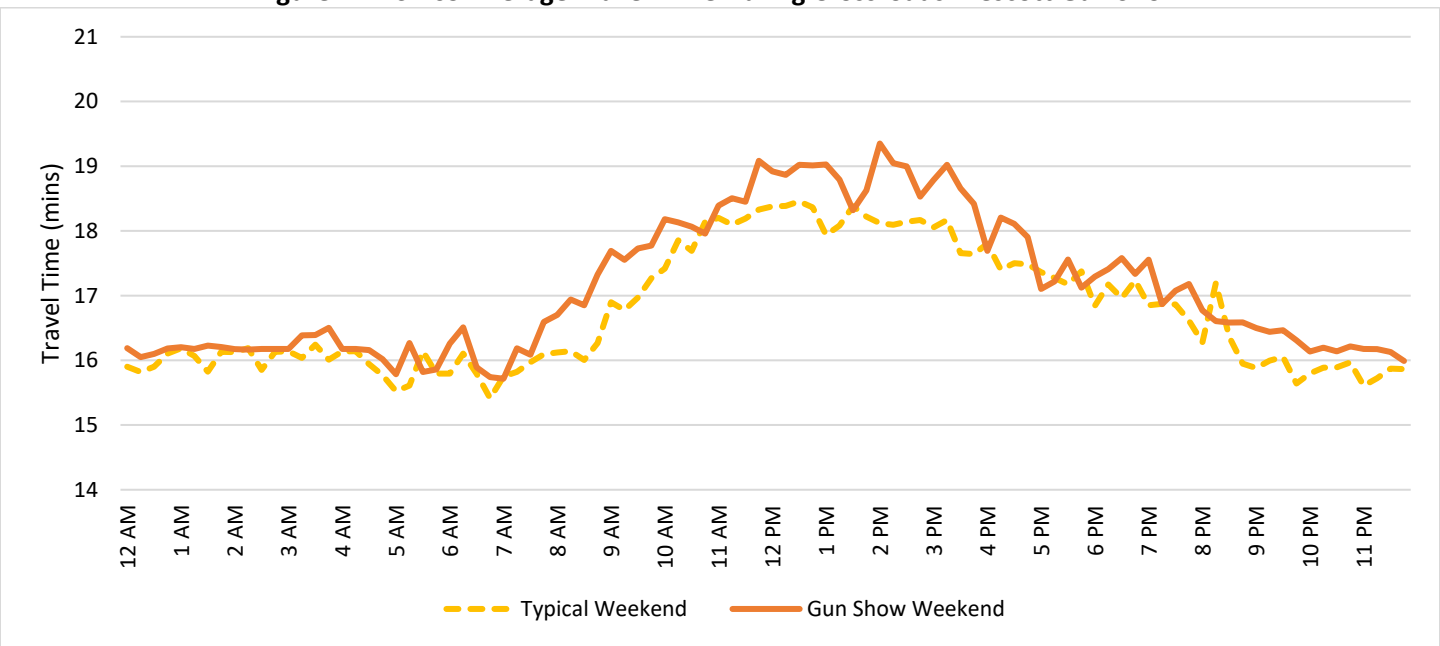


Figure 28 – SR 69 Average Speeds During Whiskey Off-Road Mountain Bike Race

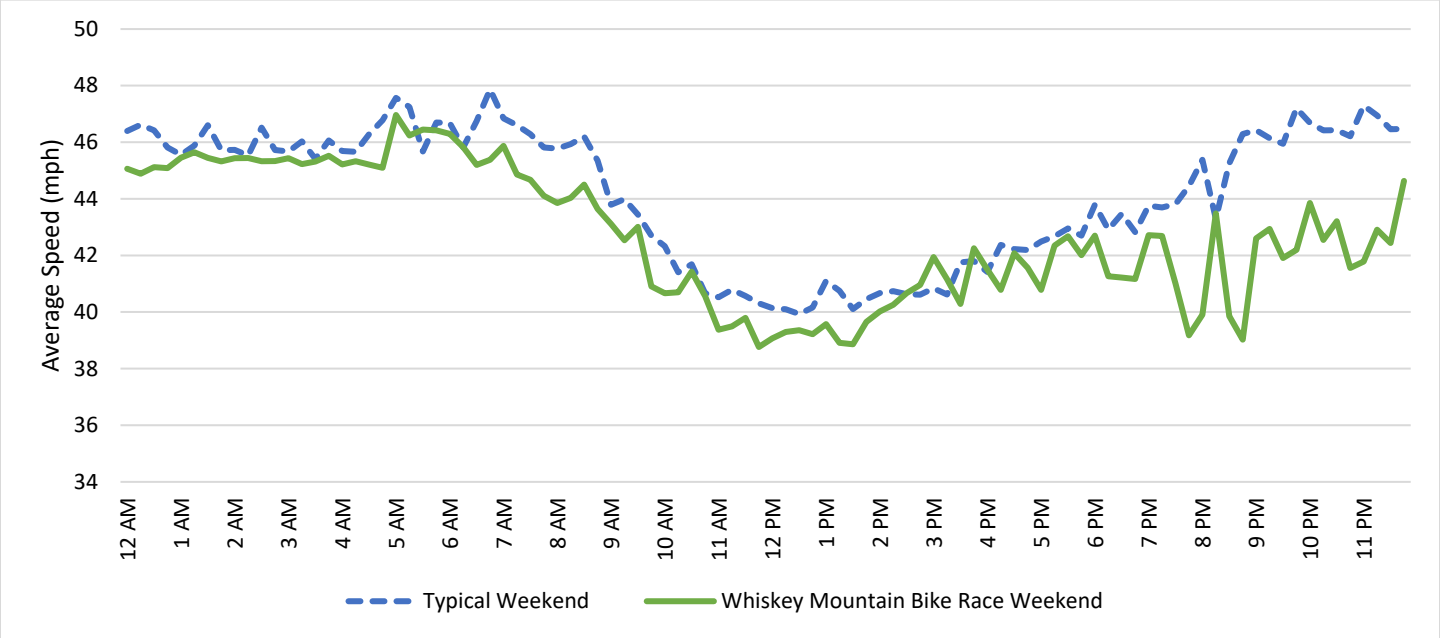


Figure 29 – SR 69 Average Travel Time During Whiskey Off-Road Mountain Bike Race

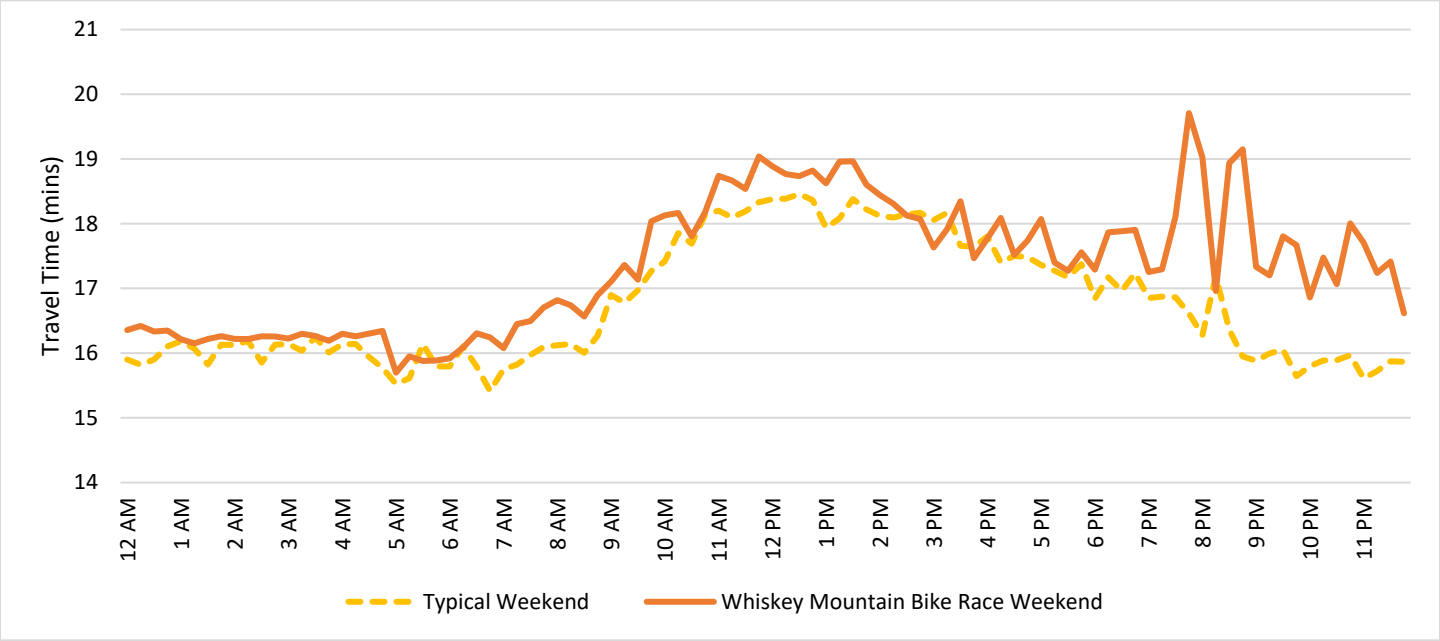


Figure 30 – SR 69 Average Speeds During Whiskey Row Marathon

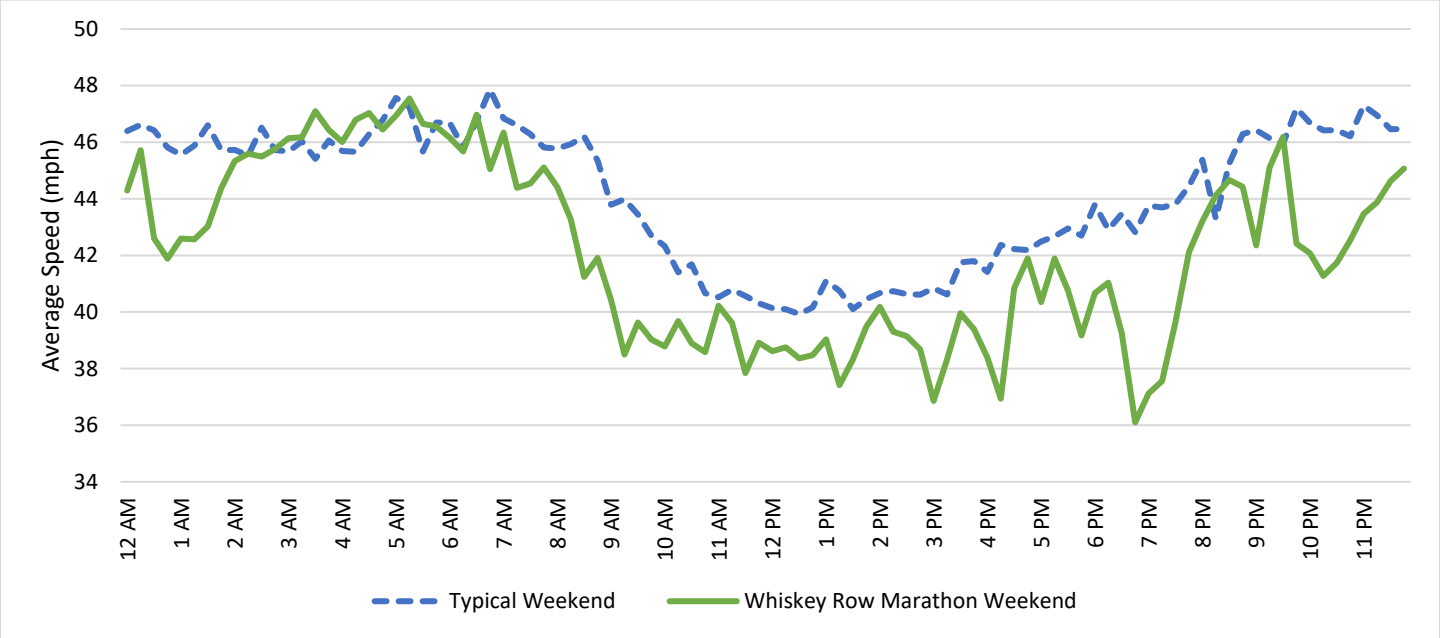


Figure 31 – SR 69 Average Travel Time During Whiskey Row Marathon

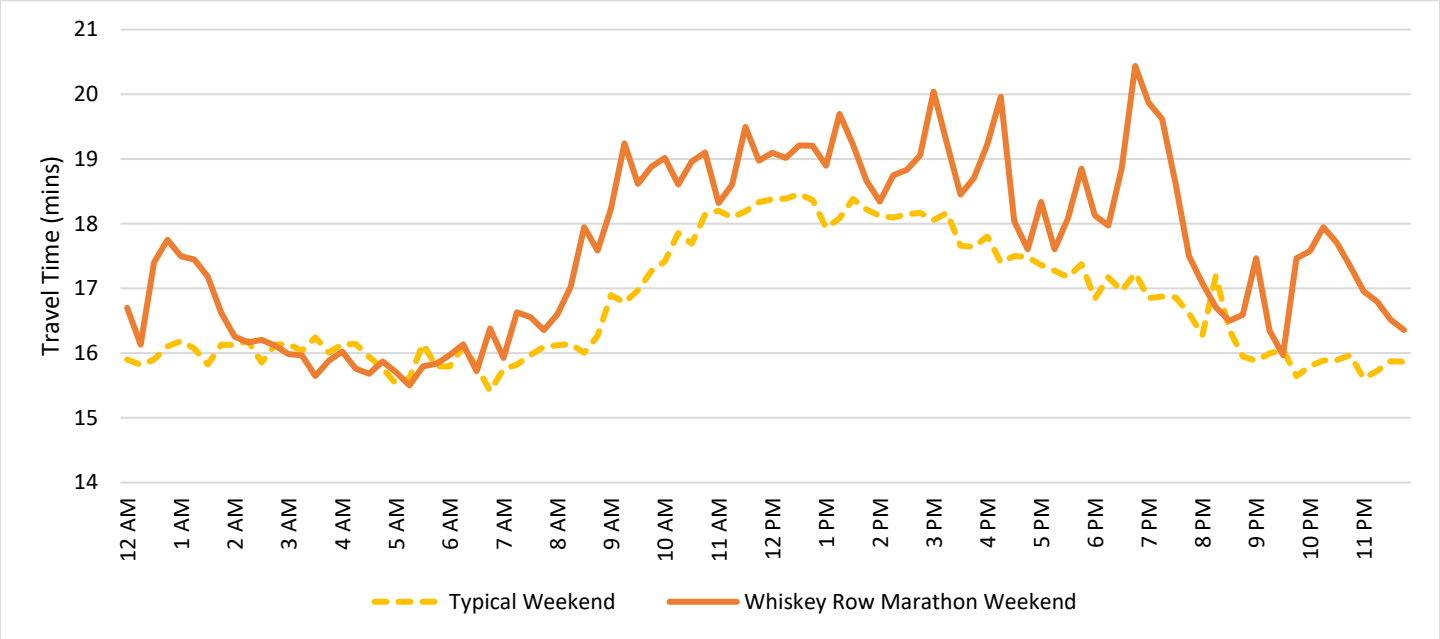


Figure 32 – SR 69 Average Speeds During Fine Art and Wine Festival

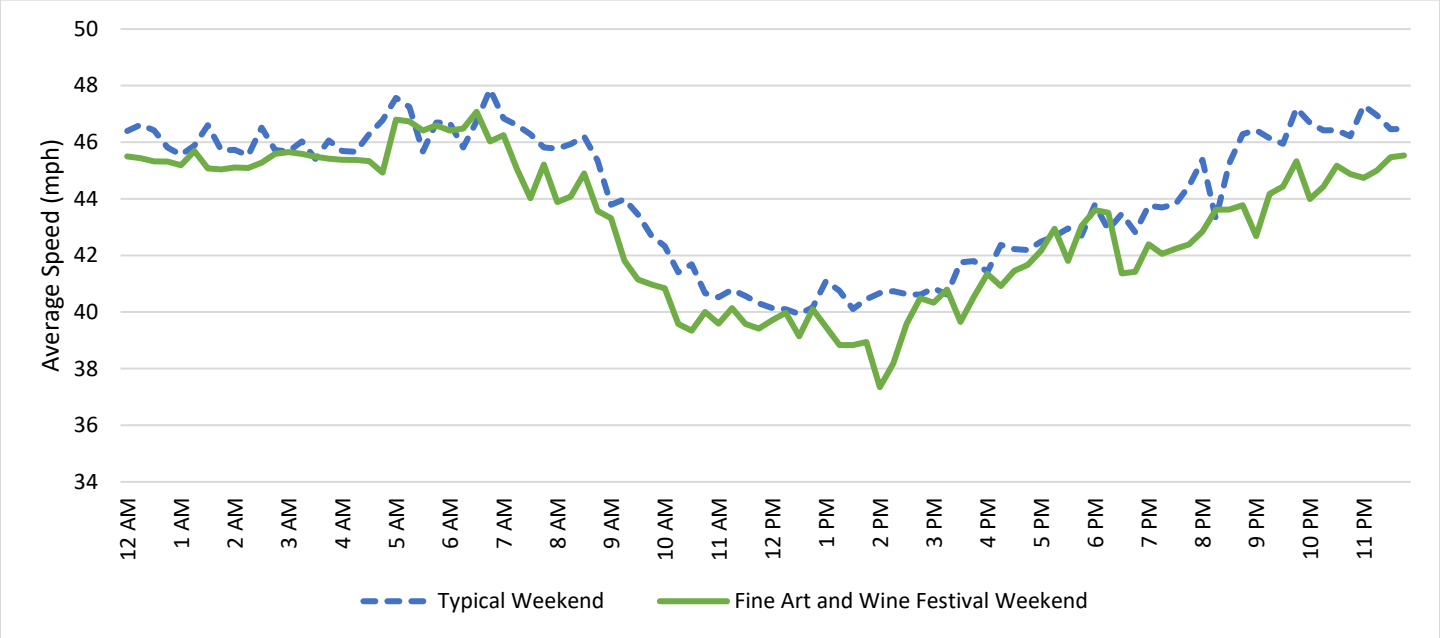


Figure 33 – SR 69 Average Travel Time During Fine Art and Wine Festival

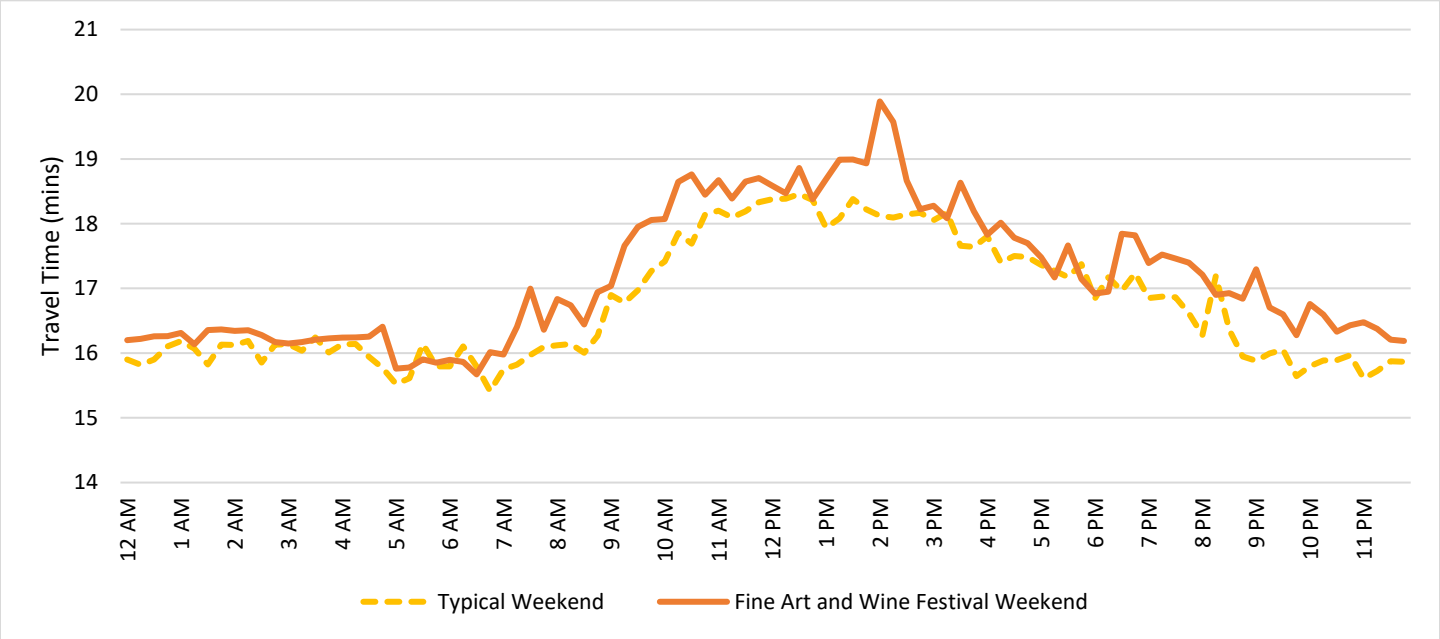


Figure 34 – SR 69 Average Speeds During Bluegrass Festival

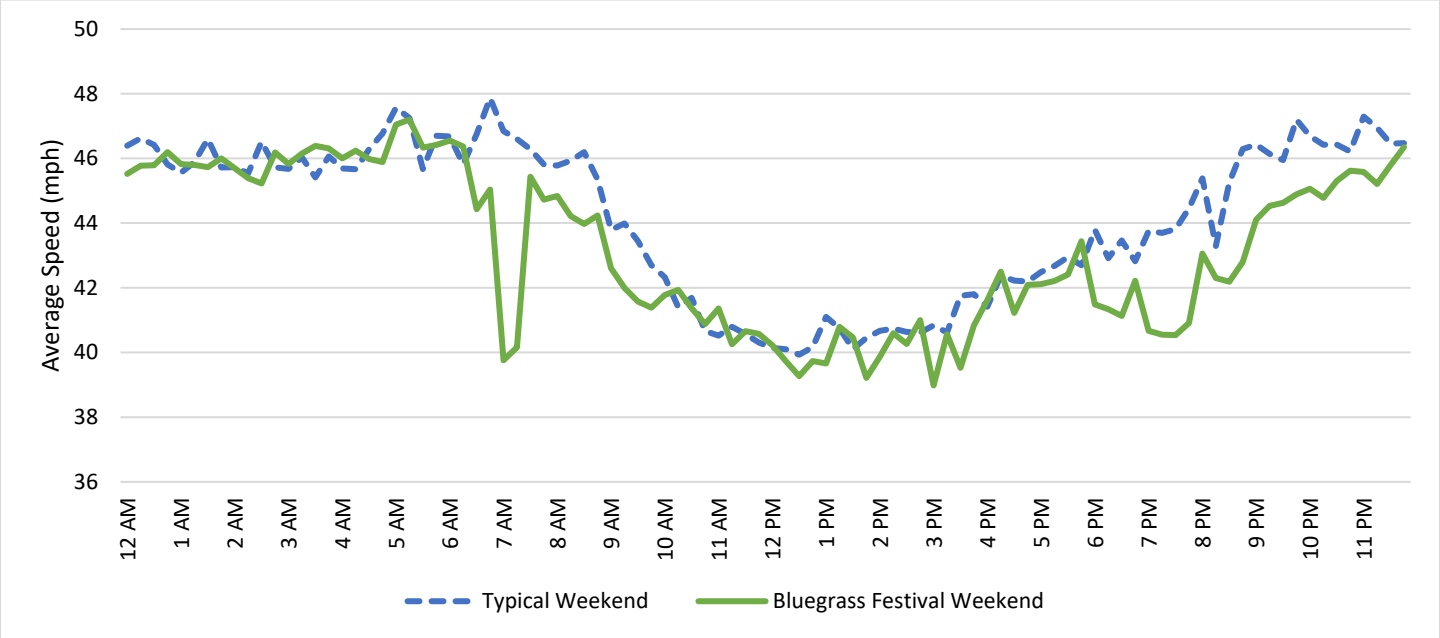


Figure 35 – SR 69 Average Travel Time During Bluegrass Festival

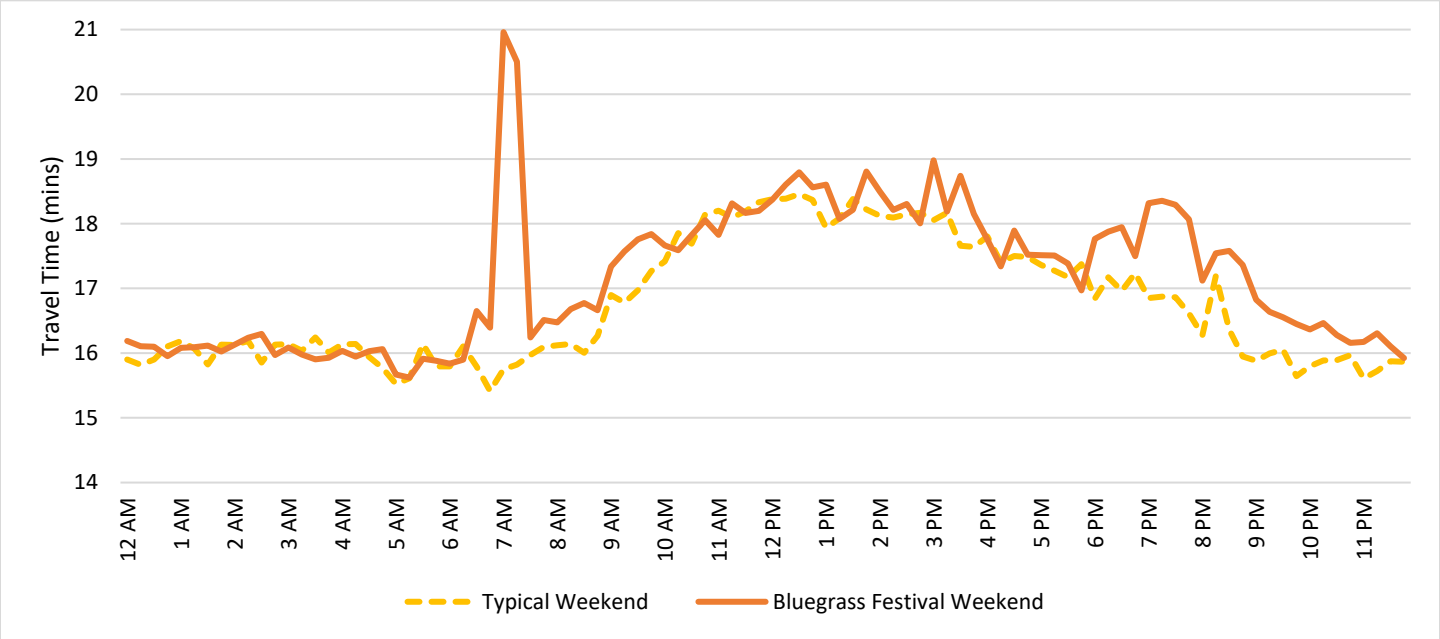


Figure 36 – SR 69 Average Speeds During 4th of July/World's Oldest Rodeo

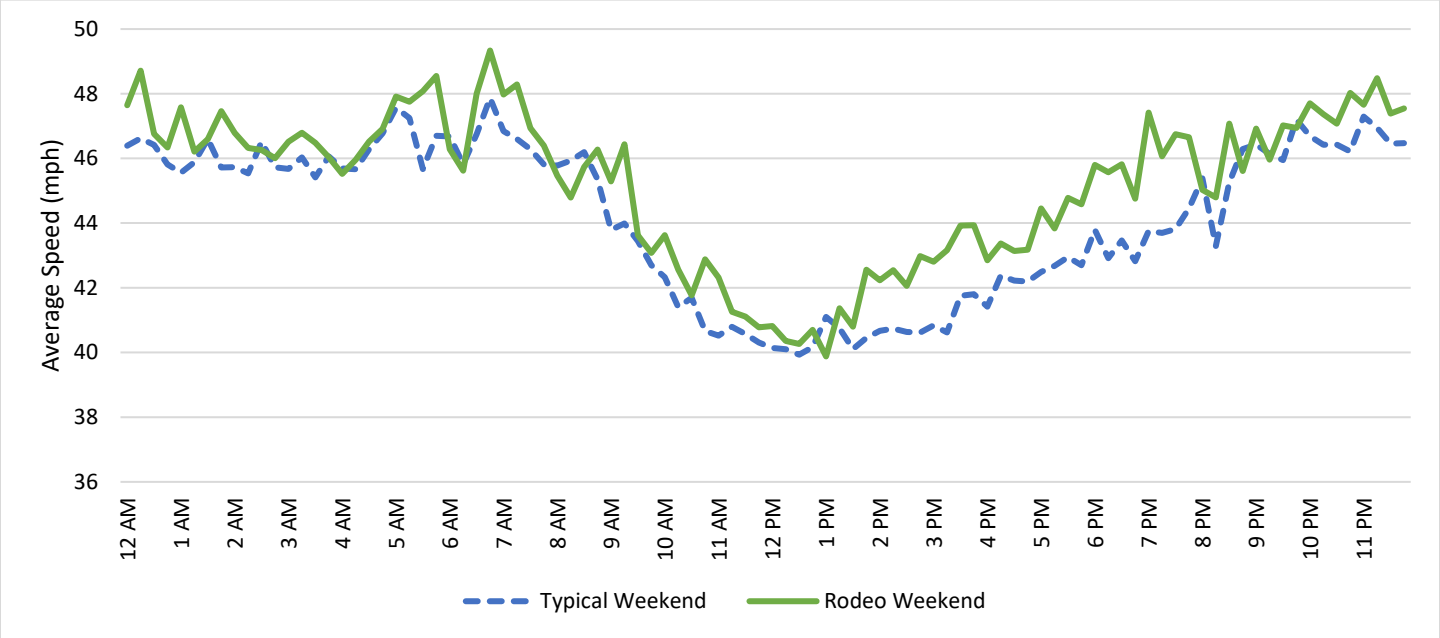


Figure 37 – SR 69 Average Travel Time During 4th of July/World's Oldest Rodeo

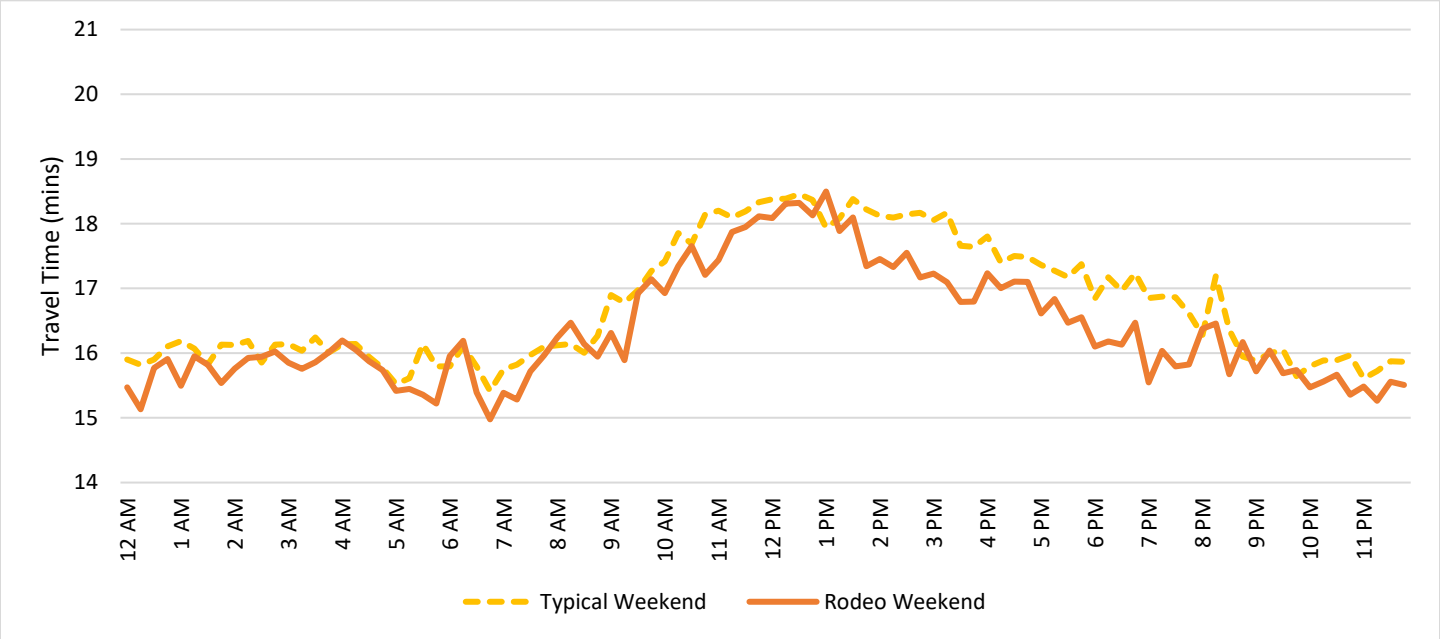


Figure 38 – SR 69 Average Speeds During Prescott's Gem and Mineral Show

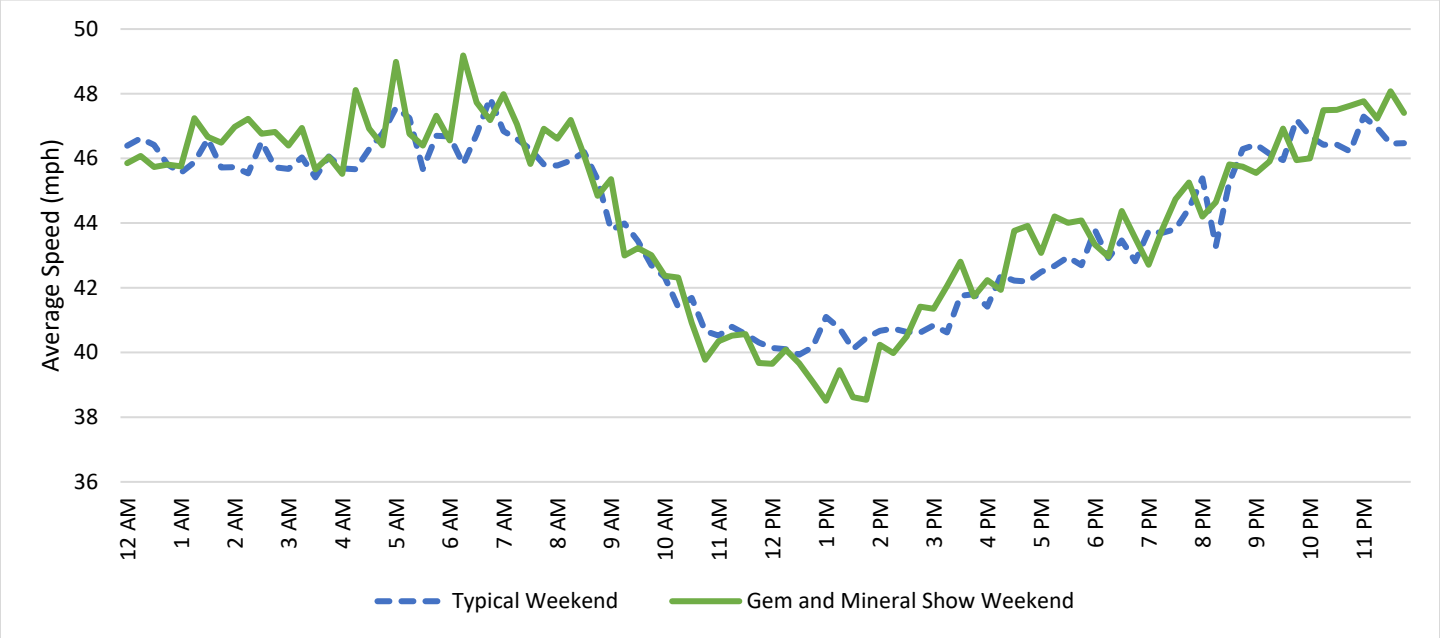


Figure 39 – SR 69 Average Travel Time During Prescott's Gem and Mineral Show

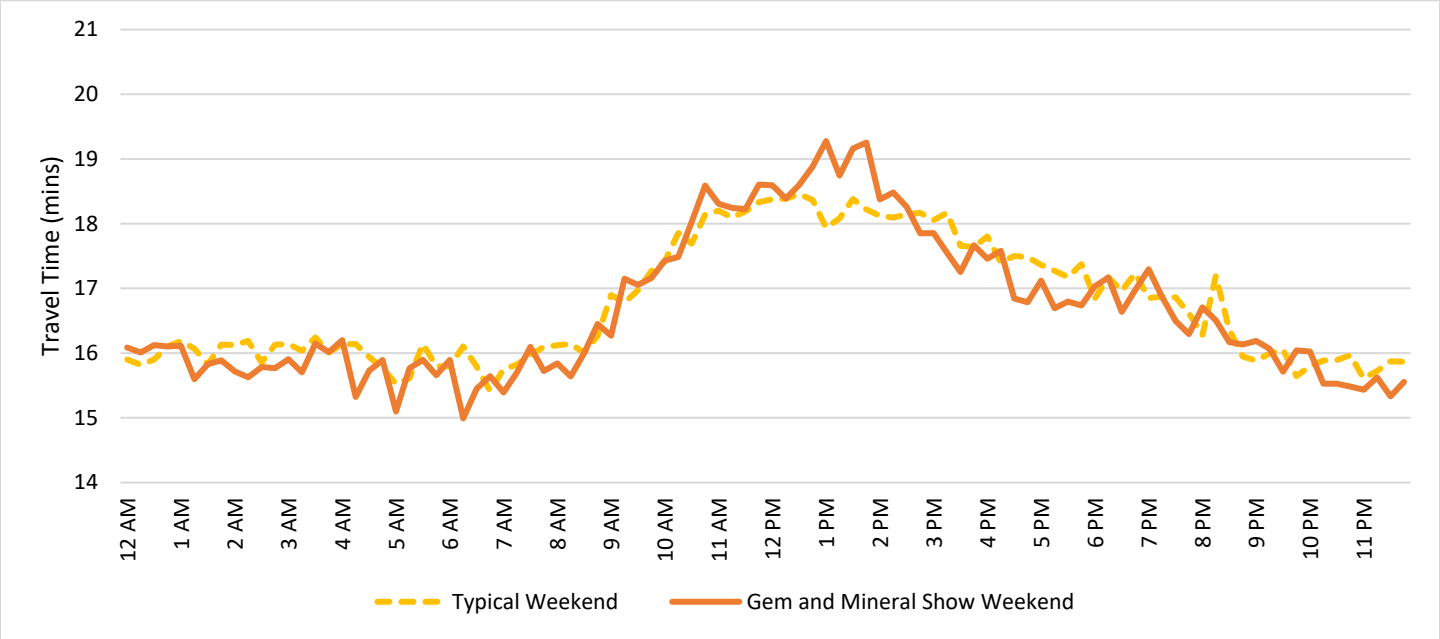


Figure 40 – SR 69 Average Speeds During Yavapai County Fair

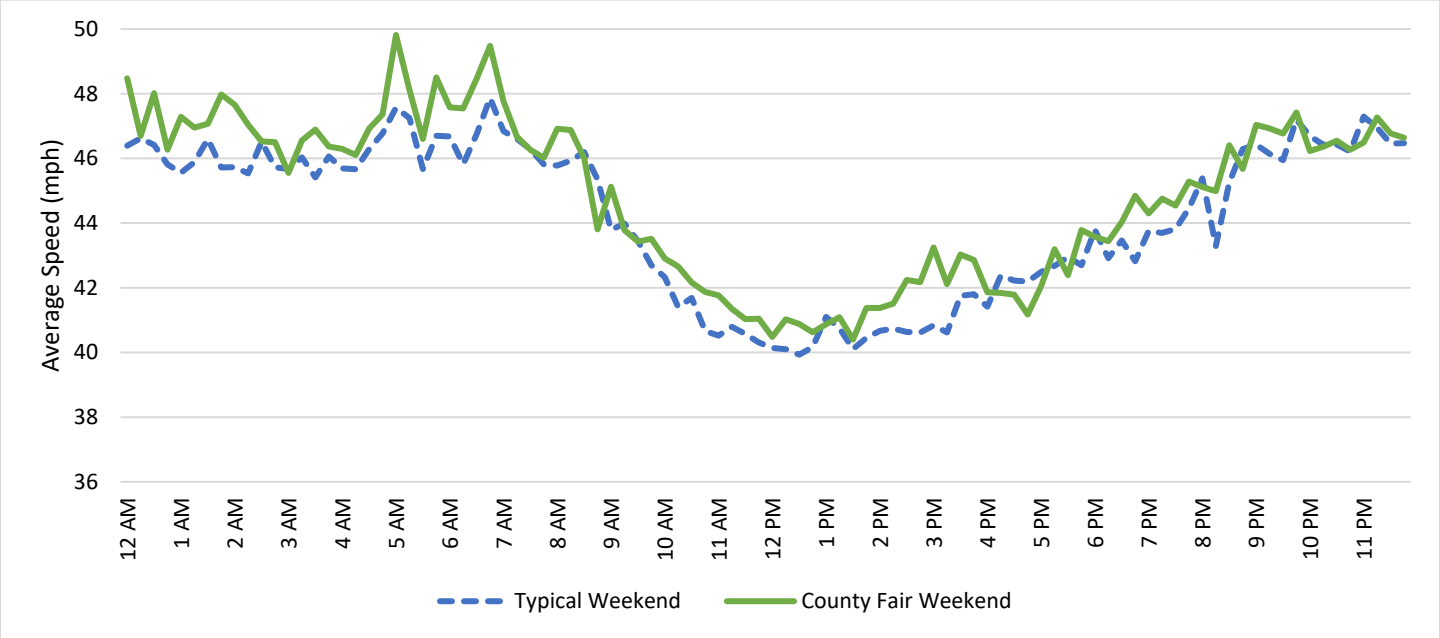
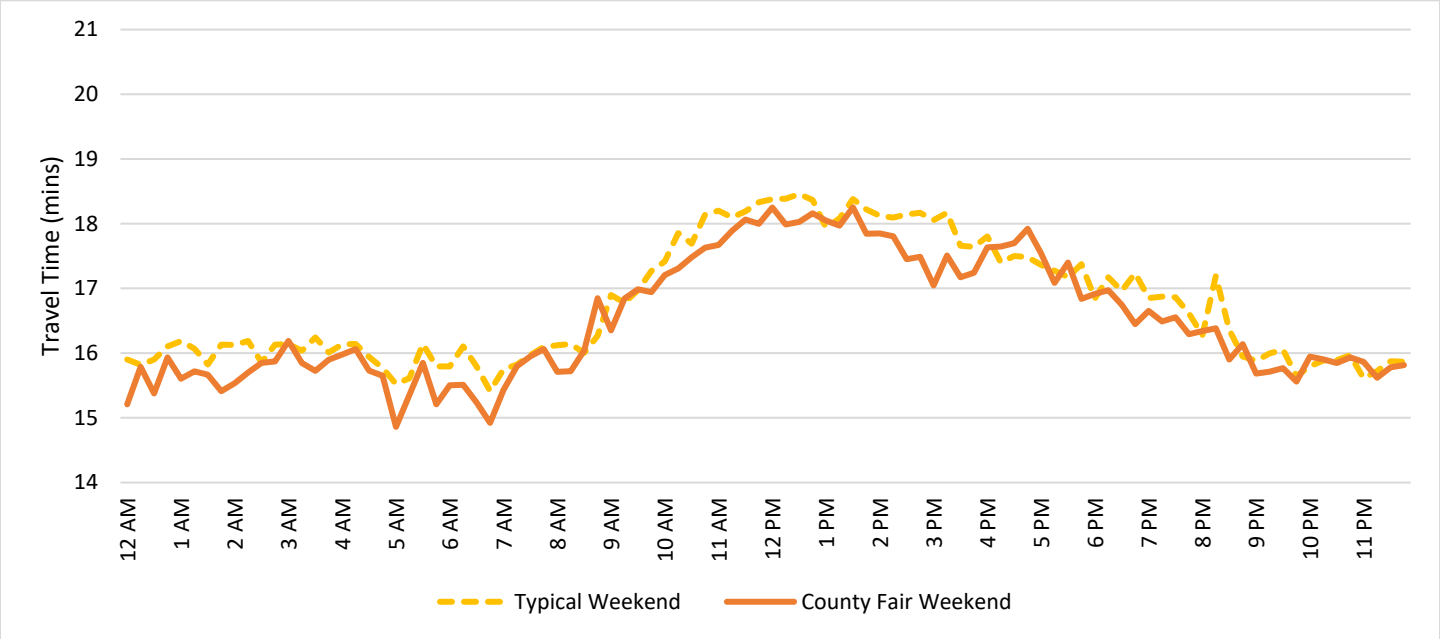


Figure 41 – SR 69 Average Travel Time During Yavapai County Fair



In general, **Figure 30** through **Figure 41** demonstrate that the average speed and travel times through the SR 69 corridor during special event weekends were similar to typical weekends in 2019. Interestingly, some special event weekends experienced an increase of performance, such as the weekend of 4th of July and the World's Oldest Rodeo. This may be due to residents traveling out of town for the holiday weekend or lack of travel altogether. The 2018 World's Oldest Rodeo was also analyzed to determine if the average speeds and travel times had greater impact than what occurred in 2019. Average speeds and travel time during the 2018 event were consistent with that of typical weekends, suggesting that the event does not greatly impact operations along SR 69.

The Whiskey Row Marathon weekend experienced the largest decrease in performance. The marathon may have been a contributing factor during the morning and afternoon hours due to the slowing of traffic in the downtown Prescott area. However, as the race officially ends at noon, the evening decrease of performance is likely due to other factors. The

Whiskey Row Marathon, along with the Whiskey Off-Road Mountain Bike Race may cause demand to shift onto other nearby roadways.

Performance spikes can be seen during the evening hours of the Whiskey Off-Road Mountain Bike Race and the morning hours of the Bluegrass Festival; however, the decrease in performance is likely not connected to the events themselves.

12-hr and 24-hr special traffic counts discussed in **Section 3.10.1** collected on February 16-23, 2021 by ADOT were analyzed to illustrate travel demand variation or predictability. The count locations are illustrated in **Figure 11**. Eastbound traffic volumes are shown in **Figure 42** through **Figure 47**. Westbound traffic volumes are shown in **Figure 48** through **Figure 55**. Note that breaks in the figures are due to 12-hr counts.

Figure 42 – SR 69 Milepost 294.7 Eastbound 2021 Weekday Traffic Volume

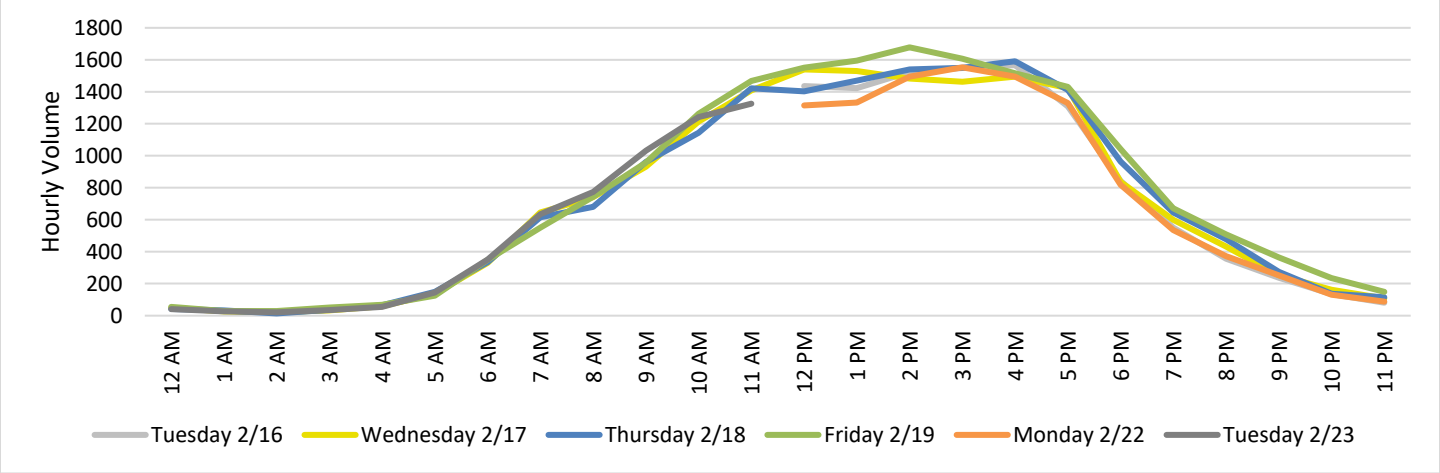


Figure 43 – SR 69 Milepost 294.7 Eastbound 2021 Weekend Traffic Volume

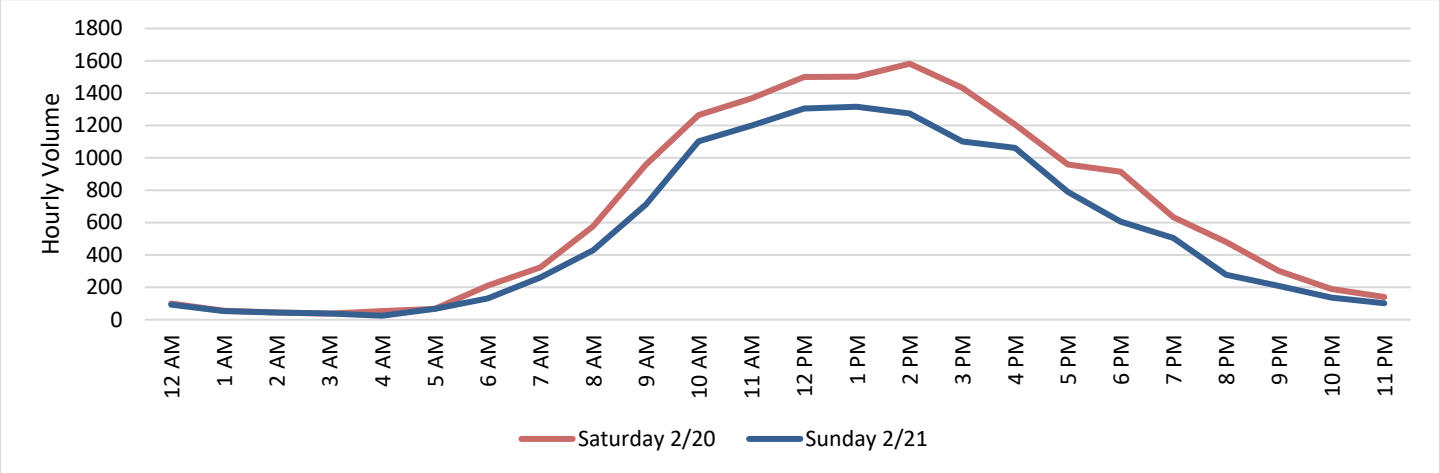


Figure 44 – SR 69 Milepost 288 Eastbound 2021 Weekday Traffic Volume

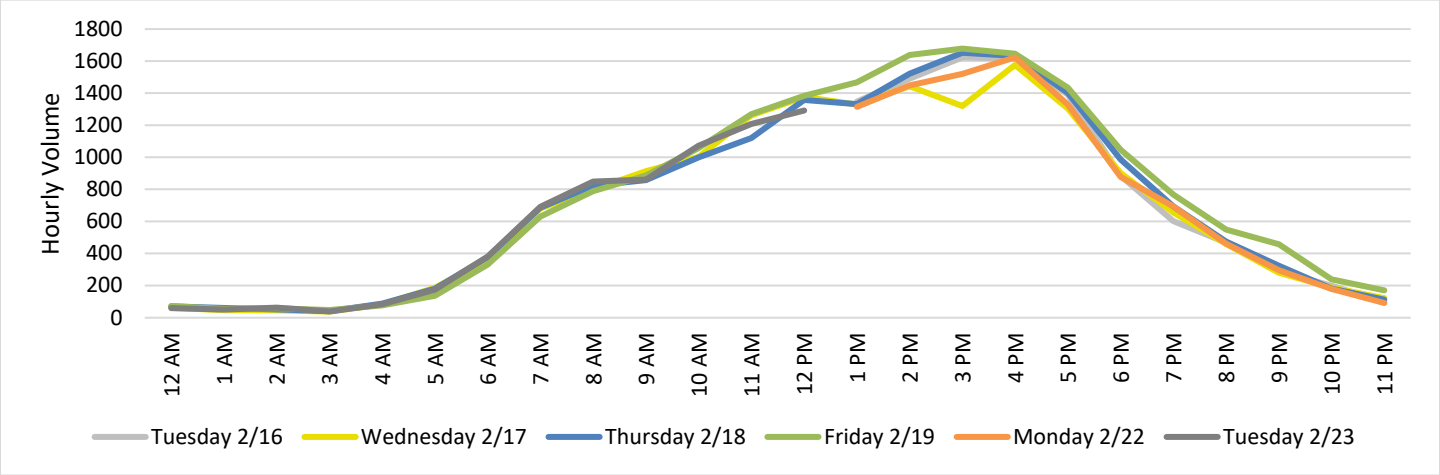


Figure 45 – SR 69 Milepost 288 Eastbound 2021 Weekend Traffic Volume

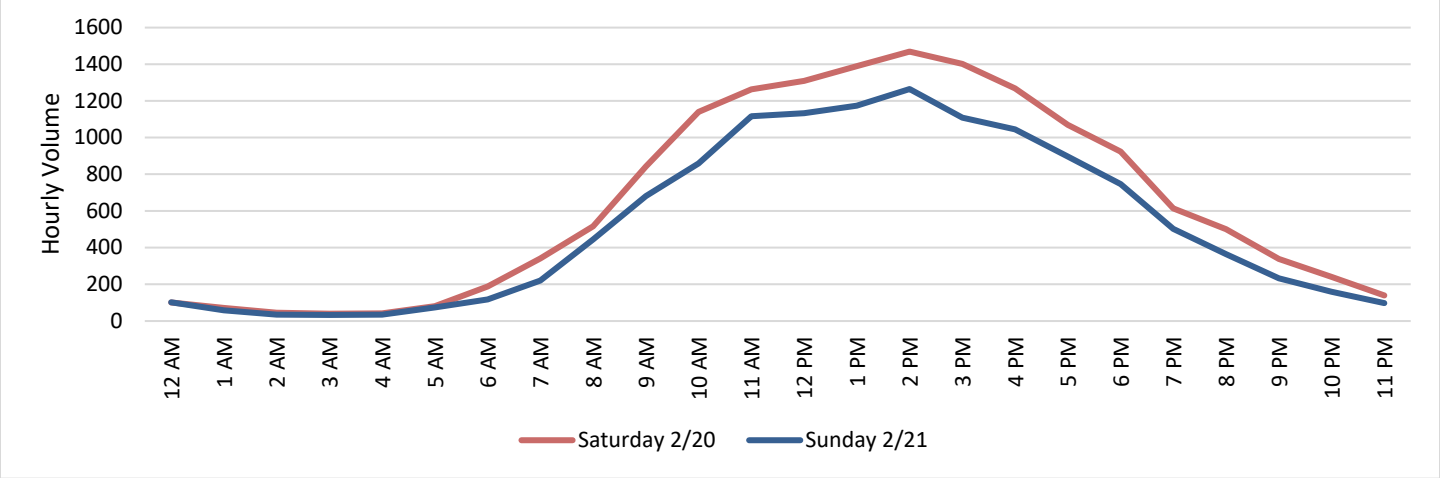


Figure 46 – SR 69 Milepost 283 Eastbound 2021 Weekday Traffic Volume

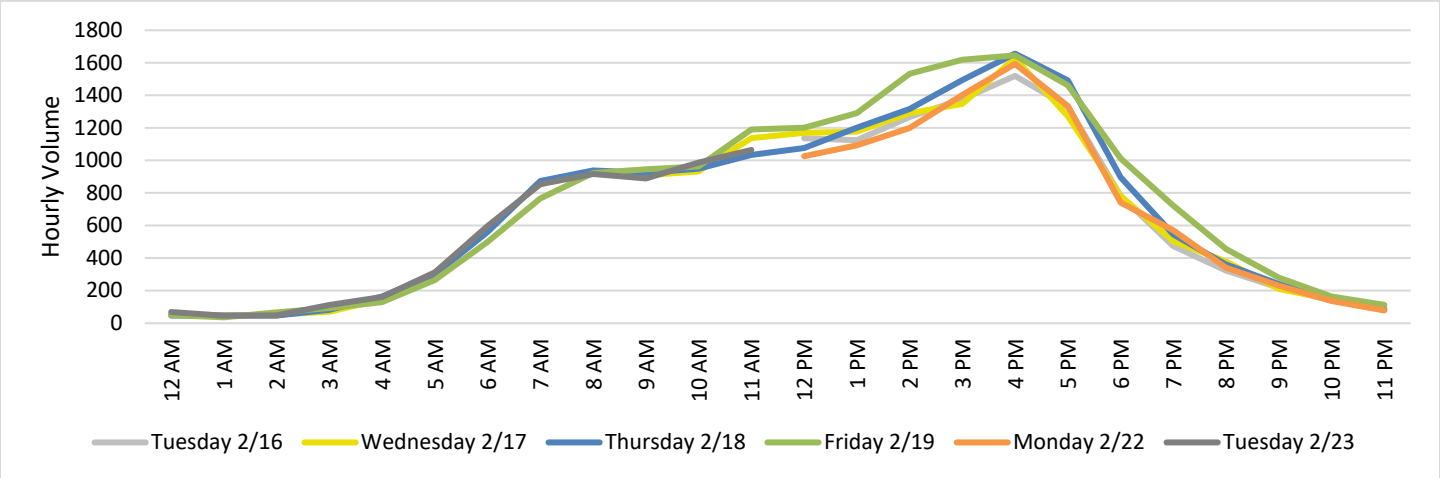


Figure 47 – SR 69 Milepost 283 Eastbound 2021 Weekend Traffic Volume

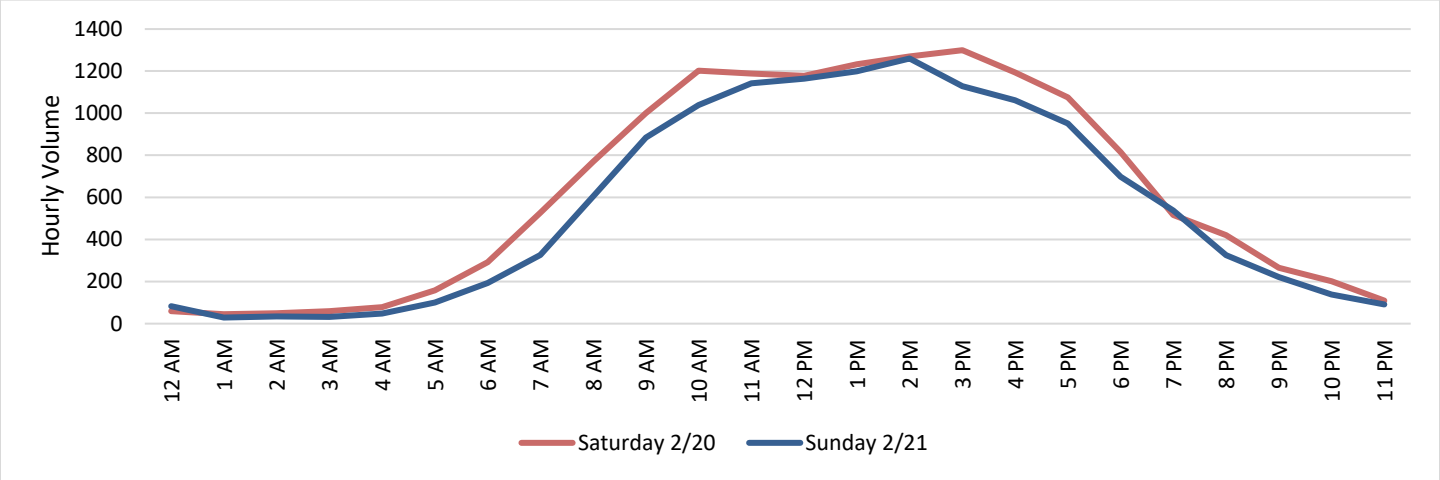


Figure 48 – SR 69 Milepost 283 Westbound 2021 Weekday Traffic Volume

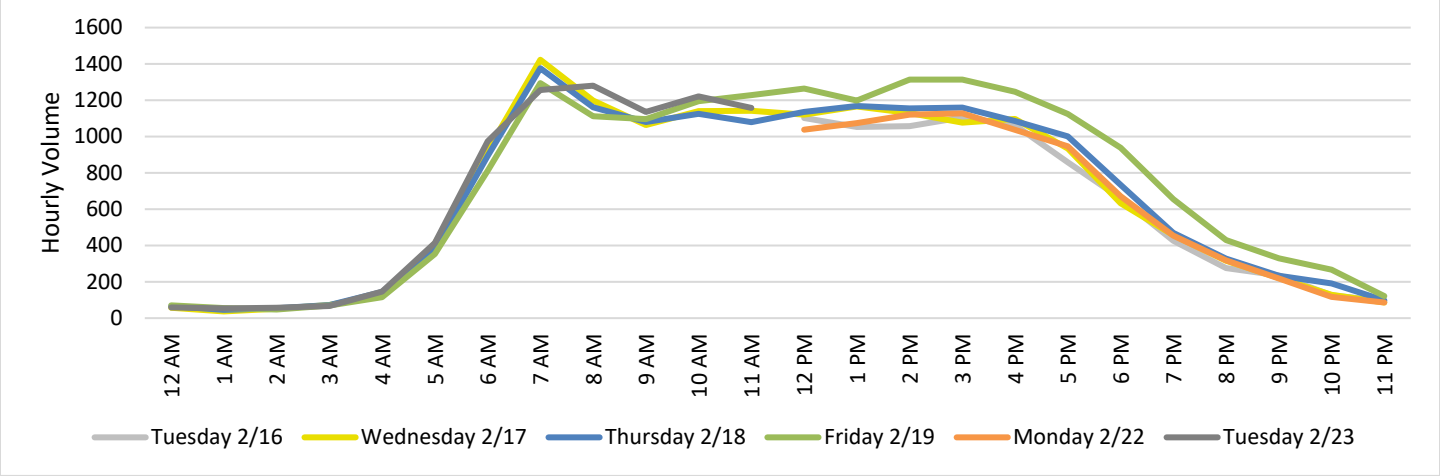


Figure 49 – SR 69 Milepost 283 Westbound 2021 Weekend Traffic Volume

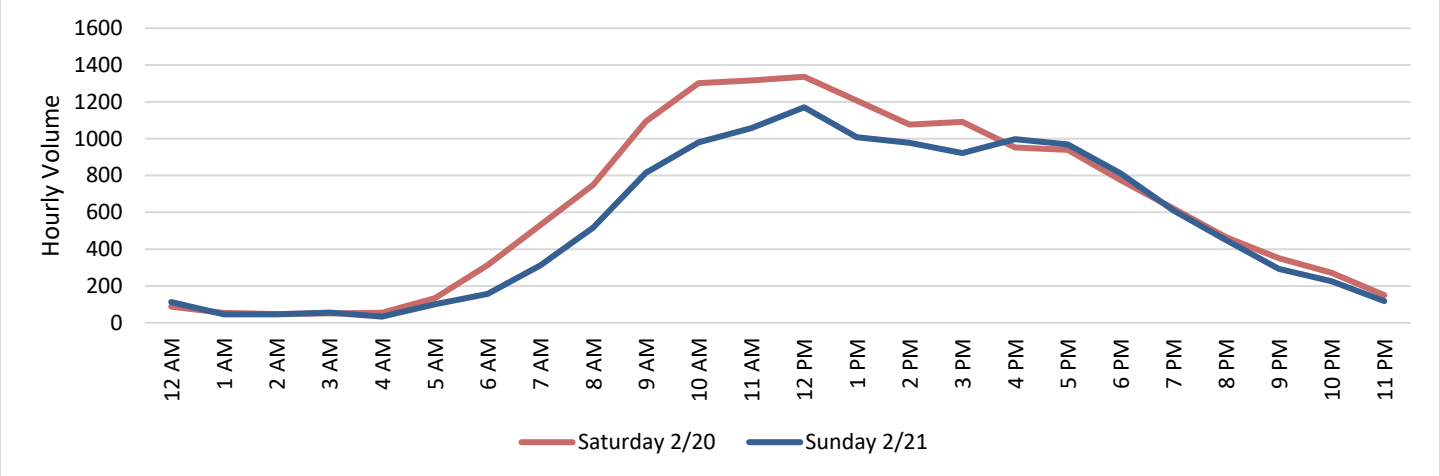


Figure 50 – SR 69 Milepost 288 Westbound 2021 Weekday Traffic Volume

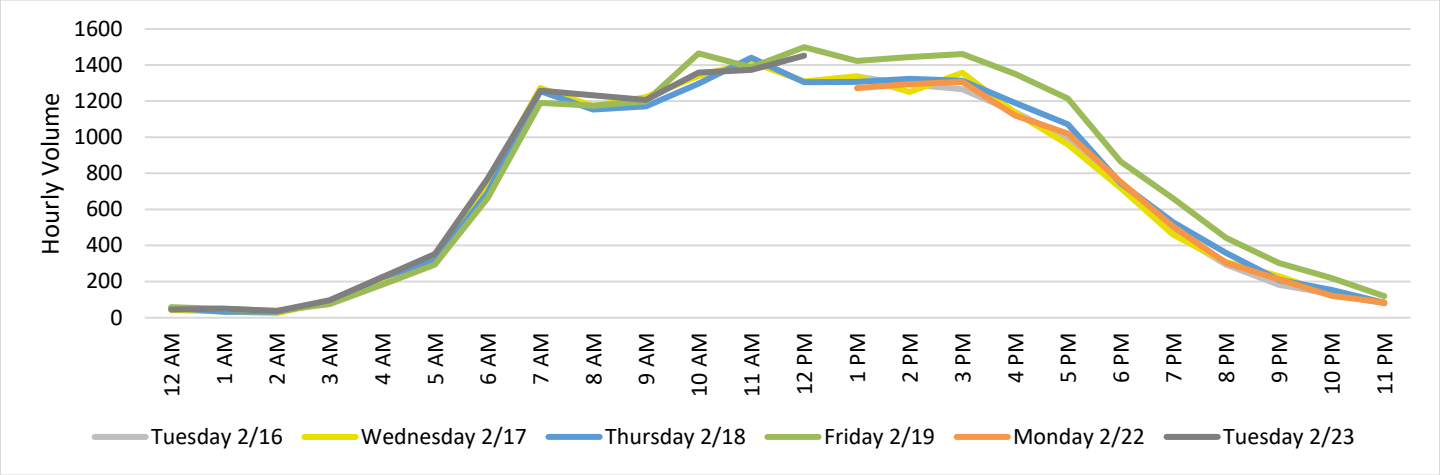


Figure 51 – SR 69 Milepost 288 Westbound 2021 Weekend Traffic Volume

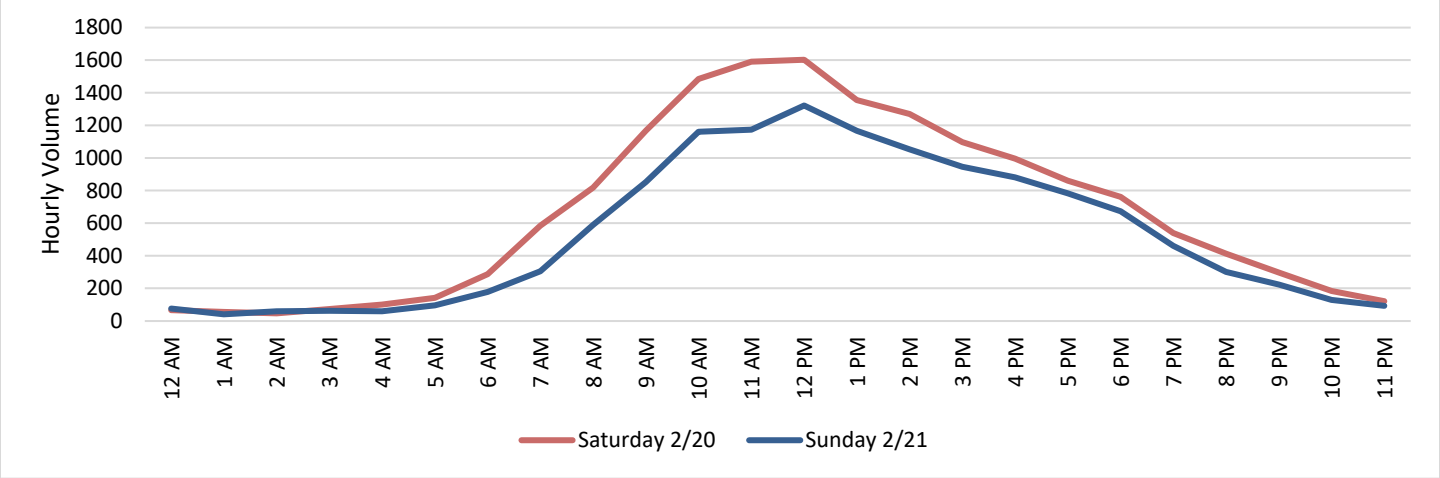


Figure 52 – SR 69 Milepost 292.65 Westbound 2021 Weekday Traffic Volume

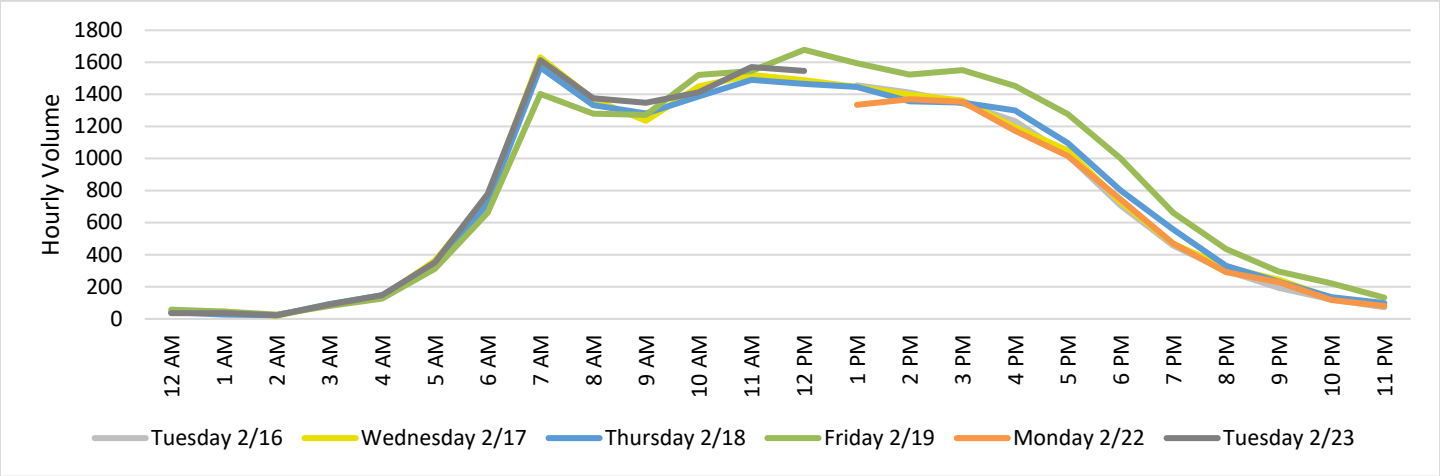


Figure 53 – SR 69 Milepost 292.65 Westbound 2021 Weekend Traffic Volume

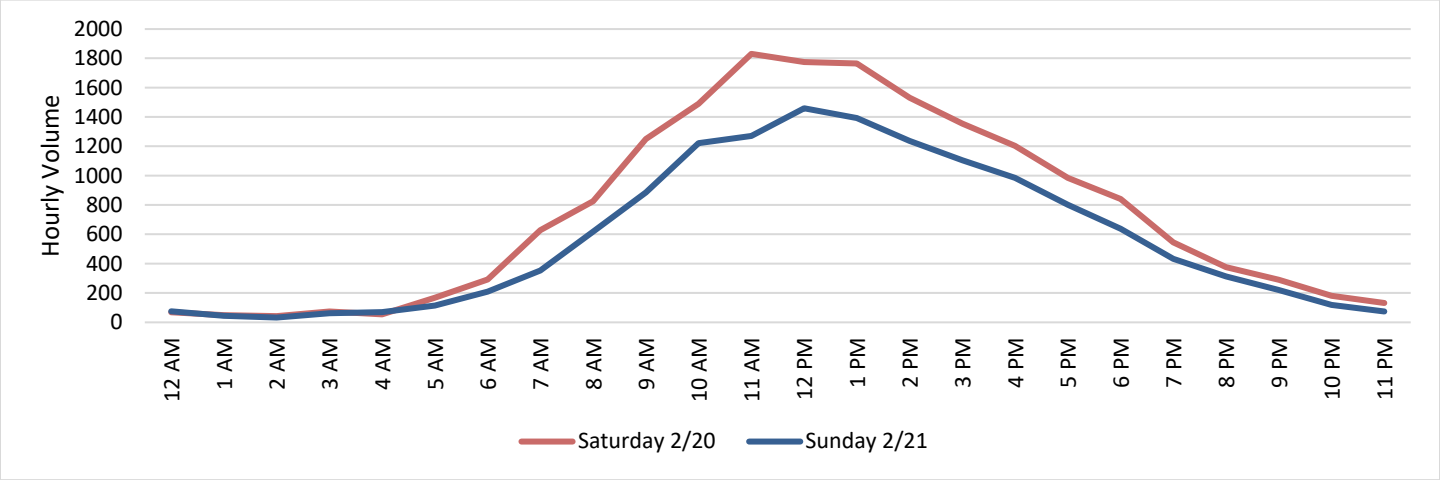


Figure 54 – SR 69 Milepost 294.7 Westbound 2021 Weekday Traffic Volume

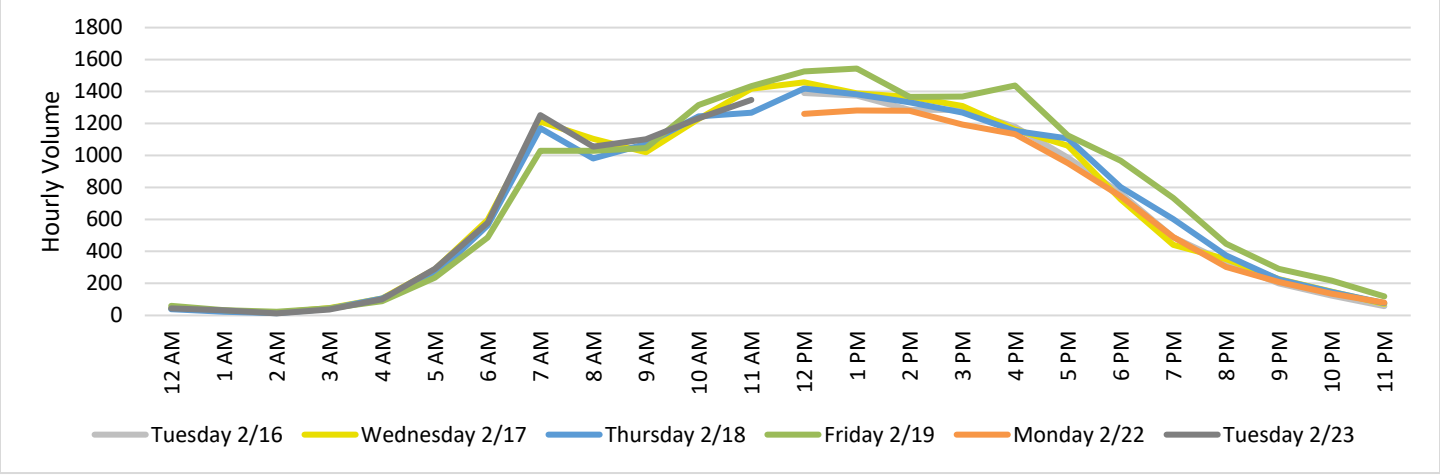
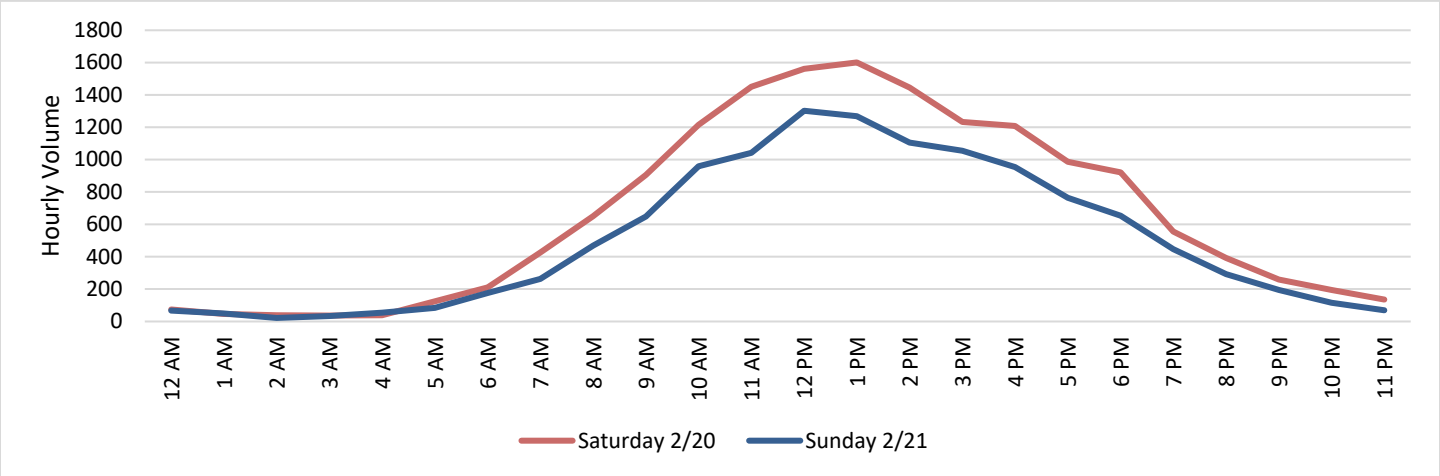


Figure 55 – SR 69 Milepost 294.7 Westbound 2021 Weekend Traffic Volume



Travel demand trends are observed in **Figure 42** through **Figure 55** during weekday and weekend travel. Traveling eastbound on weekdays, there is a steady increase of traffic through the morning and afternoon hours, and heavy traffic during the evening (2-5 PM). Traveling westbound (towards downtown Prescott) on weekdays, there are notable peaks in the morning (6:30-7:30 AM) and heavy traffic through the afternoon and early evening (11 AM-4 PM). Weekend travel

in both directions experiences a mid-day peak, generally occurring between 11 AM-3 PM. Furthermore, Saturday traffic volumes are consistently higher than Sunday volumes. In summary, peak hours of travel vary by direction of travel. However, overall traffic volumes are remarkably consistent by day-of-week for both eastbound and westbound travel.

3.11. Available Funding

The entirety of the study area along SR 69 falls within a designated Critical Urban Freight Corridor (CUFC), which extends along SR 69 from SR 89 to SR 169. Accordingly, the study area is within the National Highway Freight Network (NHFN) and is eligible for National Highway Freight Program (NHFP) funds.

ADOT restructured their project funding structure as part of the 2016-2040 Long Range Transportation Plan (LRTP). Transportation funding in greater Arizona was divided between preservation, modernization, and expansion as 78%, 22%, and less than 1%, respectively. The LRTP noted ADOT may provide money to expansion projects under certain circumstances. Implementation of an ITS strategy along SR 69 would be considered a modernization project. An ITS project would need to compete with other projects at the state level but aligns with ADOT's current funding strategy.

3.12. System Functional Capabilities

According to the FHWA *Traffic Control Systems Handbook*, factors that contribute to the need for signal retiming include changes in local or area wide traffic demands, changes in peak hour volumes, changes in directional flow, local land use changes, changes in intersection geometry, or changes in the number of travel lanes. In recent years, Prescott Valley has experienced an annual population growth rate of 2.2%. The City of Prescott has recently experienced a growth rate of 1.3% annually, according to the US Census Bureau. The increase in residents has likely caused changes to the traffic demand. Since traffic signal coordination optimization along SR 69 last occurred between 2-5 years ago, signal re-optimization would likely be beneficial for operations along the SR 69 corridor.

The existing traffic signal infrastructure along the SR 69 corridor would allow for the re-optimization of signal timing and the development of updated coordinated time-of-day plans. Three intersections are currently not included in the existing coordinated timing plans: Sheldon Street, Enterprise Parkway, and Fain Road. The installation of communications infrastructure would be required at these three intersections. Developing coordinated time-of-day signal timing plans to incorporate all signals could be considered for the SR 69 corridor; however, the distance between adjacent intersections could make coordination challenging.

The intersection of SR 69 and Glassford Hill Road should be considered as the master intersection for traffic signal coordination. The master intersection is the reference intersection that offsets are calculated from. This would allow for coordination with adjacent intersections along both SR 69 and Glassford Hill Road. The offset value for the master intersection is set to zero and the other intersections along SR 69 and Glassford Hill Road would coordinate to this intersection.

Only minimal upgrades would be necessary to implement an adaptive signal control system. Three intersections along SR 69 would likely require vehicle detection and controller communications upgrades: Sheldon Street, Enterprise Parkway, and Fain Road. Additionally, the intersection at Sheldon Street would likely require controller upgrades.

3.13. Potential Signal Timing Improvements

Coordinated traffic signal timing plans were developed to determine the extent of potential operational improvements by optimizing the plans. As mentioned in **Section 3.12**, minimal communications upgrades would be necessary to incorporate coordination along the entirety of the corridor. The existing conditions Synchro models were used as the base models for developing the optimized timing plans. The corridor was split into three coordination zones based on intersection proximity. The zones are listed in **Table 8**.

Table 8 – SR 69 Coordination Zones	
SR 69 Intersecting Roadway	**Zone**
Sheldon Street	A
Heather Heights	A
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	A
Yavpe Connector	A
Holiday Drive	A
Prescott Lakes Parkway	A
Gateway Road	A
Lee Boulevard	A
Walker Road	A
Sunrise Boulevard/Old Black Canyon Highway	B
Robin Drive	B
Ramada Drive	B
Diamond Drive	B
Sundog Ranch Road	B
Stoneridge Drive	B
Prescott E Highway	B
Glassford Hill Road	B
Lake Valley Road	B
Windsong Drive	B
Robert Road	B
Navajo Drive	B
Enterprise Parkway	C
Fain Road	C

With the coordination zones determined, the traffic signal cycle lengths were optimized between 120 and 150 seconds for the AM, mid-day, and PM peak hour models. Phase split distributions and offsets were optimized as well. The operational assumptions for establishing the updated timing plans include:

- Signal phasing sequence remained unchanged; through movements are the lagging phase.
- Yellow and all-red clearance intervals were calculated and implemented into the timing plans; computations are included in **Appendix SS-5**.
- The intersection at SR 69 and Glassford Hill Road was set as the master intersection.
- The future traffic signal at Mendecino Drive was excluded from coordination as the signal was not constructed at the time of coordination development.

The optimized traffic signal cycle lengths and offsets are included in **Table 9**.

Table 9 – SR 69 Optimized Cycle Lengths and Offsets						
SR 69 Intersecting Roadway	**AM Peak**		**Mid-Day Peak**		**PM Peak**	
	Cycle Length (s)	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**
Sheldon Street	130	84	120	2	120	31
Heather Heights	130	7	120	24	120	41
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	130	116	120	72	120	86
Yavpe Connector	130	73	120	74	120	96

Table 9 – SR 69 Optimized Cycle Lengths and Offsets						
SR 69 Intersecting Roadway	AM Peak		Mid-Day Peak		PM Peak	
	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)
Holiday Drive	130	26	120	115	120	119
Prescott Lakes Parkway	130	115	120	75	120	94
Gateway Road	130	66	120	90	120	106
Lee Boulevard	130	92	120	65	120	20
Walker Road	130	104	120	75	120	27
Sunrise Boulevard/Old Black Canyon Highway	120	117	120	95	120	97
Robin Drive	120	83	120	81	120	116
Ramada Drive	120	32	120	54	120	76
Diamond Drive	120	25	120	27	120	60
Sundog Ranch Road	120	92	120	98	120	12
Stoneridge Drive	120	71	120	110	120	32
Prescott E Highway	120	45	120	24	120	55
Glassford Hill Road	120	0	120	0	120	0
Lake Valley Road	120	52	120	56	120	38
Windsong Drive	120	27	120	47	120	32
Robert Road	120	4	120	39	120	18
Navajo Drive	120	116	120	38	120	3
Enterprise Parkway	120	78	120	48	120	0
Fain Road	120	11	120	91	120	13

The overall intersection delay, LOS, and maximum v/c ratio of the existing conditions and updated timing plans were compared for the AM, mid-day, and PM peak hours. The comparisons are included in **Table 10** through **Table 12**. Detailed results of the optimized timing plans can be found in **Appendix SS-6**.

Table 10 – SR 69 AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
SR 69 Intersecting Roadway	Existing Delay (s)	Updated Delay (s)	Existing LOS	Updated LOS	Existing Max v/c Ratio	Updated Max v/c Ratio
Sheldon Street	6.6	11.3	A	B	0.40	0.52
Heather Heights	5.3	3.8	A	A	0.39	0.38
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	5.3	5.1	A	A	0.40	0.39
Yavpe Connector	9.5	7.3	A	A	0.44	0.43
Holiday Drive	12.0	8.7	B	A	0.61	0.60
Prescott Lakes Parkway	17.8	14.5	B	B	0.64	0.61
Gateway Road	1.9	1.6	A	A	0.46	0.46
Lee Boulevard	11.6	15.8	B	B	0.74	0.86
Walker Road	9.6	8.5	A	A	0.66	0.65
Sunrise Boulevard/Old Black Canyon Highway	8.8	7.6	A	A	0.75	0.81
Robin Drive	3.3	3.6	A	A	0.70	0.69
Ramada Drive	5.1	5.2	A	A	0.70	0.70
Diamond Drive	7.7	5.4	A	A	0.64	0.64
Sundog Ranch Road	5.1	4.8	A	A	0.45	0.44
Stoneridge Drive	10.2	10.1	B	B	0.54	0.55

Table 10 – SR 69 AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
SR 69 Intersecting Roadway	Existing Delay (s)	Updated Delay (s)	Existing LOS	Updated LOS	Existing Max v/c Ratio	Updated Max v/c Ratio
Prescott E Highway	12.7	14.2	B	B	0.72	0.86
Glassford Hill Road	19.9	20.7	B	C	0.72	0.71
Lake Valley Road	13.2	13.5	B	B	0.73	0.73
Windsong Drive	10.9	11.4	B	B	0.73	0.71
Robert Road	16.9	21.3	B	C	0.71	0.90
Navajo Drive	15.6	26.2	B	C	0.79	0.90
Enterprise Parkway	7.2	3.5	A	A	0.51	0.48
Fain Road	29.6	31.1	C	C	0.82	0.81

Table 11 – SR 69 Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
SR 69 Intersecting Roadway	Existing Delay (s)	Updated Delay (s)	Existing LOS	Updated LOS	Existing Max v/c Ratio	Updated Max v/c Ratio
Sheldon Street	13.8	17.6	B	B	0.55	0.67
Heather Heights	7.3	8.7	A	A	0.40	0.39
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	9.4	9.9	A	A	0.58	0.56
Yavpe Connector	18.4	14.2	B	B	0.65	0.64
Holiday Drive	16.4	8.9	B	A	0.57	0.56
Prescott Lakes Parkway	30.7	24.9	C	C	0.92	0.83
Gateway Road	13.0	7.4	B	A	0.53	0.53
Lee Boulevard	22.2	15.9	C	B	0.78	0.78
Walker Road	9.0	9.1	A	A	0.59	0.59
Sunrise Boulevard/Old Black Canyon Highway	6.1	7.1	A	A	0.51	0.52
Robin Drive	6.7	2.5	A	A	0.49	0.49
Ramada Drive	7.1	2.4	A	A	0.48	0.48
Diamond Drive	6.2	3.9	A	A	0.50	0.51
Sundog Ranch Road	25.8	18.2	C	B	0.61	0.58
Stoneridge Drive	14.8	17.1	B	B	0.74	0.72
Prescott E Highway	13.9	12.8	B	B	0.76	0.73
Glassford Hill Road	33.6	27.0	C	C	0.85	0.80
Lake Valley Road	24.8	22.6	C	C	0.77	0.79
Windsong Drive	23.3	16.3	C	B	0.85	0.81
Robert Road	20.1	16.8	C	B	0.79	0.77
Navajo Drive	18.3	16.3	B	B	0.74	0.72
Enterprise Parkway	4.5	3.1	A	A	0.31	0.29
Fain Road	23.4	26.1	C	C	0.61	0.73

Table 12 – SR 69 PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS						
SR 69 Intersecting Roadway	Existing Delay (s)	Updated Delay (s)	Existing LOS	Updated LOS	Existing Max v/c Ratio	Updated Max v/c Ratio
Sheldon Street	16.6	21.4	B	C	0.56	0.68
Heather Heights	10.7	9.3	B	A	0.50	0.51

Table 12 – SR 69 PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS						
SR 69 Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Unnamed entrance to Frontier Village Shopping Plaza near Einstein Bros	6.3	5.6	A	A	0.49	0.51
Yavpe Connector	20.8	15.7	C	B	0.67	0.66
Holiday Drive	15.4	13.1	B	B	0.83	0.83
Prescott Lakes Parkway	50.2	26.5	D	C	1.26	0.88
Gateway Road	9.6	5.1	A	A	0.68	0.66
Lee Boulevard	16.5	14.5	B	B	0.79	0.79
Walker Road	9.4	6.4	A	A	0.62	0.61
Sunrise Boulevard/Old Black Canyon Highway	12.8	10.5	B	B	0.73	0.74
Robin Drive	9.7	3.3	A	A	0.65	0.65
Ramada Drive	7.6	3.5	A	A	0.65	0.66
Diamond Drive	10.1	5.0	B	A	0.68	0.68
Sundog Ranch Road	28.5	16.6	C	B	0.64	0.65
Stoneridge Drive	23.1	16.5	C	B	0.75	0.77
Prescott E Highway	28.3	17.2	C	B	0.88	0.82
Glassford Hill Road	47.9	34.5	D	C	0.89	0.88
Lake Valley Road	24.8	18.5	C	B	0.74	0.74
Windsong Drive	27.4	23.6	C	C	0.93	0.90
Robert Road	21.8	21.0	C	C	0.80	0.87
Navajo Drive	21.0	19.8	C	B	0.75	0.84
Enterprise Parkway	5.1	3.1	A	A	0.44	0.40
Fain Road	28.6	30.2	C	C	0.78	0.79

The LOS analysis determined that all intersections along the study corridor operate at an acceptable level, D or better, with the optimized timing plans during the AM, mid-day, and PM peak hours. In general, the overall intersection LOS's improve or stay the same from the existing conditions. The exceptions-overall intersections LOS that worsened from the existing conditions-follow:

- Sheldon Street during the AM peak hour: LOS A to B
- Glassford Hill Road during the AM peak hour: LOS B to C
- Robert Road during the AM peak hour: B to C
- Navajo Drive during the AM peak hour: B to C
- Sheldon Street during the PM peak hour: LOS B to C

Overall, the time-space diagrams of the optimized timing plans illustrate minimal interruptions of traffic flow through the corridor during the AM, mid-day, and PM peak hours. Coordination favors westbound traffic during the morning hours and eastbound traffic during the evening hours. Interruptions generally occur in the direction of the unfavored traffic flow. The updated timing plan time-space diagrams are included in **Appendix SS-7**.

3.14. Summary of Findings

The SR 69 corridor was thoroughly examined to provide an overview of current operations at the study intersections and potential improvement strategies. The predominant direction of travel during the morning hours is westbound, while the opposite trend occurs during the evening hours; the predominant direction of travel is eastbound.

Average speeds and travel time data were evaluated observe variability or predictability by time-of-day and by day-of-week. While the average speeds and travel time tend to experience some variability by time-of-day, they are reasonably predictable at corresponding times during weekdays and corresponding times during weekends. Directional 24-hr traffic volumes for weekday and weekends were also examined. It was determined that traffic demand is generally predictable through the corridor.

Average speed and travel time data were evaluated during the weekends of special events to measure traffic predictability during event weekends compared to typical weekends. Major operational disruptions during special event weekends were not apparent in the evaluation.

Synchro was used to model the existing conditions and to develop the optimized timing plans. Three coordination zones were developed in the optimized timing plans. It was determined that all overall intersections operate at an acceptable LOS, LOS D or better in the existing conditions and with the optimized timing plans. In general, the LOS improves or stays the same with the optimized timing plans, compared to the existing conditions. In conclusion, it was determined that optimizing the timing plans for the SR 69 corridor would generate minimal operational benefits.

4.0 Glassford Hill Road

4.1. Glassford Hill Road Snapshot

ITS systems capability information requests for the Glassford Hill Road corridor were provided by the Town of Prescott Valley and ADOT. A qualitative summary of the responses is summarized in **Table 13**. The complete agency responses can be found in **Appendix SS-8**.

Key				
Strong Disadvantage	**Disadvantage**	**Neutral**	**Advantage**	**Strong Advantage**
				

Table 13 – Glassford Hill Road Assessment Summary	
Attribute	**Assessment**
Staff Availability	
Staff Experience/Training with ASCT	
Existing Detection	
Existing Communications	
Existing Controllers	
Current Optimization	
Available Budget for ITS Improvement	
Available Maintenance Budget	

Existing vehicle detection, communications, and controller types along the SR 69 corridor are illustrated in **Figure 56** through **Figure 58**. More detailed information is available in **Section 4.9**.

Figure 56 – Glassford Hill Road Vehicle Detection Types



Figure 57 – Glassford Hill Road Communication Types



Figure 58 – Glassford Hill Road Controller Types



4.2. Relevant Plans and Studies

No relevant plans or studies were identified for the Glassford Hill Road corridor.

4.3. Agency Information

Traffic signals along Glassford Hill Road are not connected to a central system. The corridor has GPS clocks at most locations. Vehicle detection consists of radar, in-ground loops, and video. The Town of Prescott Valley has three part-time staff available to maintain traffic signals and lighting within the area. Two of the staff have Level 2 ISMA certification and the other has Level 1 ISMA certification, indicating entry level to well-rounded experience with prevalent signal technologies; however, staff are not currently familiar with ATSPM.

4.4. Existing Land Use

The current land use in the surrounding area is primarily residential, with scattered commercial and recreational land. The commercial land including retail stores, restaurants, hotels, and a movie theater are mostly located at the southern end of the corridor, directly off Glassford Hill Road.

Major trip generators, such as schools, shopping centers, and entertainment center locations are illustrated in **Figure 59**. Some of key developments in the area include the following:

- Several schools are located near or at the intersections of Glassford Hill Road. Liberty Traditional School is located near the Lakeshore Drive intersection. Glassford Hill Middle School, Bradshaw Mountain High School, and Yavapai College, Prescott Valley are located at the Panther Path intersection, south of the Long Look Drive intersection. Granville Elementary School is located near the southern Granville Parkway intersection.

- Yavapai Regional Medical Center is located approximately one-half mile from the intersection of Glassford Hill Road and Florentine Road.

- The Findlay Toyota Center (formerly the Prescott Valley Event Center), a sport, concert, and event arena is also located near the intersection of Glassford Hill Road and Florentine Road.

Typically, residential land results in high weekday morning and evening travel, with moderate weekday mid-day travel and high weekend afternoon travel. The high school near the Glassford Hill and Long Look Drive intersection generates traffic demand surges on weekdays during school hours due to the variable bell schedule. Commercial areas generally experience the highest travel volumes during the weekday evening hours and weekend afternoon hours.

Figure 59 – Glassford Hill Road Major Trip Generators



4.5. Roadway Characteristics

Glassford Hill Road is typically a divided four-lane section. There are right-turn lanes at various businesses and signals throughout the corridor. The number of travel lanes along segments of the corridor are listed in **Table 14**. The posted speed limit along Glassford Hill Road ranges from 35 mph to 45 mph.

Table 14 – Glassford Hill Road Number of Travel Lanes	
Roadway Segment	**Number of Lanes**
SR 69 to Long Look Drive	6
Long Look Drive to SR 89A	4

The expansion of the four-lane segment from Tuscany Way South to SR 89A to a six-lane roadway section was a recommendation included in the 2045 RTP. The segment is approximately 2.25 miles long and the planning construction cost estimate included in the 2045 RTP is $6.35 million.

4.6. Programmed Improvements

The following programmed improvement was identified along Glassford Hill Road within the study area.

- **Spouse Drive Intersection Improvements:** A fourth (west) leg will be constructed as part of the Glassford Hill Road and Spouse Drive Signal Improvements project, currently in the construction phase. The project also includes the addition of a northbound left-turn lane at the intersection.

4.7. Other Factors Influencing Operations

Glassford Hill Road has medium density access point spacing from SR 69 to Lakeshore Drive with 15 access points in less than a mile distance. Glassford Hill Road has low density access point spacing from Lakeshore Drive to SR 89A with less than 10 access points per mile.

4.8. Crash Analysis

As shown in the heat map in **Figure 60,** most crashes in the corridor occur at intersections, with the greatest number at Glassford Hill Road, Florentine Road, and Lakeshore Drive. Rear end crashes are often indicative of congestion; the heat map in **Figure 61** illustrates the location of rear end crashes. Notably, the intersection with SR 89A has the highest number of crashes. Additional treatments may be merited at Glassford Hill Road, Florentine Road, and Lakeshore Drive to reduce crash frequency.

Figure 60 – Glassford Hill Road Crash Heat Map

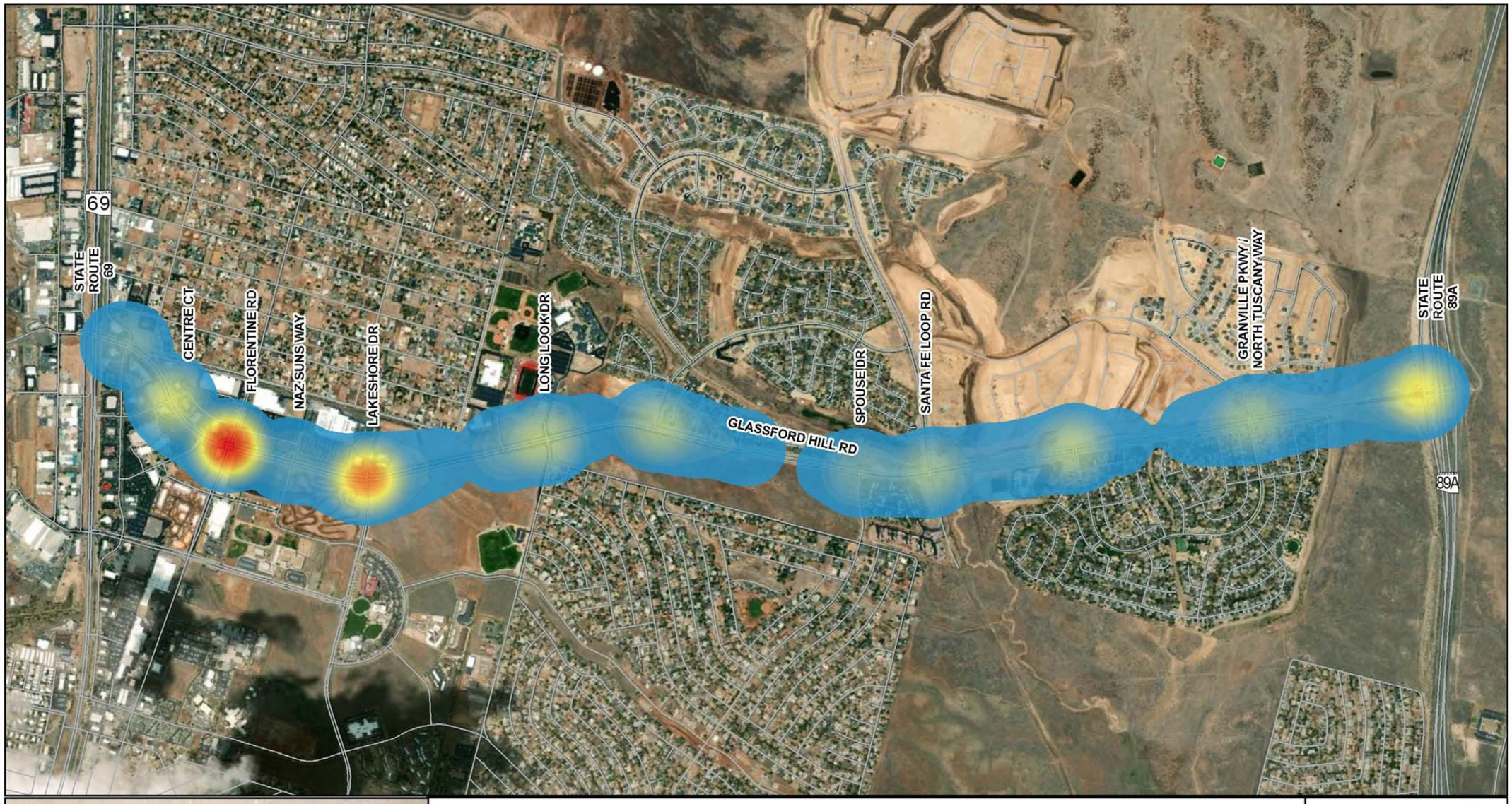
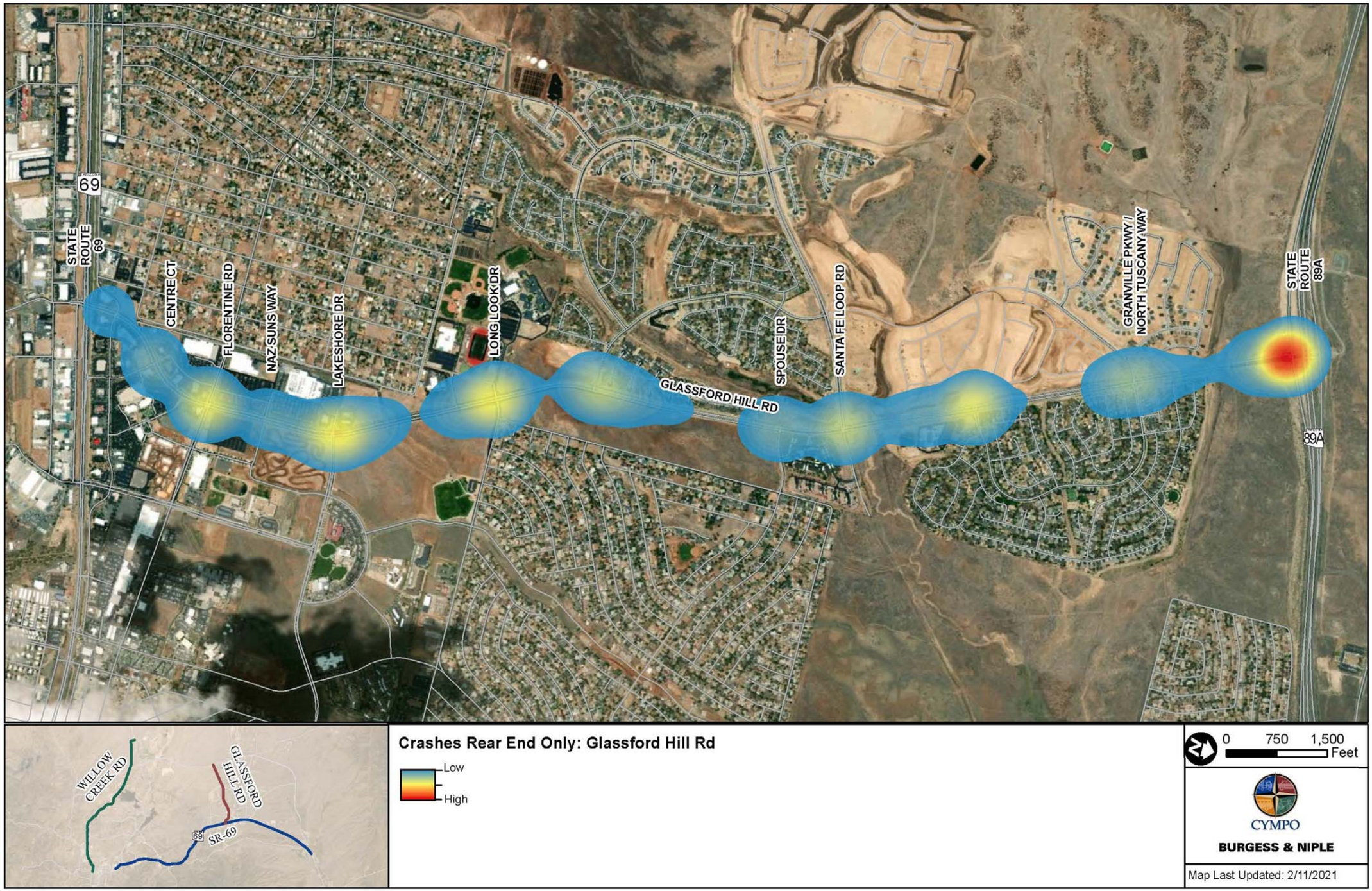


Figure 61 – Glassford Hill Road Rear End Crash Heat Map



4.9. Traffic Management Devices

The traffic management devices along Glassford Hill Road are identified in **Table 15** based on the information requests provided by the Town of Prescott Valley and ADOT.

Although GPS clocks do not operate as standard controller communications, in which controllers are capable of transferring information between units or to a central system, they function by resetting the internal clock in the controller each day, therefore, maintaining synchronization between controllers. Since this is one of the key functions of controller communications, GPS clocks are categorized as communications for the purpose of this Plan.

Table 15 – Glassford Hill Road Traffic Management Devices

Glassford Hill Road Intersecting Roadway	Detection/ Manufacturer	Communication/ Manufacturer	Controller Make/Model	Spacing to Next Signal (miles)	Other
State Route 69*	Radar/ Wavetronix	None	Econolite/Cobalt	▪ South: N/A ▪ North: 0.3	▪ Excessive Pedestrian use ▪ No EVP
Centre Court	Loops	GPS Clock	Econolite/Cobalt	▪ South: 0.3 ▪ North: 0.2	▪ No EVP
Florentine Road	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.2 ▪ North: 0.2	▪ No EVP
Veterans Way (Previously NAZ Suns Way)	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.2 ▪ North: 0.2	▪ No EVP
Lakeshore Drive	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.2 ▪ North: 0.5	▪ No EVP
Long Look Drive	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.5 ▪ North: 0.8	▪ No EVP
Spouse Drive	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.8 ▪ North: 0.2	▪ No EVP
Santa Fe Loop Road	Video	GPS Clock	Econolite/Cobalt	▪ South: 0.2 ▪ North: 0.4	▪ No EVP
Granville Parkway/North Tuscany Way	Loops	GPS Clock	Econolite/Cobalt	▪ South: 0.5 ▪ North: 0.5	▪ No EVP
State Route 89A*	Radar/ Wavetronix	None	Econolite/Cobalt	▪ South: 0.5 ▪ North: N/A	▪ No EVP

*ADOT owns and operates traffic signal

4.10. ITS/Traffic Operations

4.10.1. Traffic Volumes

ADT counts along the Glassford Hill Road corridor were obtained from Traffic Research and Analysis, Inc. (TRA). The counts were collected in 15-minute intervals on May 16, 2017. The ADT along the corridor is shown in **Table 16**.

Table 16 – Glassford Hill Road 2017 ADT

Glassford Hill Roadway Segment	ADT
State Route 69 to Pav Way	20,615
Pav Way to Florentine Road	20,423
Florentine Road to Lakeshore Drive	27,420

Table 16 – Glassford Hill Road 2017 ADT	
Glassford Hill Roadway Segment	**ADT**
Lakeshore Drive to Panther Path	25,097
Panther Path to Long Look Drive	25,629
Long Look Drive to Spouse Drive	21,427
Spouse Drive to State Route 89A	24,547

TMC data was collected at four of the study corridor intersections as part of the Glassford Hill Road Intersection Safety Study completed in February 2018. The count data was collected for the AM peak and PM peak hours during the week of December 11, 2017 for the intersections at SR 69, Centre Court, Long Look Drive, and Granville Parkway North/Tuscany Way along the Glassford Hill Road corridor.

TMC data was collected by TRA at the Glassford Hill Road and SR 89A TI as part of the State Route 89A, State Route 89 to Robert Road Transportation Study completed in March 2018. The AM peak and PM peak hour count data was collected on April 13, 2017.

TMC and ADT data obtained in 2017 were scaled up using a 2% compound annual growth rate.

Pre-pandemic (2020) TMC data was collected from the StreetLight database for five signalized intersections along the Glassford Hill Road corridor: Florentine Road, Veterans Way, Lakeshore Drive, Spouse Drive, and Santa Fe Loop Road. Hourly analysis was conducted for January 1-31, 2020. Average Tuesday-Thursday counts during this time period were used to generate the weekday TMCs. The TMCs were calibrated using scaled 2017 ADT values found in **Table 16**.

TMCs obtained from previous studies did not provide mid-day counts. Using the 24-hr counts obtained from the StreetLight database at five intersections along the corridor, the average proportion of mid-day to peak hour traffic was determined. This proportion was multiplied by the peak hour TMCs obtained from the previous studies to derive approximate mid-day TMCs for the intersections at SR 69, Centre Court, Long Look Drive, Granville Parkway North/Tuscany Way, and SR 89A along the Glassford Hill Road corridor.

The TMCs for the AM, mid-day, and PM peak hours are illustrated in **Figure 62** through **Figure 64**.

Figure 62 – Glassford Hill Road AM Peak Hour Turning Movement Counts

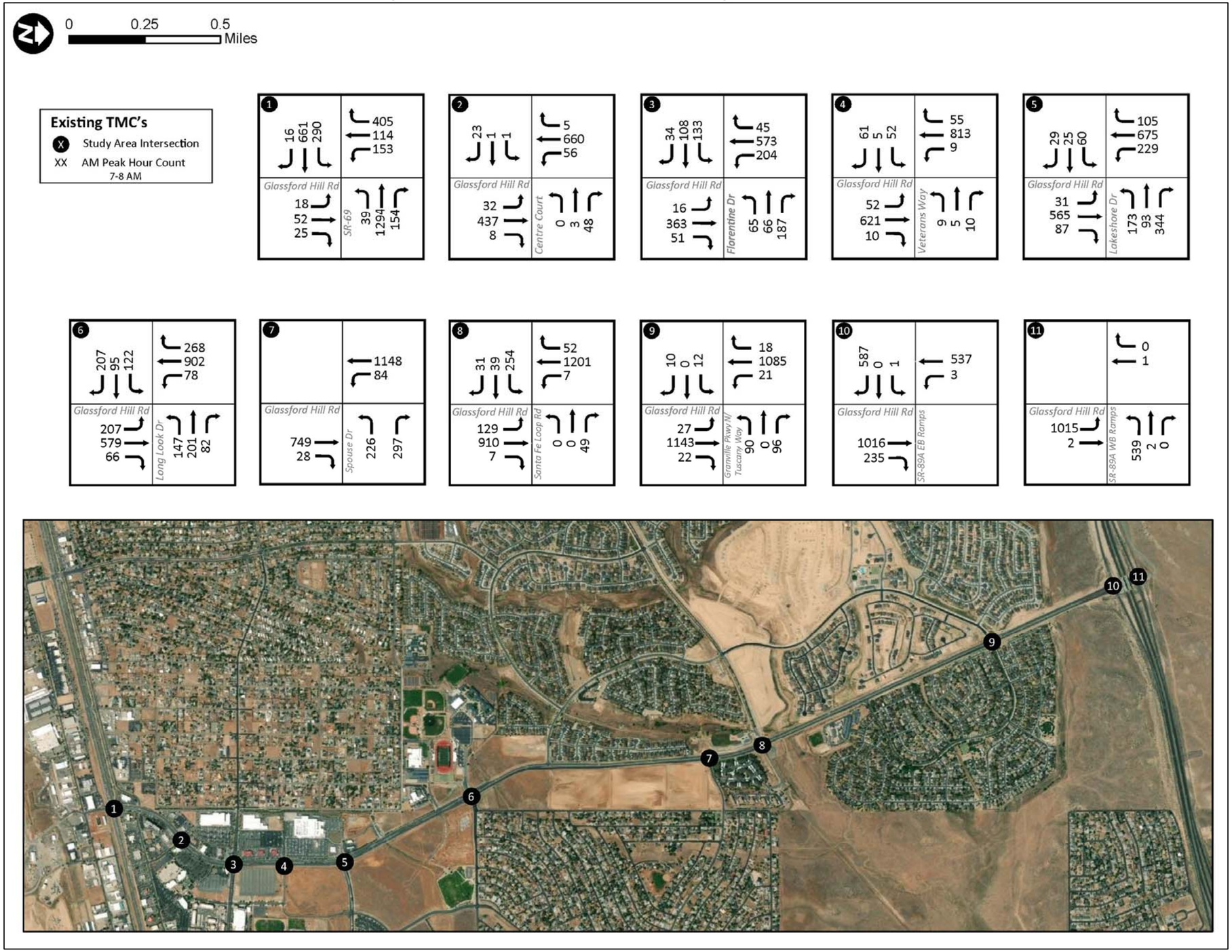


Figure 63 – Glassford Hill Road Mid-Day Peak Hour Turning Movement Counts

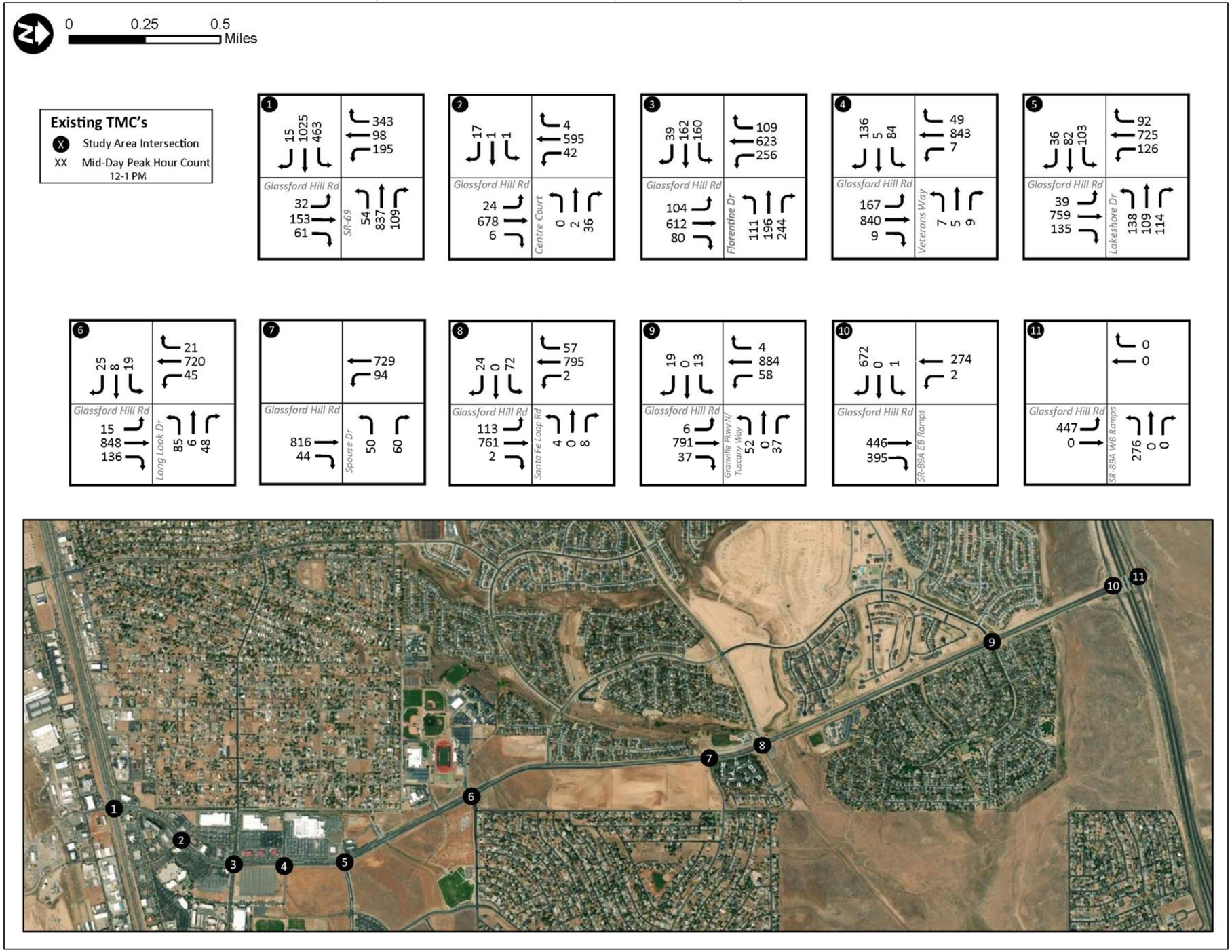
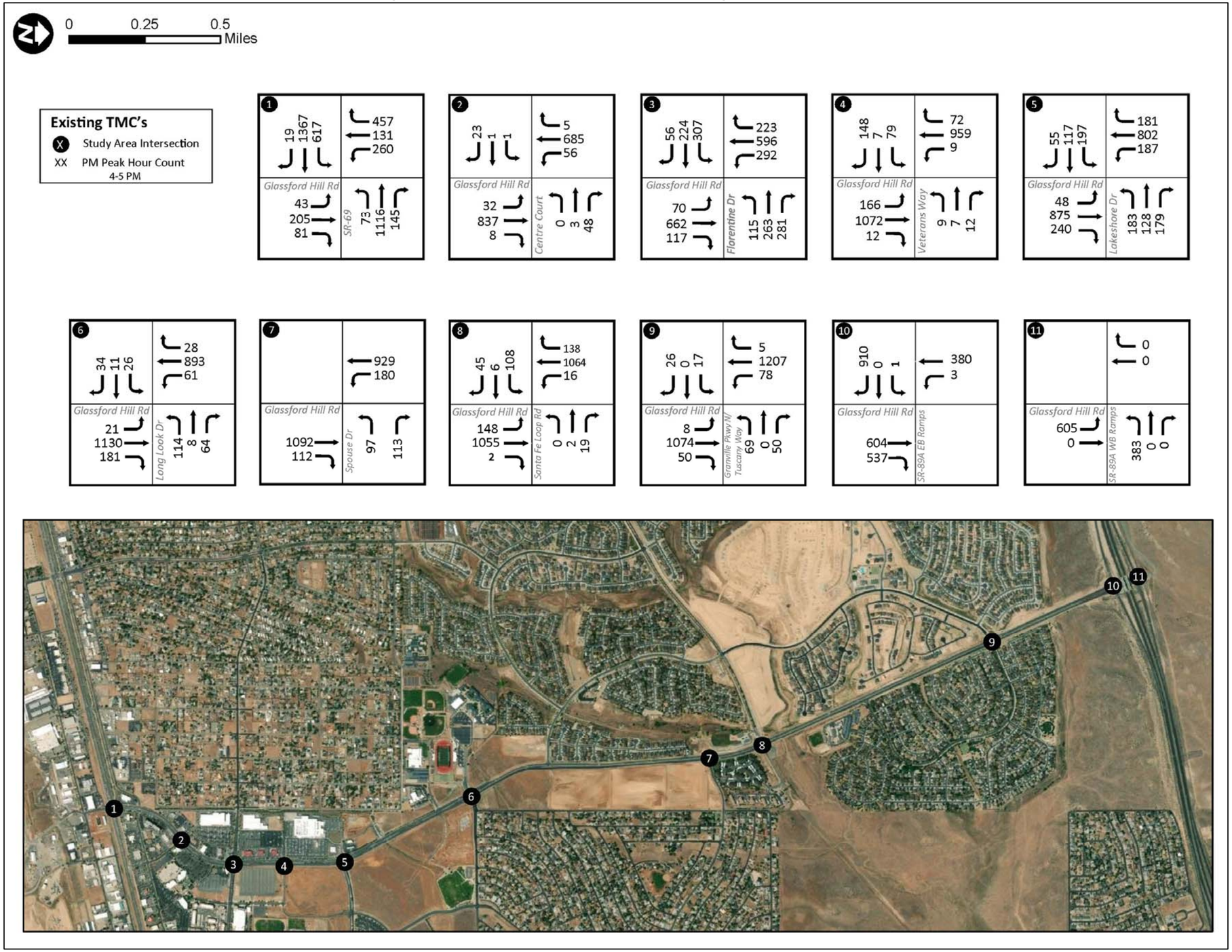


Figure 64 – Glassford Hill Road PM Peak Hour Turning Movement Counts



4.10.2. Signal Timing Plans

The traffic signal timing plans for the ten existing signalized intersections were provided by the Town of Prescott Valley and ADOT. The plans were last updated in 2014 and are included in **Appendix SS-9**.

The Glassford Hill Road and SR 69 intersection is fully-actuated and coordinated with adjacent traffic signals along SR 69. This traffic signal is not coordinated with other signals along Glassford Hill Road. The intersections from Centre Court to Santa Fe Loop Road along the Glassford Hill Road corridor are fully-actuated and coordinated with time-of-day timing plans, with the exception of the Long Look Drive intersection during the AM peak hour and Spouse Drive intersection during the AM peak and mid-day peak hours, in which the intersections are fully-actuated and uncoordinated. The intersections of Glassford Hill Road and Granville Parkway North/Tuscany Way and Glassford Hill Road and SR 89A are fully-actuated and uncoordinated.

The day plan and change time for the Glassford Hill Road and Long Look Drive timing plan differs on Wednesday afternoons due to early release of the adjacent high school.

The left turn types vary throughout the corridor. The intersections at SR 69, Long Look Drive, and SR 89A along Glassford Hill Road utilize protected only left turn movements at all approaches. All other signalized intersections along the corridor provide protected/permissive major street left turns and either protected only, permissive, or protected/permissive minor street left turns.

A channelized free-right turn lane is available at the eastbound approach of Glassford Hill Road and SR 89A Eastbound Ramps.

A summary of the existing traffic signal cycle lengths and offsets is included in **Table 17**.

Table 17 – Glassford Hill Road Existing Cycle Lengths and Offsets

Glassford Hill Road Intersecting Roadway	AM Peak		Mid-Day Peak		PM Peak	
	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)
State Route 69	120	119	135	66	135	110
Centre Court	130	0	130	58	135	60
Florentine Road	130	110	130	40	135	47
Veterans Way	130	129	130	57	135	104
Lakeshore Drive	130	84	130	20	135	91
Long Look Drive	-	-	130	109	135	24
Spouse Drive	-	-	-	-	135	9
Santa Fe Loop Drive	110	0	120	34	125	44
Granville Parkway North/Tuscany Way	-	-	-	-	-	-
State Route 89A Eastbound Ramps	-	-	-	-	-	-
State Route 89A Westbound Ramps	-	-	-	-	-	-

4.10.3. Existing Traffic Patterns/Operations

The traffic volumes and signal timing plans were entered into Synchro to emulate the existing conditions and to determine the delays, LOS, and maximum v/c ratios by intersection approach. The LOS analysis was conducted using Synchro's built-in methodology due to its capability to assess unique signal timing and geometric configurations. A summary of the LOS and v/c ratio analysis results are included in **Table 18**. Glassford Hill Road was noted as the north-south roadway in the results table at all intersections. Pedestrian volumes were not considered in the analysis. Detailed results can be found in **Appendix SS-10**.

Table 18 – Glassford Hill Road Existing Conditions Delay, LOS, and v/c Ratio Analysis										
Glassford Hill Road Intersecting Roadway	**Approach**	**AM Peak**			**Mid-Day Peak**			**PM Peak**		
		Delay (s)	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**
State Route 69	EB	28.4	C	0.72	35.6	D	0.85	43.5	D	0.89
	WB	21.6	C	0.54	27.5	C	0.47	37.0	D	0.65
	NB	42.1	D	0.30	61.4	E	0.68	70.0	E	0.82
	SB	31.4	C	0.62	39.0	D	0.66	49.0	D	0.74
	Overall	**26.3**	**C**	**0.72**	**35.7**	**D**	**0.85**	**44.5**	**D**	**0.89**
Centre Court	EB	24.7	C	0.18	27.1	C	0.14	25.9	C	0.18
	WB	21.3	C	0.32	22.3	C	0.26	22.1	C	0.33
	NB	4.5	A	0.12	4.7	A	0.19	13.5	A	0.23
	SB	2.6	A	0.18	3.3	A	0.16	3.3	A	0.18
	Overall	**4.5**	**A**	**0.32**	**4.8**	**A**	**0.26**	**9.4**	**A**	**0.33**
Florentine Road	EB	51.9	D	0.51	50.3	D	0.55	50.0	D	0.71
	WB	30.3	C	0.54	36.8	D	0.63	41.2	D	0.67
	NB	14.1	B	0.17	24.6	C	0.37	44.5	C	0.55
	SB	9.0	A	0.35	18.3	B	0.63	41.7	D	0.88
	Overall	**20.2**	**C**	**0.54**	**28.2**	**C**	**0.63**	**43.9**	**D**	**0.88**
Veterans Way	EB	35.4	D	0.41	32.2	C	0.54	36.0	D	0.54
	WB	38.9	D	0.09	35.9	D	0.07	36.9	D	0.10
	NB	5.9	A	0.17	6.7	A	0.38	2.5	A	0.41
	SB	2.7	A	0.23	3.4	A	0.27	5.6	A	0.31
	Overall	**6.7**	**A**	**0.41**	**8.2**	**A**	**0.54**	**7.2**	**A**	**0.54**
Lakeshore Drive	EB	36.1	D	0.34	41.6	D	0.46	42.8	D	0.59
	WB	35.4	D	0.64	36.4	D	0.52	38.6	D	0.59
	NB	20.9	C	0.23	25.9	C	0.32	16.3	B	0.41
	SB	13.1	B	0.45	12.8	B	0.33	18.2	B	0.56
	Overall	**22.0**	**C**	0.64	**23.8**	**C**	**0.52**	**23.5**	**C**	**0.59**
Long Look Drive	EB	25.3	C	0.40	31.2	C	0.13	30.2	C	0.15
	WB	33.5	C	0.60	40.1	D	0.35	46.2	D	0.50
	NB	29.5	C	0.56	11.0	B	0.26	6.4	A	0.37
	SB	29.6	C	0.73	10.6	B	0.26	12.0	B	0.33
	Overall	**29.5**	**C**	**0.73**	**13.4**	**B**	**0.35**	**12.1**	**B**	**0.50**
Spouse Drive	EB	-	-	-	-	-	-	-	-	-
	WB	18.5	B	0.59	19.1	B	0.21	37.1	D	0.53
	NB	17.6	B	0.51	12.9	B	0.44	26.7	C	0.51
	SB	11.6	B	0.60	5.0	A	0.31	5.4	A	0.50
	Overall	**14.9**	**B**	**0.60**	**9.7**	**A**	**0.44**	**18.6**	**B**	**0.53**
Santa Fe Loop Road	EB	92.3	F	1.05	41.5	D	0.44	42.6	D	0.55
	WB	0.7	A	0.13	14.2	B	0.03	25.1	C	0.16
	NB	9.5	A	0.46	4.8	A	0.29	9.1	A	0.45
	SB	18.3	B	0.64	7.9	A	0.34	14.7	B	0.53
	Overall	**23.5**	**C**	**1.05**	**8.2**	**A**	**0.44**	**13.9**	**B**	**0.55**

Table 18 – Glassford Hill Road Existing Conditions Delay, LOS, and v/c Ratio Analysis										
Glassford Hill Road Intersecting Roadway	**Approach**	**AM Peak**			**Mid-Day Peak**			**PM Peak**		
		Delay (s)	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**
Granville Parkway North/Tuscany Way	EB	16.1	B	0.06	10.5	B	0.06	11.3	B	0.08
	WB	16.2	B	0.38	15.8	B	0.22	18.6	B	0.31
	NB	11.6	B	0.53	13.6	B	0.41	17.8	B	0.57
	SB	11.3	B	0.51	9.1	A	0.37	12.5	B	0.55
	Overall	**11.8**	**B**	**0.53**	**11.4**	**B**	**0.41**	**15.1**	**B**	**0.57**
State Route 89A Eastbound Ramps	EB	0.8	A	0.40	1.1	A	0.47	1.9	A	0.62
	WB	-	-	-	-	-	-	-	-	-
	NB	232.7	F	1.54	21.9	C	0.70	27.6	C	0.78
	SB	13.2	A	0.22	1.1	A	0.12	1.2	A	0.16
	Overall	**123.3**	**F**	**1.54**	**10.8**	**B**	**0.70**	**13.9**	**B**	**0.78**
State Route 89A Westbound Ramps	EB	-	-	-	-	-	-	-	-	-
	WB	63.8	E	0.86	35.1	D	0.52	42.5	D	0.65
	NB	33.4	C	0.66	18.1	B	0.59	23.2	B	0.68
	SB	39.0	D	0	0	A	0	0	A	0
	Overall	**44.0**	**D**	**0.86**	**24.6**	**C**	**0.59**	**30.7**	**C**	**0.68**

In general, the LOS analysis determined that the intersection approaches at each intersection along the Glassford Hill Road corridor operate at an acceptable level, LOS D or better, in the existing conditions. The exceptions-intersection approaches operating at LOS E or LOS F-follow:

- SR 69 northbound approach during the PM peak hour: LOS E
- Santa Fe Loop Road eastbound approach during the AM peak hour: LOS F
- SR 89A Eastbound Ramps northbound approach during the AM peak hour: LOS F
- SR 89A Westbound Ramps westbound approach during the AM peak hour: LOS E

Furthermore, the LOS analysis determined that most overall intersections along the corridor operate at an acceptable level, LOS D or better, in the existing conditions. The exceptions-overall intersections operating at LOS E or LOS F-follow:

- SR 89A Eastbound Ramps during the AM peak hour: LOS F

AM, mid-day, and PM peak hour overall intersection LOS summaries are shown in **Figure 65** through **Figure 67**.

Figure 65 – Glassford Hill Road AM Peak Hour Levels of Service



Figure 66 – Glassford Hill Road Mid-Day Peak Hour Levels of Service

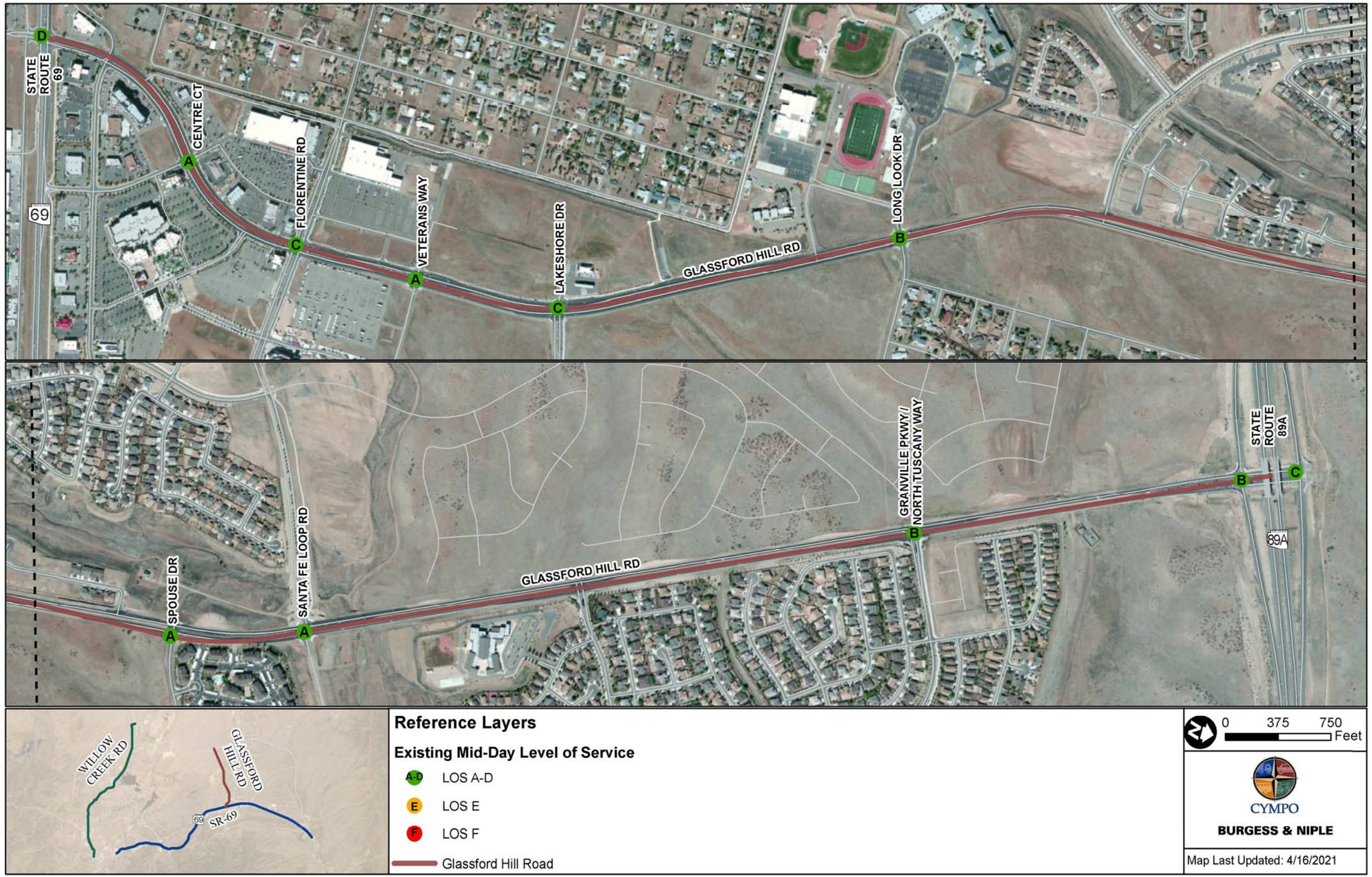
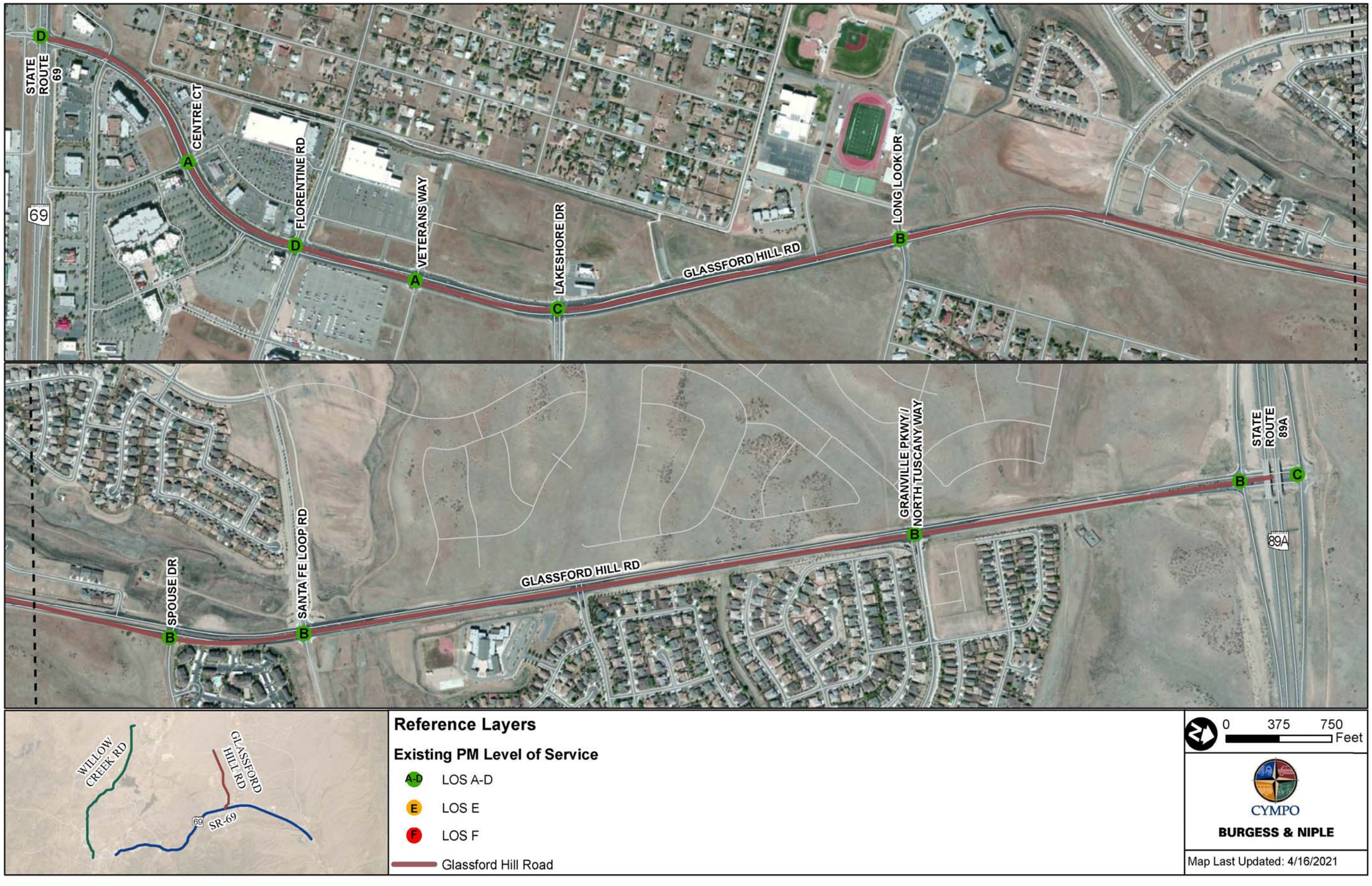


Figure 67 – Glassford Hill Road PM Peak Hour Levels of Service



Time-space diagrams along the Glassford Hill Road corridor were observed to evaluate the existing signal coordination and to identify potential signal timing improvements. The time-space diagrams in the existing conditions indicate interrupted traffic flow at several intersections during the AM, mid-day, and PM peak hours of travel suggesting that traffic signal optimization would likely be beneficial for operations along the corridor. The time-space diagrams are included in **Appendix SS-11.**

4.10.4. Traffic Predictability

The 2017 ADT included in **Table 16** were examined by direction of travel through the Glassford Hill Road corridor to illustrate travel demand variability or predictability. The travel demand is shown in **Figure 68** through **Figure 74.** The roadway segment from Florentine Road to Lakeshore Drive accommodates the highest volume of daily traffic.

Figure 68 – Traffic Volumes on Glassford Hill Road: SR 69 to Pav Way

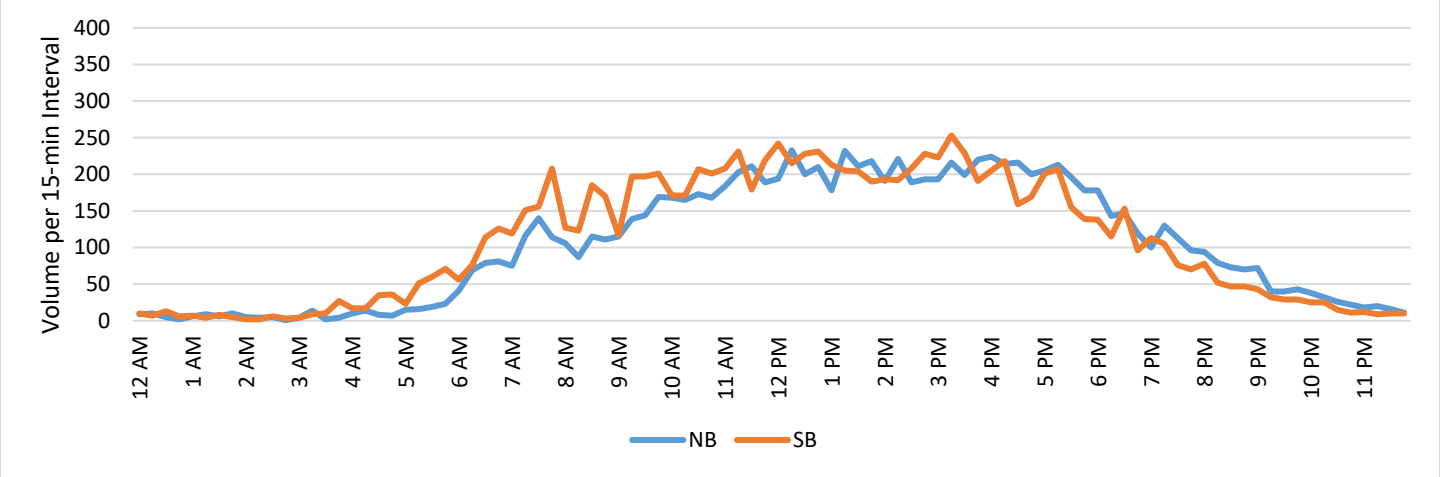


Figure 69 – Traffic Volumes on Glassford Hill Road: Pav Way to Florentine Road

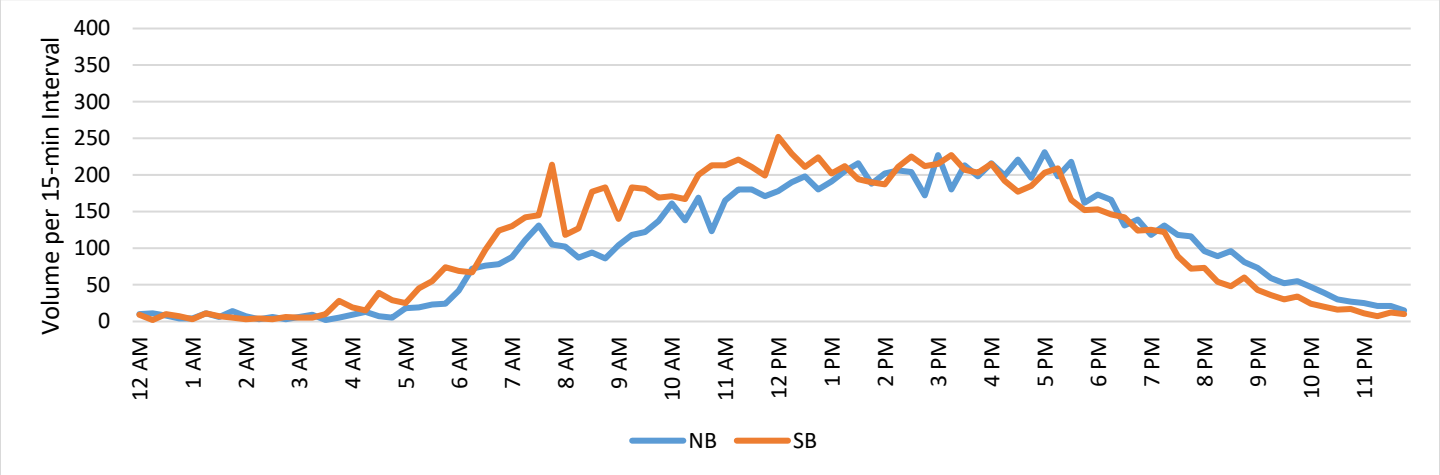


Figure 70 – Traffic Volumes on Glassford Hill Road: Florentine Road to Lakeshore Drive

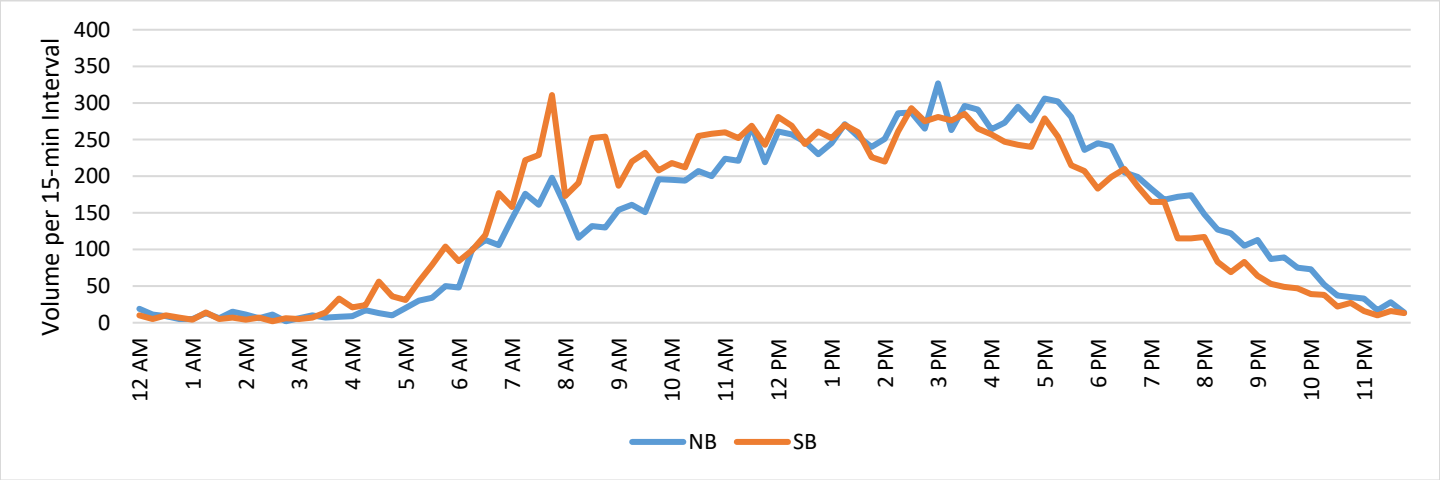


Figure 71 – Traffic Volumes on Glassford Hill Road: Lakeshore Drive to Panther Path

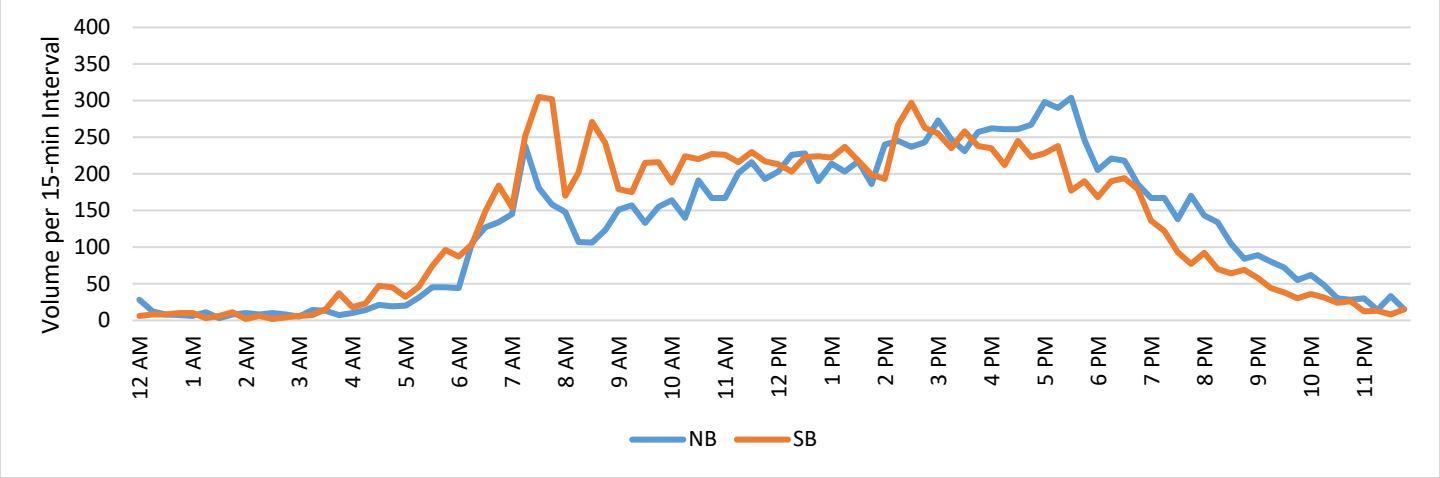


Figure 72 – Traffic Volumes on Glassford Hill Road: Panther Path to Long Look Drive

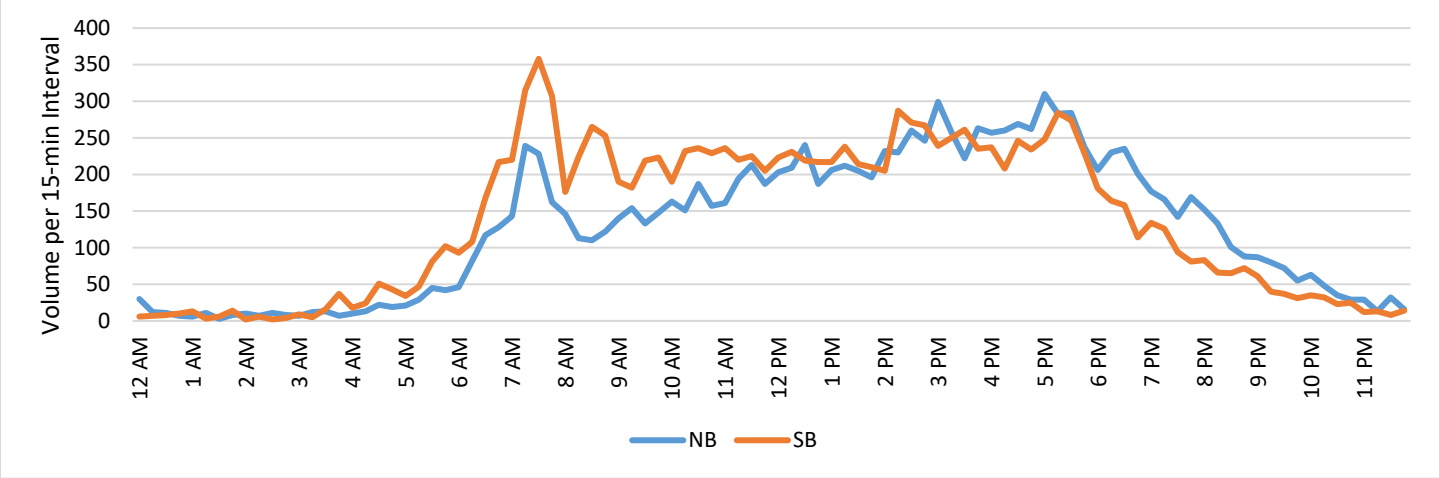


Figure 73 – Traffic Volumes on Glassford Hill Road: Long Look Drive to Spouse Drive

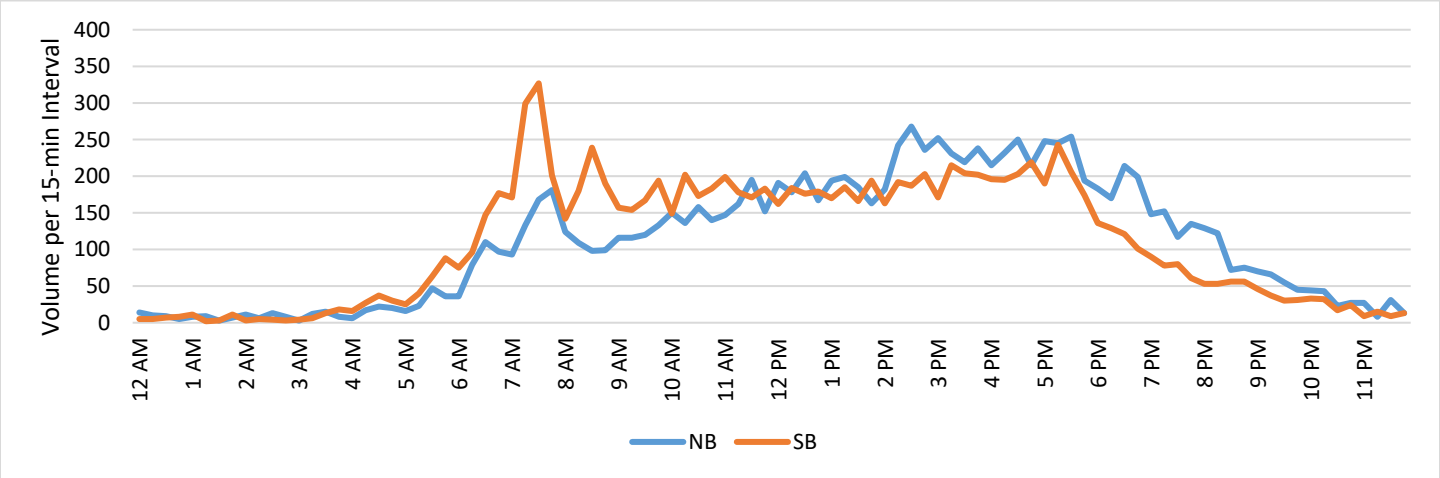


Figure 74 – Traffic Volumes on Glassford Hill Road: Spouse Drive to SR 89A

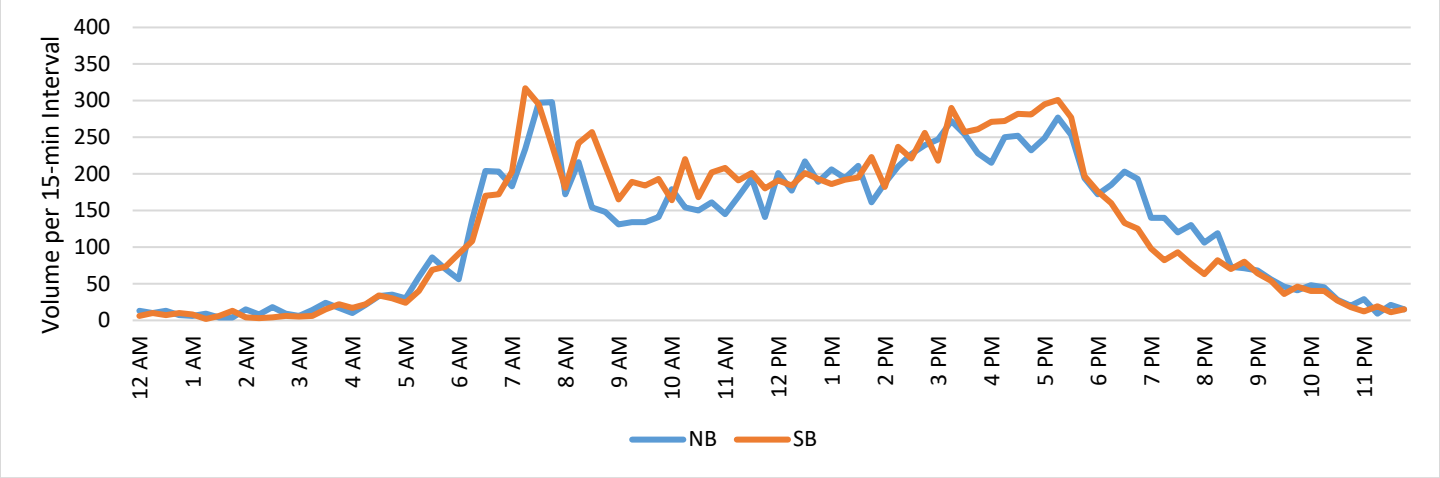


Figure 68 through **Figure 74** illustrate notable peaks during the morning (7-8 AM) and late afternoon/evening (2-5 PM). The travel demand peaks are consistent through the corridor in both directions of travel. There is a slightly higher traffic volume traveling southbound during the morning hours and the opposite trend occurs during the evening hours; the northbound traffic volume is slightly higher than the southbound.

Weekday hourly traffic volumes at two locations along the corridor were collected from the Streetlight database at various parts of the year to determine if seasonal traffic exists. Averaged Tuesday-Thursday data for the months of July 2019, October 2019, and January 2020 were collected near the intersections of Glassford Hill Road and Lakeshore Drive, shown in **Figure 75**, and Glassford Hill Road and Santa Fe Loop Drive, shown in **Figure 76**.

Figure 75 – Glassford Hill Road Seasonal Traffic Volumes Near Lakeshore Drive

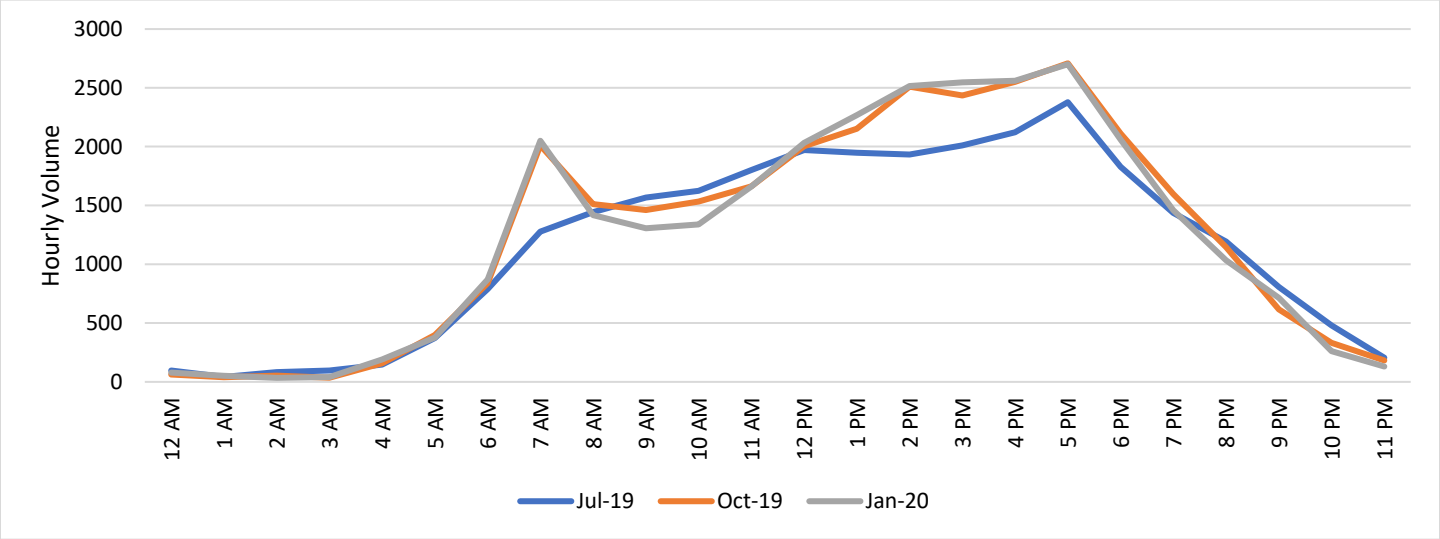


Figure 76 – Glassford Hill Road Seasonal Traffic Volumes Near Santa Fe Loop Drive

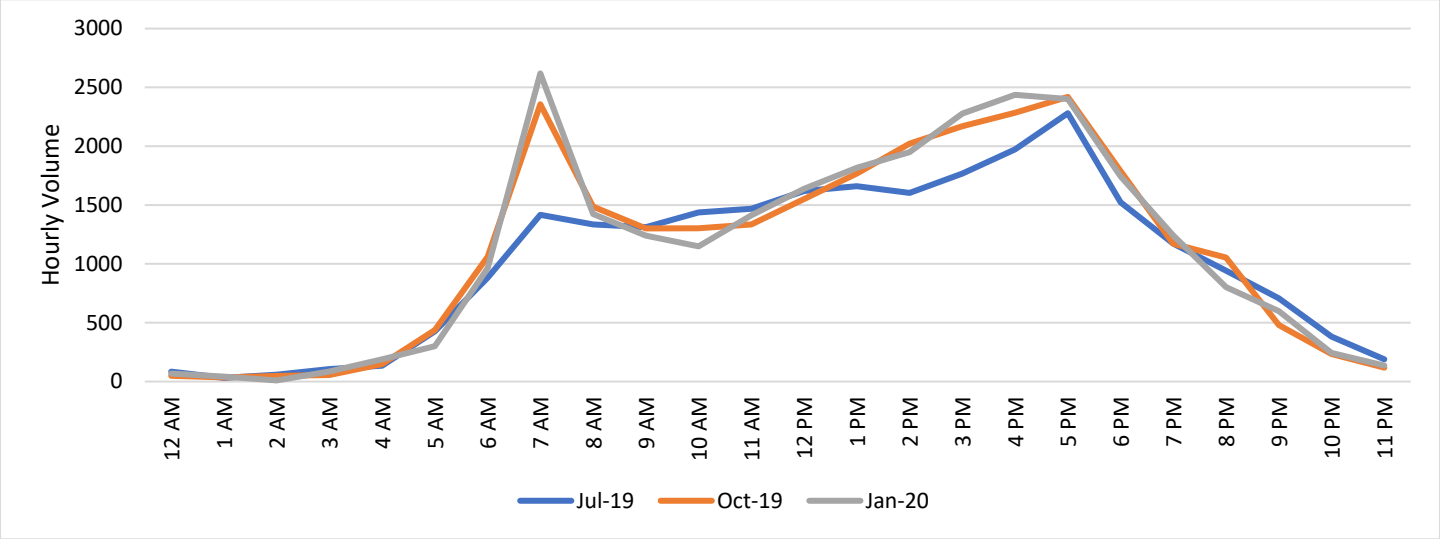


Figure 75 and **Figure 76** illustrate that the traffic volumes during the months of July, October, and January are relatively consistent. Traffic volumes during October and January are exceptionally predictable during all periods of the day. The volumes during the month of July are slightly lower, comparatively, during the morning (6-8 AM) and late afternoon/evening (2-5 PM). However, non-peak period travel is highly consistent with October and January traffic volumes. Lower traffic volumes during the summer months may be due to snowbird residents, which travel out of state during the summer months.

INRIX data for Glassford Hill Road was not available at the time of this Plan; average speed, travel time, or special event analysis was not completed for the study corridor.

4.11. Available Funding

4.11.1. Construction Funding

Development Impact Fees are collected by the Town of Prescott Valley to fund circulation, public safety, recreation, and cultural projects. $760,000 is budgeted for streets for FY 2019-20220 and $484,046 for FY 2020-2021.

Approximately $500,000 is estimated for streets projects in FY 2020-2021 from grant revenue received from state and federal agencies to assist with funding capital improvement projects.
The Streets Capital Improvement Fund accounts for the 0.33% Town of Prescott Valley sales tax and is dedicated to major street improvements. The Streets Capital Improvement Fund budgeted expenses for FY 2021 totals $6.2 million. The estimated ending fund balance by 6/30/21 is $87,580.

4.11.2. Maintenance Funding

A 0.5% Town of Prescott Valley sales tax is allocated to street maintenance and public safety. The FY 2020-2021 Town of Prescott Valley's allocated Highway User Revenue Fund (HURF) objectives include pavement maintenance and equipment upgrades including LED streetlights, communications capability in traffic signal cabinets, LED lighted street name signs, facility improvements to Long Mesa Operations Facility, etc.

4.12. System Functional Capabilities

As stated in **Section 3.12**, the recent growth in Prescott Valley has likely caused changes to the traffic demand in the area, one factor that contributes to the need for traffic signal retiming. Since the existing timing plans were last updated in 2017, signal re-optimization would likely be beneficial for operations along the Glassford Hill Road corridor.

Currently, the Glassford Hill Road and Long Look Drive traffic signal is uncoordinated during the AM peak hour; the Glassford Hill Road and Spouse Drive traffic signal is uncoordinated during the AM peak and mid-day peak hours. Additionally, the intersections at SR 69, Granville Parkway North/Tuscany Way, and SR 89A run uncoordinated at all hours. The existing traffic signal infrastructure along the corridor would allow for the re-optimization of signal timing and the development of updated coordinated time-of-day plans for all intersections long the corridor, with the exceptions of SR 69 and SR 89A due to the lack of controller communications infrastructure at these intersections. The addition of GPS clocks or other controller communications infrastructure at these locations would allow for the development of coordinated time-of-day signal timing plans which incorporate all signals and would create a comprehensive traffic system for the Glassford Hill Road corridor.

The intersection of SR 69 and Glassford Hill Road should be considered as the master intersection for traffic signal coordination. The master intersection is the reference intersection that offsets are calculated from. This would allow for coordination with adjacent intersections along both SR 69 and Glassford Hill Road. The offset value for the master intersection is set to zero and the other intersections along SR 69 and Glassford Hill Road would coordinate to this intersection.

Controller communication upgrades would be necessary at all intersections to implement an adaptive signal control system along the Glassford Hill Road corridor.

4.13. Potential Signal Timing Improvements

Coordinated traffic signal timing plans were developed to determine the extent of potential operational improvements by optimizing the plans. As mentioned in **Section 4.12**, minimal communications upgrades would be necessary to incorporate coordination along the entirety of the corridor. The existing conditions Synchro models were used as the base models for developing the optimized timing plans. Due to the length of the corridor and intersection proximity, it was unnecessary to split the corridor into coordination zones. This is reiterated in **Table 19**.

Table 19 – Glassford Hill Road Coordination Zones

Glassford Hill Intersecting Roadway	Zone
State Route 69	A
Centre Court	A
Florentine Road	A
Veterans Way	A
Lakeshore Drive	A

Table 19 – Glassford Hill Road Coordination Zones	
Glassford Hill Intersecting Roadway	**Zone**
Long Look Drive	A
Spouse Drive	A
Santa Fe Loop Drive	A
Granville Parkway North/Tuscany Way	A
State Route 89A Eastbound Ramps	A
State Route 89A Westbound Ramps	A

With the coordination zones determined, the traffic signal cycle lengths were optimized between 120 and 150 seconds for the AM, mid-day, and PM peak hour models. Phase split distributions and offsets were optimized as well. The operational assumptions for establishing the updated timing plans include:

- Signal phasing sequence remained unchanged; through movements are the lagging phase.
- Yellow and all-red clearance intervals were calculated and implemented into the timing plans; computations are included in **Appendix SS-12**.
- The intersection at SR 69 and Glassford Hill Road was set as the master intersection.
- Westbound right turn movement at Glassford Hill Road and Florentine Road incorporates an overlap phase (phases 3 and 6).

The optimized traffic signal cycle lengths and offsets are included in **Table 20**.

Table 20 – Glassford Hill Road Optimized Cycle Lengths and Offsets						
Glassford Hill Intersecting Roadway	**AM Peak**		**Mid-Day Peak**		**PM Peak**	
	Cycle Length (s)	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**
State Route 69	120	0	120	0	120	0
Centre Court	120	83	120	44	120	83
Florentine Road	120	46	120	35	120	43
Veterans Way	120	45	120	42	120	22
Lakeshore Drive	120	119	120	112	120	114
Long Look Drive	120	62	120	64	120	58
Spouse Drive	120	117	120	10	120	96
Santa Fe Loop Drive	120	95	120	117	120	106
Granville Parkway North/Tuscany Way	120	19	120	56	120	46
State Route 89A Eastbound Ramps	120	31	120	84	120	83
State Route 89A Westbound Ramps	120	31	120	84	120	83

The overall intersection delay, LOS, and maximum v/c ratio of the existing conditions and updated timing plans were compared for the AM, mid-day, and PM peak hours. The comparisons are included in **Table 21** through **Table 23**. Detailed results of the optimized timing plans can be found in **Appendix SS-13**.

Table 21 – Glassford Hill Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Glassford Hill Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
State Route 69	26.3	28.7	C	C	0.72	0.63
Centre Court	4.5	3.1	A	A	0.32	0.31
Florentine Road	20.2	15.9	C	B	0.54	0.47

Table 21 – Glassford Hill Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Glassford Hill Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Veterans Way	6.7	5.0	A	A	0.41	0.39
Lakeshore Drive	22.0	15.3	C	B	0.64	0.58
Long Look Drive	29.5	27.1	C	C	0.73	0.68
Spouse Drive	14.9	11.6	B	B	0.60	0.67
Santa Fe Loop Drive	23.5	20.4	C	C	1.05	0.75
Granville Parkway North/Tuscany Way	11.8	12.3	B	B	0.53	0.50
State Route 89A Eastbound Ramps	123.3	51.8	F	D	1.54	0.95
State Route 89A Westbound Ramps	44.0	54.5	D	D	0.86	0.85

Table 22 – Glassford Hill Road Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Glassford Hill Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
State Route 69	35.7	32.4	D	C	0.85	0.70
Centre Court	4.8	2.3	A	A	0.26	0.24
Florentine Road	28.2	21.5	C	C	0.63	0.66
Veterans Way	8.2	9.8	A	A	0.54	0.52
Lakeshore Drive	23.8	16.7	C	B	0.52	0.47
Long Look Drive	13.4	8.2	B	A	0.35	0.33
Spouse Drive	9.7	3.3	A	A	0.44	0.34
Santa Fe Loop Drive	8.2	5.9	A	A	0.44	0.43
Granville Parkway North/Tuscany Way	11.4	6.3	B	A	0.41	0.35
State Route 89A Eastbound Ramps	10.8	6.7	B	A	0.70	0.46
State Route 89A Westbound Ramps	24.6	51.0	C	D	0.59	0.65

Table 23 – Glassford Hill Road PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS						
Glassford Hill Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
State Route 69	44.5	38.0	D	D	0.89	0.85
Centre Court	9.4	3.2	A	A	0.33	0.31
Florentine Road	43.9	24.6	D	C	0.88	0.80
Veterans Way	7.2	10.2	A	B	0.54	0.50
Lakeshore Drive	23.5	17.2	C	B	0.59	0.63
Long Look Drive	12.1	9.5	B	A	0.50	0.42
Spouse Drive	18.3	9.6	B	A	0.53	0.53
Santa Fe Loop Drive	13.9	8.1	B	A	0.55	0.54
Granville Parkway North/Tuscany Way	15.1	7.0	B	A	0.57	0.49
State Route 89A Eastbound Ramps	13.9	10.5	B	B	0.78	0.64
State Route 89A Westbound Ramps	30.7	46.4	C	D	0.68	0.68

The LOS analysis determined that all intersections along the study corridor operate at an acceptable level, D or better, with the optimized timing plans during the AM, mid-day, and PM peak hours. In general, the overall intersection LOS's improve or stay the same from the existing conditions. The exceptions-overall intersections LOS that worsened from the existing conditions-follow:

- State Route 89A during the mid-day peak hour: LOS C to D
- Veterans Way during the PM peak hour: LOS A to B
- State Route 89A during the PM peak hour: LOS C to D

Overall, the time-space diagrams of the optimized timing plans illustrate minimal interruptions of traffic flow through the corridor during the AM, mid-day, and PM peak hours. The updated timing plan time-space diagrams are included in **Appendix SS-14**.

4.14. Summary of Findings

The Glassford Hill Road corridor was thoroughly examined to provide an overview of current operations at the study intersections and potential improvement strategies. Traffic demand is somewhat higher in the southbound direction during the morning hours compared to northbound travel, while the opposite trend occurs during the evening hours; traffic demand is somewhat higher in the northbound direction compared to southbound travel.

Traffic volumes during three various months of the year were evaluated to determine if seasonal traffic exists in the area. It was determined that the traffic volumes during the months of July, October, and January are relatively consistent, with slightly lower volumes during July.

Synchro was used to model the existing conditions and to develop the optimized timing plans. It was determined that all overall intersections operate at an acceptable LOS, LOS D or better in the existing conditions, except for the intersection of Glassford Hill Road and SR 89A Eastbound Ramps during the AM peak hour, which operates at LOS F. With the optimized timing plans, all intersections operate at an acceptable LOS, LOS D or better. In general, the LOS improves or stays the same with the optimized timing plans, compared to the existing conditions. In conclusion, it was determined that optimizing the timing plans for the Glassford Hill Road corridor would generate operational benefits.

5.0 Willow Creek Road

5.1. Willow Creek Road Snapshot

ITS systems capability information requests for the Willow Creek Road corridor were provided by the City of Prescott and Yavapai County. A qualitative summary of the responses is summarized in **Table 24**. The complete agency responses can be found in **Appendix SS-15**.

Key				
Strong Disadvantage	**Disadvantage**	**Neutral**	**Advantage**	**Strong Advantage**
				

Table 24 – Willow Creek Road Assessment Summary	
Attribute	**Assessment**
Staff Availability	
Staff Experience/Training with ASCT	
Existing Detection	
Existing Communications	
Existing Controllers	
Current Optimization	
Available Budget for ITS Improvement	
Available Maintenance Budget	

Existing vehicle detection, communications, and controller types along the SR 69 corridor are illustrated in **Figure 77** through **Figure 79**. More detailed information is available in **Section 5.9**.

Figure 77 – Willow Creek Road Vehicle Detection Types

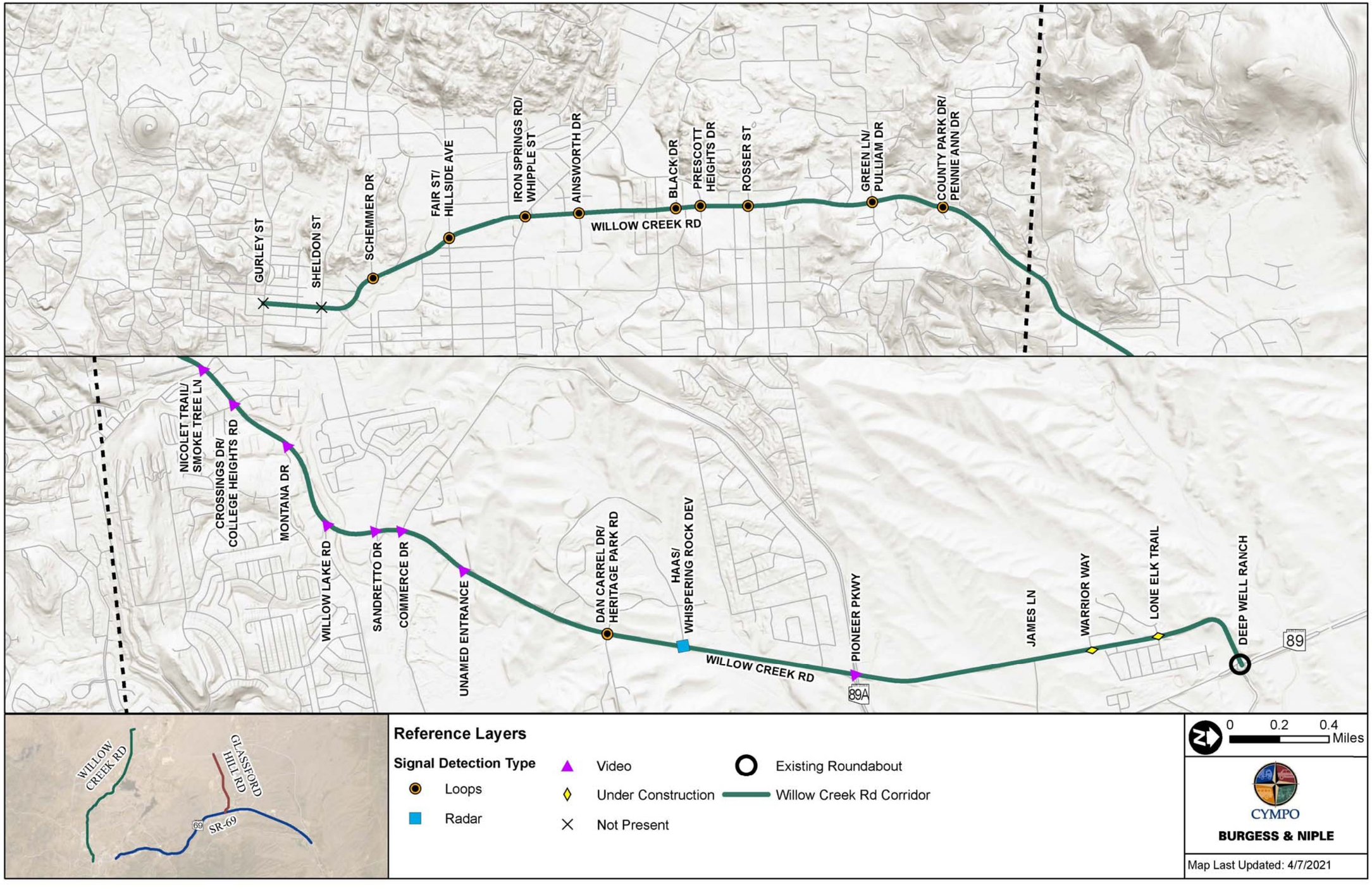


Figure 78 – Willow Creek Road Communication Types

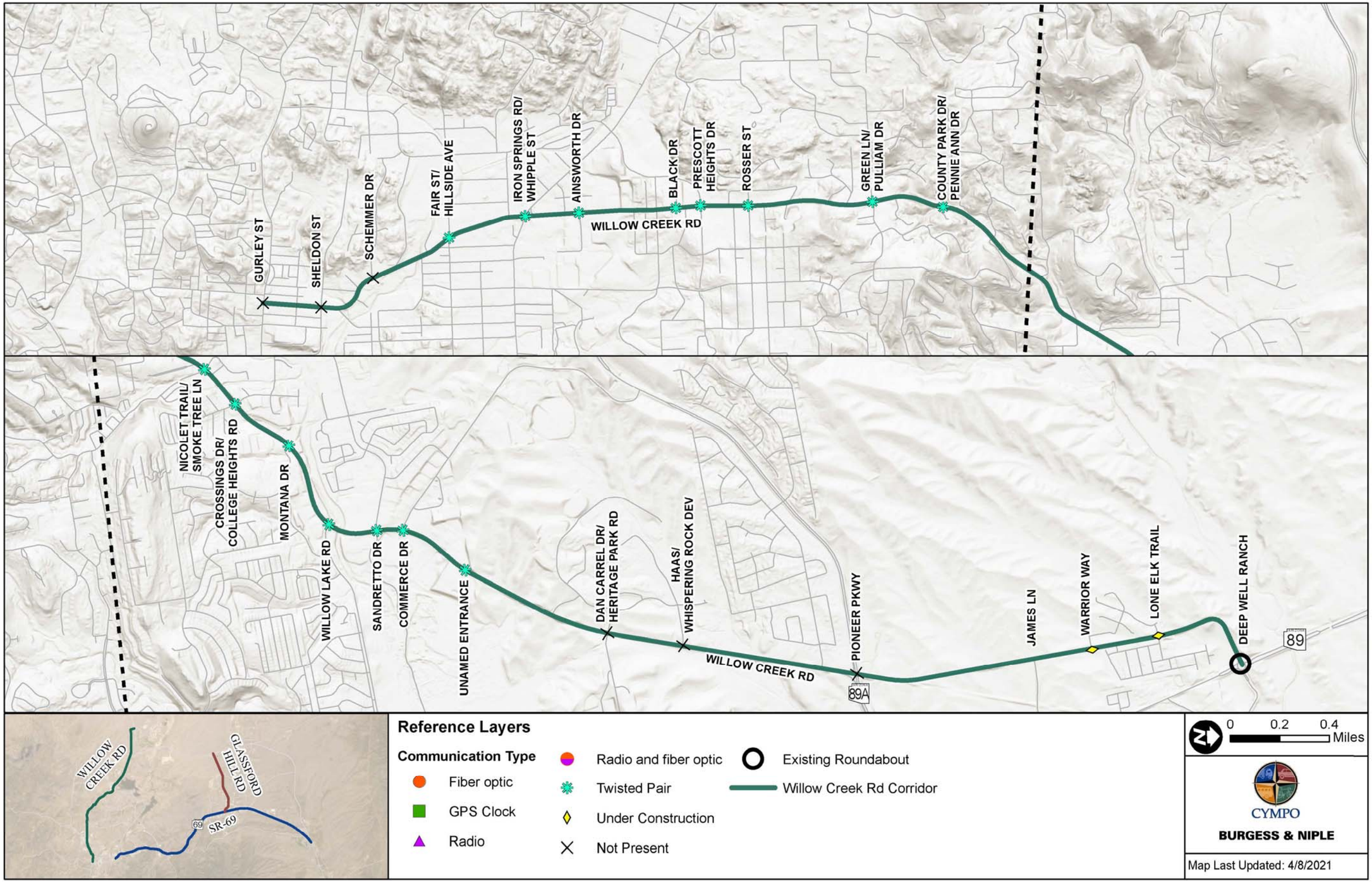
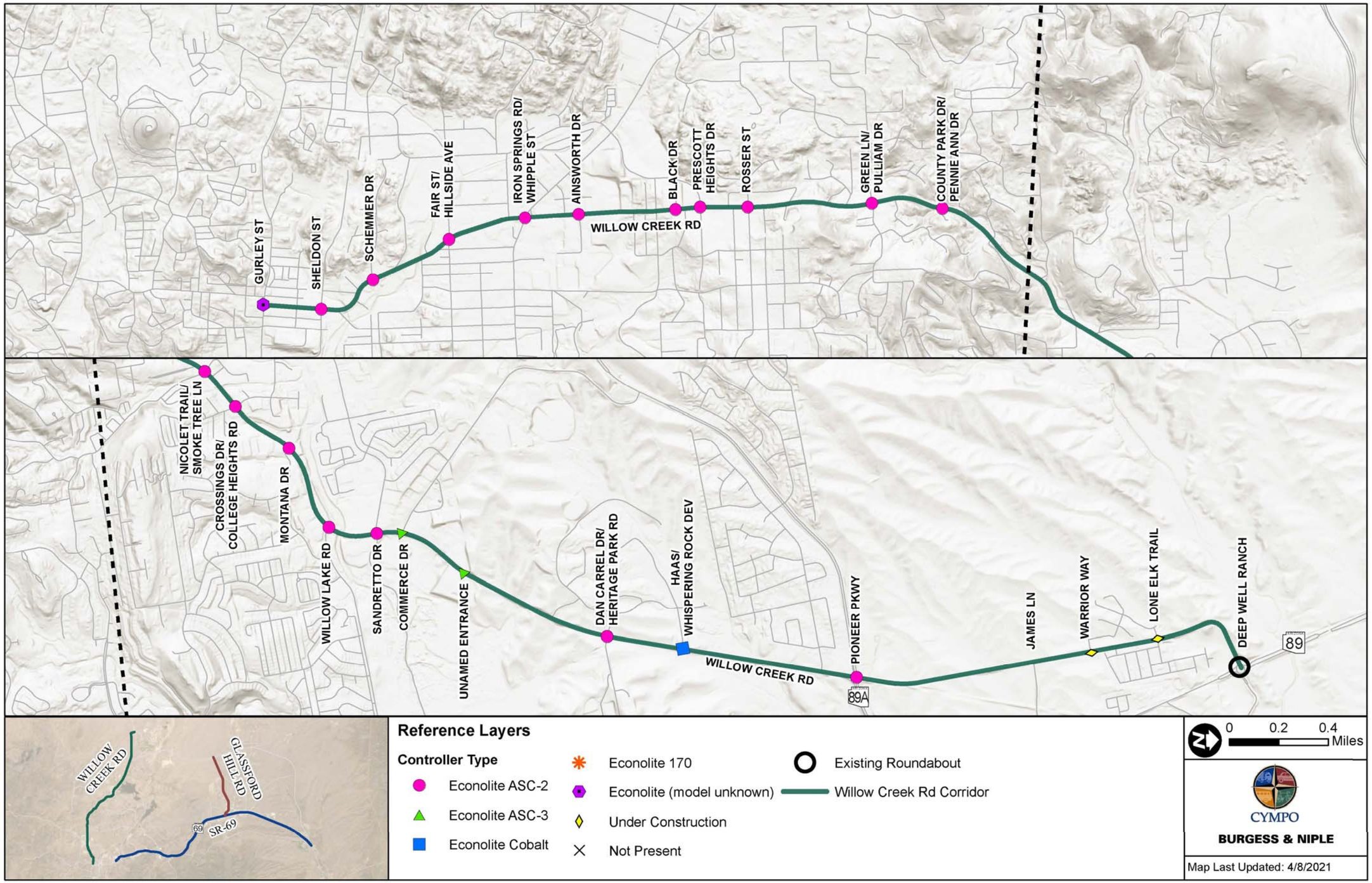


Figure 79 – Willow Creek Road Controller Types



5.2. Relevant Plans and Studies

No relevant studies were identified for this study area corridor.

As part of a SR 89 widening project, ADOT completed construction of James Lane from SR 89 to the new Willow Creek Road alignment. The Willow Creek Road and James Lane intersection is currently stop controlled at James Lane, but the City of Prescott and developer understand that roadway widening, and construction of a traffic signal or roundabout would occur upon development of commercial property adjacent to the intersection.

5.3. Agency Information

Traffic signals along Willow Creek Road are not connected to a central system. The corridor has twisted pair wire communications in some locations, with gaps present in the conduit. The City of Prescott has three full-time staff available to maintain traffic signals and lighting within the area. Staff is not currently familiar with ATSPM.

5.4. Existing Land Use

The current land use in the surrounding area is primarily residential, with scattered commercial, industrial, and recreational land. The commercial uses including retail stores, medical offices, hotels, and restaurants are mostly located directly off Willow Creek Road or its intersecting minor streets.

Significant schools, shopping centers, parks, hospitals, and special event locations are illustrated in **Figure 80**. Some of key developments in the area include the following:

- Several schools are located near or at the intersections of Willow Creek Road. Lincoln Elementary School is located south of the Gurley Street intersection. Northpoint Expeditionary Learning Academy is located 0.4 miles east of the corridor near the Schemmer Drive intersection. Prescott High School is located 0.25 miles east of the Ainsworth Drive intersection. Mountain Oak School is located at the intersection of Prescott Heights Drive. ASCEND is located at the intersection of Commerce Drive. Embry-Riddle Aeronautical University, Prescott Campus is located at the Dan Carrel Drive intersection.

- Two hospitals are located near or at the intersections of Willow Creek Road. Yavapai Regional Medical Center West is located at the Whipple Street intersection, and Thumb Butte Medical Center is located at the Montana Drive intersection.

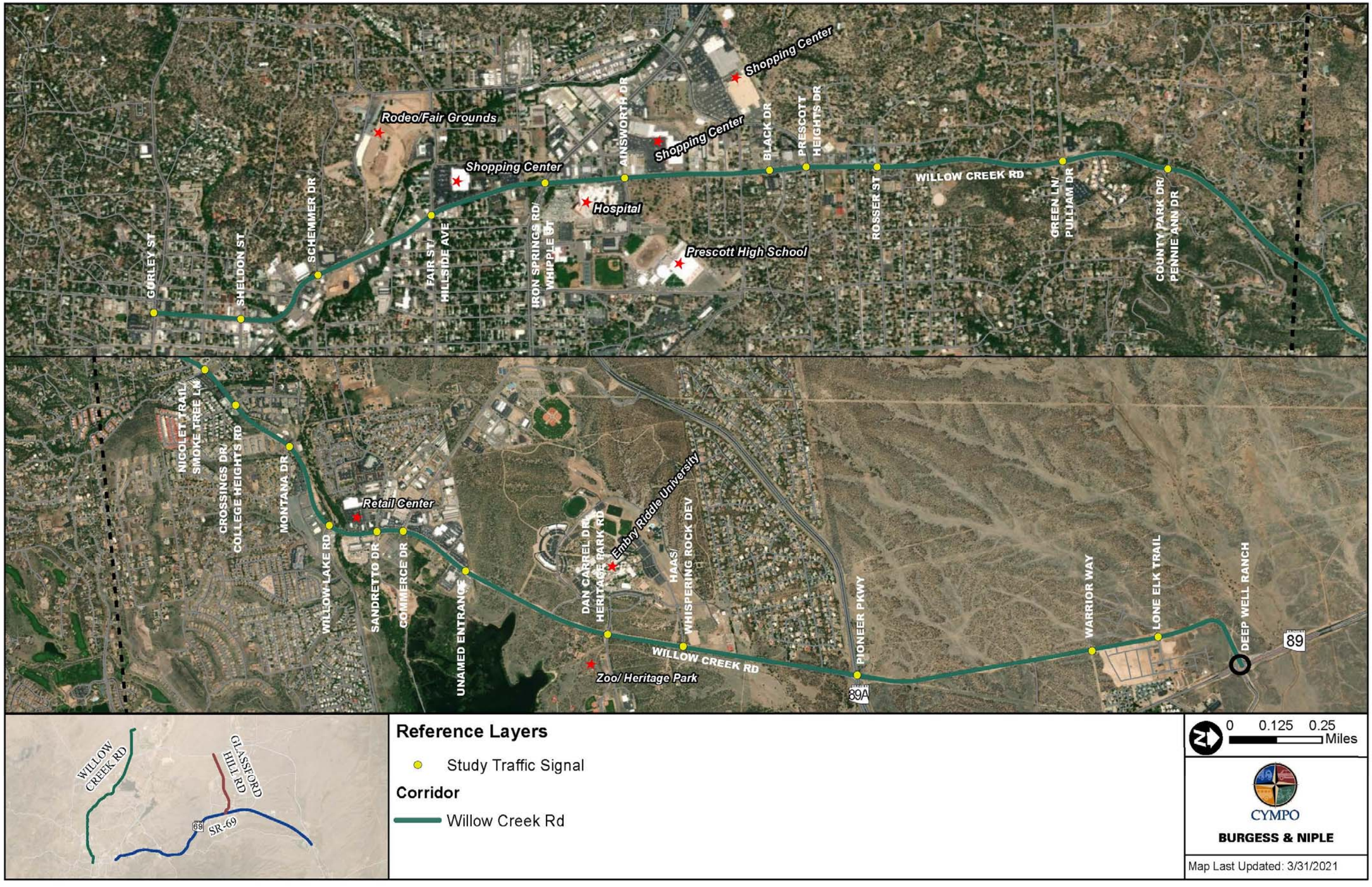
- Yavapai County Courthouse Plaza is located approximately 0.4 miles east of the Grove Avenue and Gurley Street intersection.

- Heritage Park, which includes the Heritage Park Zoological Sanctuary, is located at the intersection of Willow Creek Road and Heritage Park Road.

- The Yavapai County fairgrounds and rodeo grounds are located one-quarter mile west of Miller Valley Road and Fair Street/Hillside Avenue.

Typically, residential land use results in high weekday morning and evening travel, with moderate weekday mid-day travel and high weekend afternoon travel. Commercial areas generally experience the highest travel volumes during the weekday evening hours and weekend afternoon hours. Emergency vehicles traveling to hospitals in the area may affect traffic signal timing due to EVP.

Figure 80 – Willow Creek Road Major Trip Generators



5.5. Roadway Characteristics

Willow Creek Road is typically a four-lane section with a center TWLTL. There are right-turn lanes at various businesses and signals throughout the corridor. The number of travel lanes along segments of the corridor are listed in **Table 25**. The posted speed limit along Willow Creek Road ranges from 30 mph at the south end of the corridor and increases incrementally to 45 mph at the north end of the corridor.

Table 25 – Willow Creek Road Number of Travel Lanes

Roadway Segment	Number of Lanes
Gurley Street to Pioneer Parkway	4
Pioneer Parkway to SR 89	2

5.6. Programmed Improvements

The following programmed improvements were identified along Willow Creek Road within or near the study area.

- **Warrior Way and Lone Oak Trail;** Traffic signals will be constructed as part of the Willow Creek Road Curve Realignment Project, currently in the construction phase. The project also includes widening Willow Creek Road to four lanes with a raised center median from Warrior Way to the Deep Well Ranch Roundabout.

5.7. Other Factors Influencing Operations

Willow Creek Road has varying access point spacing within the project area. Most of the corridor has moderate to dense access spacing. From the unnamed entrance to Lone Elk Trail, Willow Creek Road has low density access point spacing with less than 10 access points per mile.

5.8. Crash Analysis

A high-level crash analysis was conducted for the Willow Creek Road corridor. As shown in the heat map in **Figure 81**, most crashes in the corridor occur at intersections, with the greatest number at Iron Springs Road/Whipple Street and Willow Lake Road. Rear end crashes are often indicative of congestion; the heat map in **Figure 82** displays rear end crashes; the same intersections are most prominent.

Figure 81 – Willow Creek Road Crash Heat Map

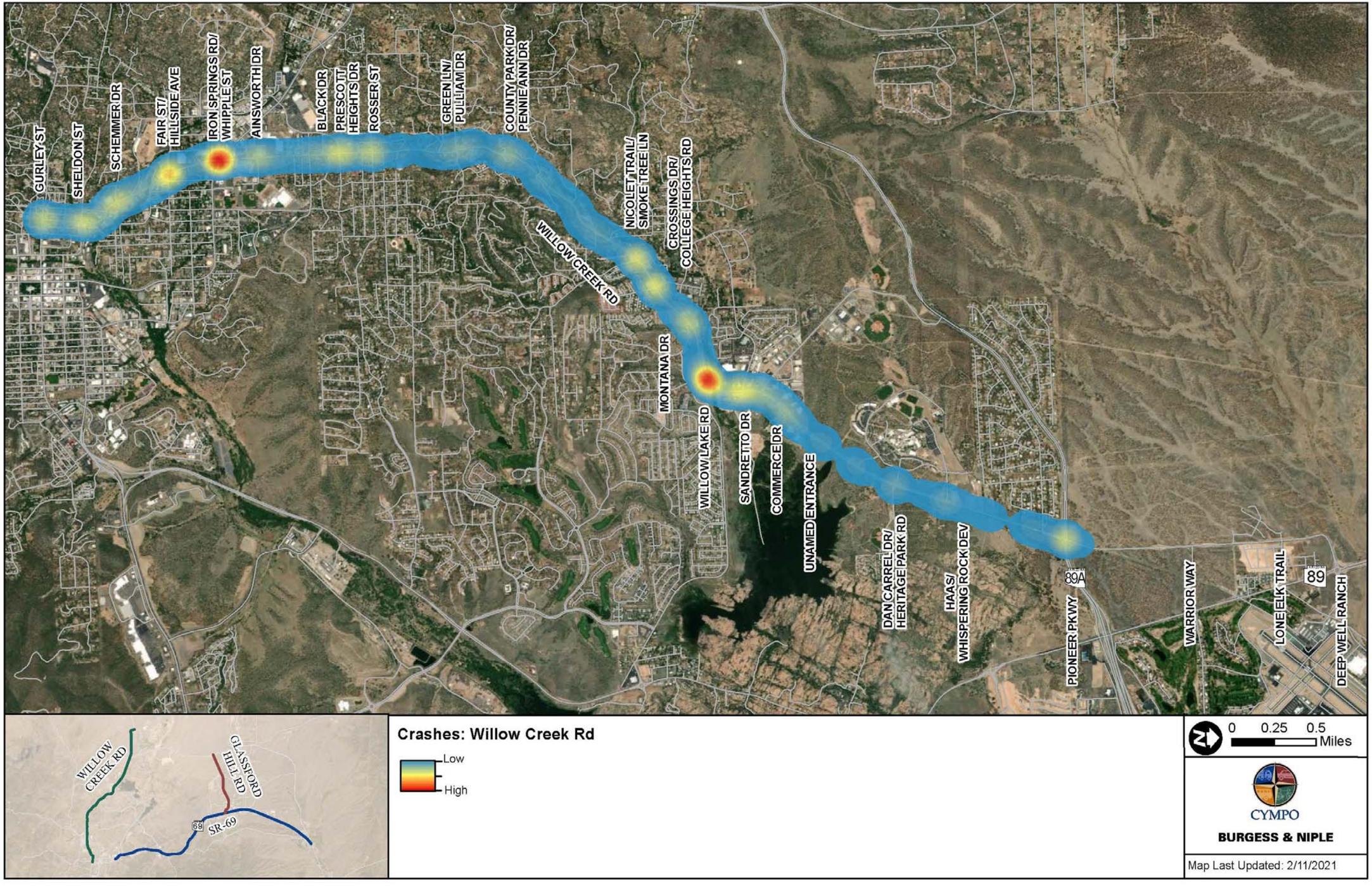
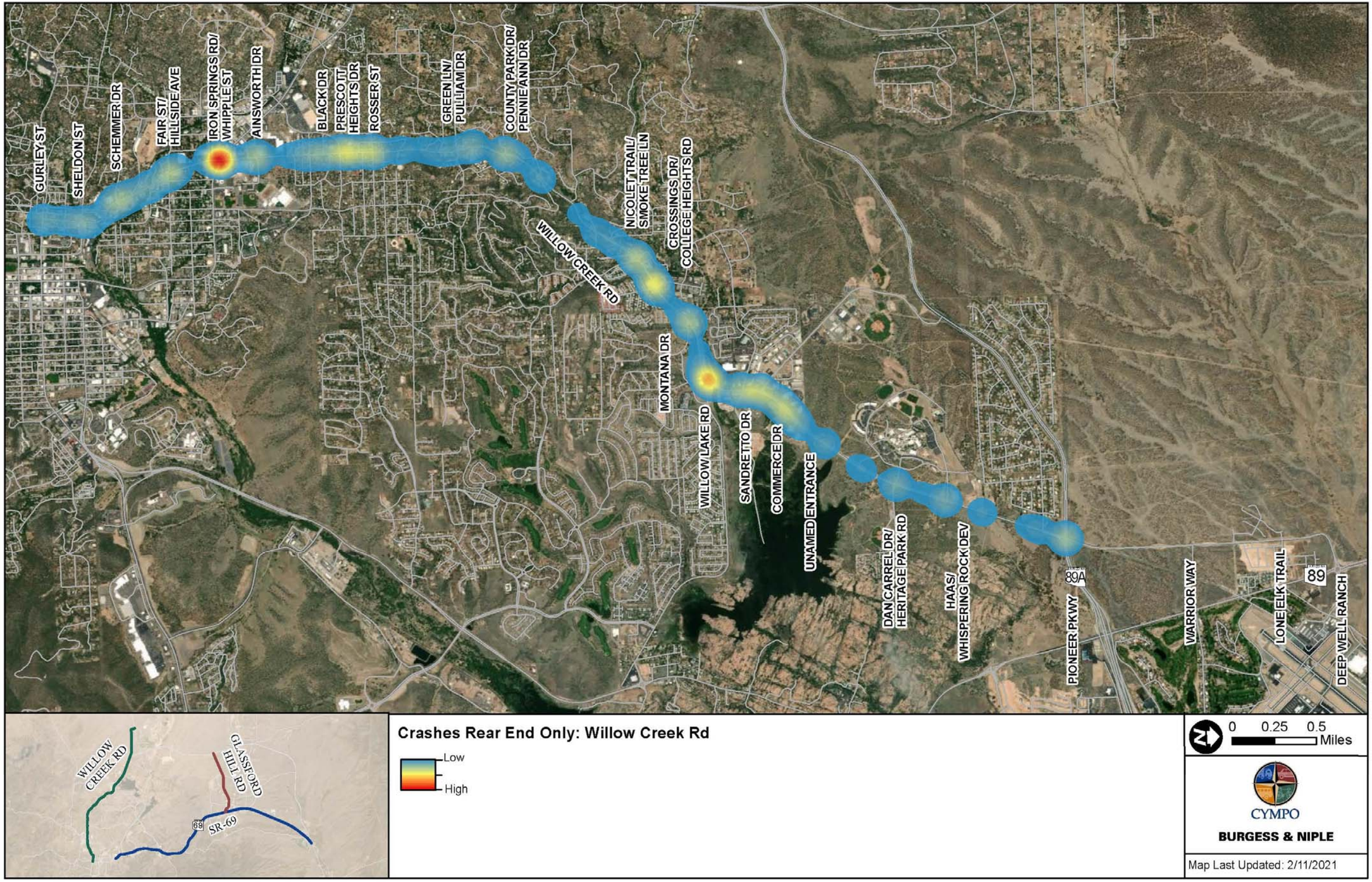


Figure 82 – Willow Creek Road Rear End Crash Heat Map



5.9. Traffic Management Devices

The traffic management devices along Willow Creek Road are identified in **Table 26** based on the information requests provided by the City of Prescott and Yavapai County. It was noted that there are gaps present in the twisted pair wire conduit located approximately mid-way along the corridor.

Table 26 – Willow Creek Road Traffic Management Devices

Willow Creek Road Intersecting Roadway	Detection	Communication	Controller Make/ Model	Spacing to Next Signal (miles)	Other
Gurley Street	**Main Street** ▪ Thru Lanes Adv Det.: N/A ▪ Thru Lanes Stop Line: N/A ▪ LT Turn Lane: N/A **Side Street** ▪ Thru Lanes Adv Det.: N/A ▪ Thru Lanes Stop Line: N/A LT Turn Lane: N/A	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No Communications Media: N/A	Econolite	▪ South: N/A ▪ North: 0.2	
Sheldon Street	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: None **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: None	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: N/A	Econolite/ ASC-2	▪ South: 0.2 ▪ North: 0.3	
Schemmer Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: N/A	Econolite/ ASC-2	▪ South: 0.3 ▪ North: 0.4	▪ Excessive Pedestrian use
Fair Street/Hillside Avenue	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: None	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: N/A	Econolite/ ASC-2	▪ South: 0.4 ▪ North: 0.3	▪ Excessive Pedestrian use
Iron Springs Road/Whipple Street	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.3 ▪ North: 0.2	▪ Excessive Pedestrian use

Table 26 – Willow Creek Road Traffic Management Devices					
Willow Creek Road Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Ainsworth Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.2 ▪ North: 0.4	▪ Excessive Pedestrian use ▪ No EVP
Black Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.4 ▪ North: 0.1	▪ Synced operation with Prescott Heights Drive
Gail Gardner Way/Prescott Heights Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.1 ▪ North: 0.2	▪ Synced operation with Black Drive
Rosser Street	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: None **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.2 ▪ North: 0.5	
Green Lane/Pullam Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: None **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.5 ▪ North: 0.3	

Table 26 – Willow Creek Road Traffic Management Devices					
Willow Creek Road Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Country Park Drive/Pennie Ann Drive	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.3 ▪ North: 1.0	
Nicolet Trail/Smoke Tree Lane	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 1.0 ▪ North: 0.2	
Crossings Drive/College Heights Road	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.2 ▪ North: 0.3	
Montana Drive	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.3 ▪ North: 0.4	
Willow Lake Road	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: N/A ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.4 ▪ North: 0.2	

Table 26 – Willow Creek Road Traffic Management Devices					
Willow Creek Road Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Sandretto Drive	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: No ▪ Ethernet Capable: No ▪ Communications Media: Twisted pair wire	Econolite/ ASC-2	▪ South: 0.2 ▪ North: 0.1	
Commerce Drive	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: Twisted pair wire	Econolite/ ASC-3	▪ South: 0.1 ▪ North: 0.3	
Unnamed entrance to Tractor Supply Co and Prescott Honda	**Main Street** ▪ Thru Lanes Adv Det.: None ▪ Thru Lanes Stop Line: None ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: N/A ▪ Thru Lanes Stop Line: N/A ▪ LT Turn Lane: N/A	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: N/A ▪ Ethernet Capable: Yes ▪ Communications Media: Twisted pair wire	Econolite/ ASC-3	▪ South: 0.3 ▪ North: 0.7	
Dan Carrell Drive/Heritage Park Road	**Main Street** ▪ Thru Lanes Adv Det.: Loop ▪ Thru Lanes Stop Line: Loop ▪ LT Turn Lane: Loop **Side Street** ▪ Thru Lanes Adv Det.: N/A ▪ Thru Lanes Stop Line: N/A ▪ LT Turn Lane: N/A	▪ Connected to Central System: No ▪ Communications Capable: N/A ▪ NTCIP Capable: Unknown ▪ Ethernet Capable: No ▪ Communications Media: None	Econolite/ ASC-2	▪ South: 0.7 ▪ North: 0.3	

Table 26 – Willow Creek Road Traffic Management Devices					
Willow Creek Road Intersecting Roadway	**Detection**	**Communication**	**Controller Make/ Model**	**Spacing to Next Signal (miles)**	**Other**
Haas/Whispering Rock Development	**Main Street** ▪ Thru Lanes Adv Det.: Radar ▪ Thru Lanes Stop Line: Radar ▪ LT Turn Lane: Radar **Side Street** ▪ Thru Lanes Adv Det.: N/A ▪ Thru Lanes Stop Line: N/A ▪ LT Turn Lane: N/A	▪ Connected to Central System: No ▪ Communications Capable: Yes ▪ NTCIP Capable: Yes ▪ Ethernet Capable: Yes ▪ Communications Media: None	Econolite/ Cobalt	▪ South: 0.3 ▪ North: 0.7	
Pioneer Parkway*	**Main Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video **Side Street** ▪ Thru Lanes Adv Det.: Video ▪ Thru Lanes Stop Line: Video ▪ LT Turn Lane: Video	▪ Connected to Central System: No ▪ Communications Capable: Unknown ▪ NTCIP Capable: Yes ▪ Ethernet Capable: No ▪ Communications Media: None	Econolite/ ASC-2	▪ South: 0.7 ▪ North: 1.0	▪ Overhead restrictions, SB approach and WB approach ▪ No EVP
Warrior Way (Under Construction)				▪ South: 1.0 ▪ North: 0.3	
Lone Elk Trail (Under Construction)				▪ South: 0.3 ▪ North: N/A	
*Yavapai County owns and operates traffic signal					

5.10. ITS/Traffic Operations

5.10.1. Traffic Volumes

TMC data was collected by a GRIDSMART video detection system at the intersection of Willow Creek Road and Willow Lake Road. 24-hour data was collected during November 20-December 21, 2020. Note that volumes may be lower than typical due to the COVID-19 pandemic which is known to have reduced VMT.

Pre-pandemic (2020) TMC data was collected from the StreetLight database for all signalized intersections along the Willow Creek Road corridor, with the exception of Willow Creek Road and Willow Lake Road. Hourly analysis was conducted for January 1-31, 2020. Average Tuesday-Thursday counts during this time period were used to generate the weekday TMCs. The TMCs were calibrated using the 24-hr GRIDSMART data at the Willow Creek Road and Willow Lake intersection.

The TMCs for the AM, mid-day, and PM peak hours are illustrated in **Figure 83** through **Figure 85**.

Figure 83 – Willow Creek Road AM Peak Hour Turning Movement Counts

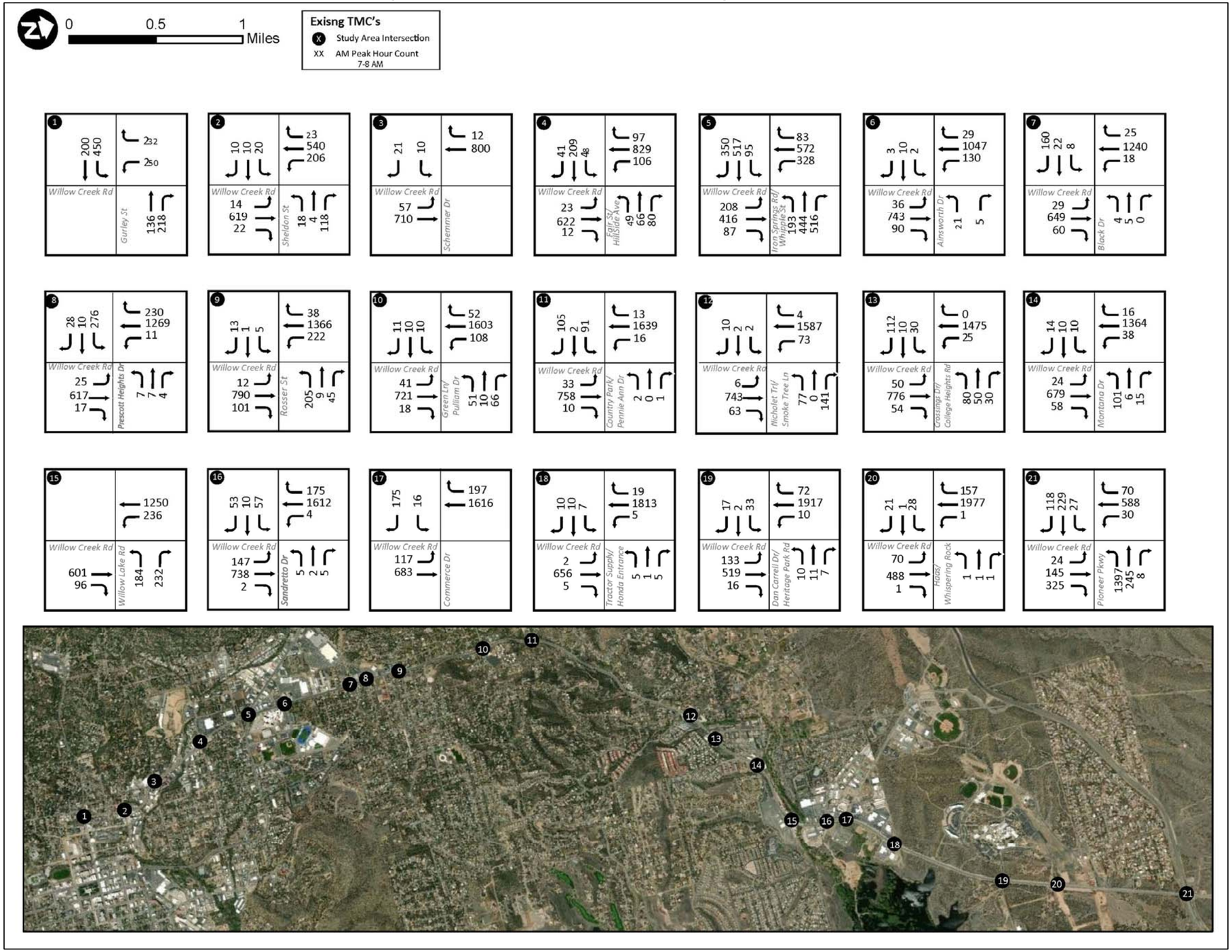


Figure 84 – Willow Creek Road Mid-Day Peak Hour Turning Movement Counts

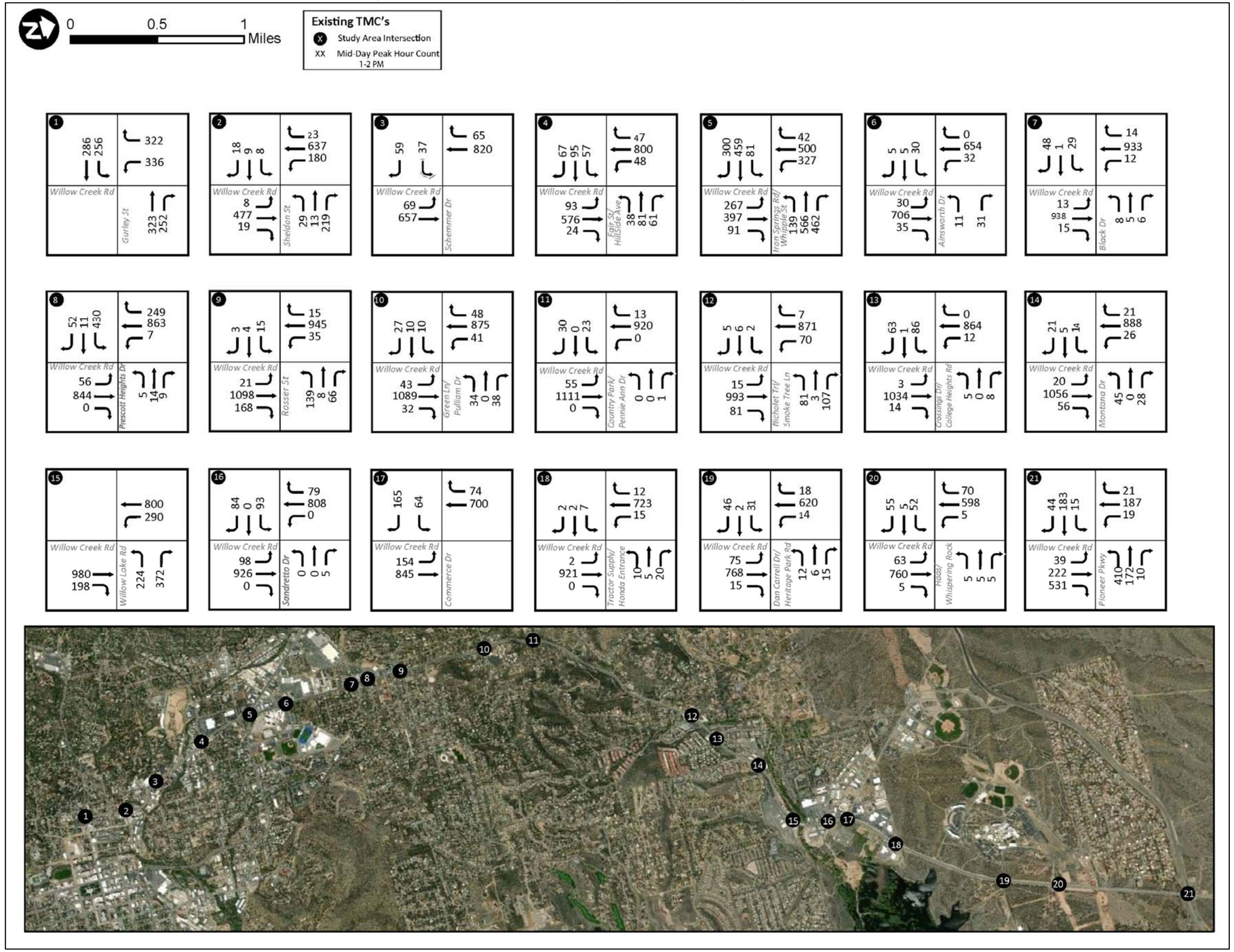
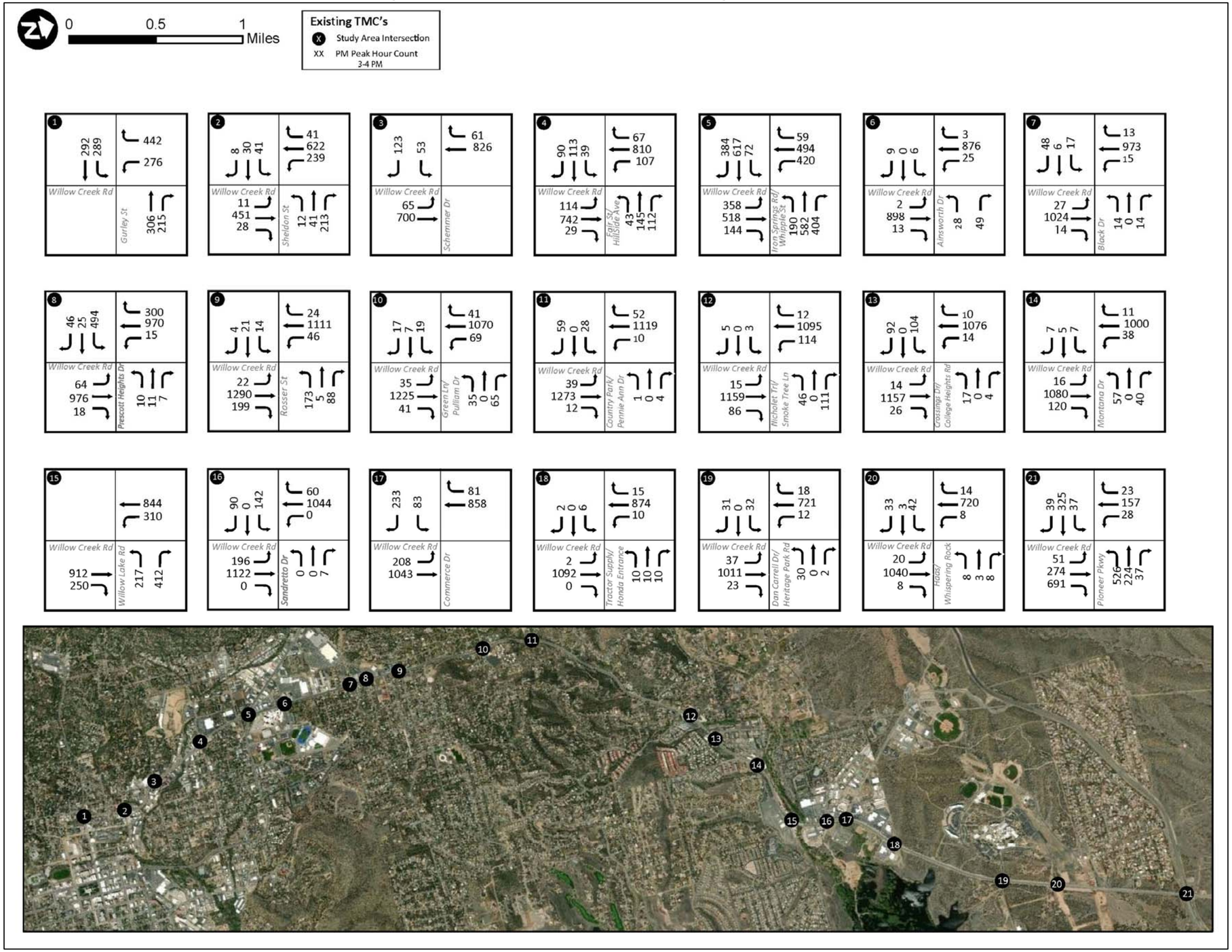


Figure 85 – Willow Creek Road PM Peak Hour Turning Movement Counts



5.10.2. Signal Timing Plans

The traffic signal timing plans for the 21 existing signalized intersections were provided by the City of Prescott. Most of the plans have remained unchanged for several years; a few have been in place since 2006. The plans are included in **Appendix SS-16**.

Most of the traffic signals along the Willow Creek Road corridor are semi or fully-actuated, uncoordinated signals. Only two time-of-day timing settings are implemented. The vehicle and pedestrian recalls vary by time-of-day at the Willow Creek Road and Sandretto Drive intersection, but all other signal timing settings remain unchanged. At Willow Creek Road and Pioneer Parkway, the maximum phase length for the westbound left turn movement increases during the AM peak hour. All other signal timing settings remain unchanged.

The left turn types vary between protected only, permissive, and protected/permissive throughout the corridor. However, the most common left turn type is permissive for both major and minor street movements.

A channelized free-right turn at the northbound approach and channelized right turn with a yield control sign at the westbound approach are provided at Willow Creek Road and Pioneer Parkway. Channelized right turns with a stop sign control are located at the west and eastbound approaches of Willow Creek Road and Iron Springs Road/Whipple Street.

Existing pedestrian clearance intervals were computed using a walking speed of 4 feet per second.

5.10.3. Existing Traffic Patterns/Operations

The traffic volumes and signal timing plans were entered into Synchro to emulate the existing conditions and to determine the delays, LOS, and maximum v/c ratios by intersection approach. The LOS analysis was conducted using Synchro's built-in methodology due to its capability to assess unique signal timing and geometric configurations. A summary of the LOS and v/c ratio analysis results are included in **Table 27**. Willow Creek Road was noted as the north-south roadway in the results table at all intersections. Pedestrian volumes were not considered in the analysis. Detailed results can be found in **Appendix SS-17**.

Table 27 – Willow Creek Road Existing Conditions Delay, LOS, and v/c Ratio Analysis

Willow Creek Road Intersecting Roadway	Approach	AM Peak			Mid-Day Peak			PM Peak		
		Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio	Delay (s)	LOS	Max v/c Ratio
Gurley Street	EB	11.1	B	0.40	10.7	B	0.35	11.0	B	0.37
	WB	11.6	B	0.22	17.6	B	0.34	18.2	B	0.32
	NB	-	-	-	-	-	-	-	-	-
	SB	20.6	C	0.39	18.3	B	0.49	15.1	B	0.60
	Overall	**14.7**	**B**	**0.40**	**15.7**	**B**	**0.49**	**14.7**	**B**	**0.60**
Sheldon Street	EB	29.3	C	0.24	22.4	C	0.19	40.3	D	0.48
	WB	15.0	B	0.43	15.9	B	0.60	16.7	B	0.59
	NB	13.1	B	0.40	12.2	B	0.31	12.0	B	0.30
	SB	3.5	A	0.35	3.5	A	0.27	3.6	A	0.35
	Overall	**9.1**	**A**	**0.43**	**8.5**	**A**	**0.60**	**9.7**	**A**	**0.59**
Schemmer Drive	EB	20.2	C	0.12	20.0	C	0.27	18.1	B	0.44
	WB	-	-	-	-	-	-	-	-	-
	NB	1.6	A	0.24	2.9	A	0.25	3.5	A	0.29
	SB	7.8	A	0.38	10.9	B	0.46	12.7	B	0.51
	Overall	**5.1**	**A**	**0.38**	**8.0**	**A**	**0.46**	**9.4**	**A**	**0.51**

Table 27 – Willow Creek Road Existing Conditions Delay, LOS, and v/c Ratio Analysis										
Willow Creek Road Intersecting Roadway	**Approach**	**AM Peak**			**Mid-Day Peak**			**PM Peak**		
		Delay (s)	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**
Fair Street/Hillside Avenue	EB	46.4	D	0.78	31.8	C	0.57	35.0	D	0.64
	WB	24.6	C	0.40	34.5	C	0.60	45.1	D	0.80
	NB	18.6	B	0.42	13.5	B	0.35	17.8	B	0.49
	SB	15.8	B	0.54	16.8	B	0.52	19.0	B	0.58
	Overall	**21.6**	**C**	**0.78**	**18.9**	**B**	**0.60**	**23.4**	**C**	**0.80**
Iron Springs Road/Whipple Street	EB	21.8	C	0.65	24.1	C	0.61	34.2	C	0.75
	WB	20.2	C	0.57	20.8	C	0.59	25.1	C	0.66
	NB	30.7	C	0.62	28.1	C	0.68	40.4	D	0.87
	SB	28.7	C	0.71	25.9	C	0.67	37.6	D	0.90
	Overall	**26.3**	**C**	**0.71**	**24.3**	**C**	**0.68**	**33.9**	**C**	**0.90**
Ainsworth Drive	EB	31.1	C	0.10	32.8	C	0.25	0.5	A	0.07
	WB	28.6	C	0.14	9.3	A	0.14	14.9	B	0.23
	NB	7.3	A	0.37	6.2	A	0.31	4.8	A	0.37
	SB	6.6	A	0.48	6.2	A	0.31	7.2	A	0.42
	Overall	**7.3**	**A**	**0.48**	**7.0**	**A**	**0.31**	**6.3**	**A**	**0.42**
Black Drive	EB	7.0	A	0.34	9.8	A	0.11	9.8	A	0.12
	WB	16.4	B	0.01	13.0	B	0.02	8.4	A	0.04
	NB	10.0	B	0.45	12.6	B	0.62	12.7	B	0.65
	SB	21.3	C	0.85	12.5	B	0.61	14.5	B	0.66
	Overall	**16.3**	**B**	**0.85**	**12.4**	**B**	**0.62**	**13.4**	**B**	**0.66**
Gail Gardner Way/Prescott Heights Drive	EB	28.3	C	0.60	36.1	D	0.83	46.7	D	0.93
	WB	26.4	C	0.07	24.9	C	0.17	26.3	C	0.14
	NB	9.4	A	0.37	10.6	B	0.49	11.7	B	0.58
	SB	20.4	C	0.83	13.9	B	0.60	15.2	B	0.68
	Overall	**18.6**	**B**	**0.83**	**17.2**	**B**	**0.83**	**20.1**	**C**	**0.93**
Rosser Street	EB	16.6	B	0.06	25.7	C	0.03	24.4	C	0.08
	WB	37.4	D	0.72	27.9	C	0.57	33.1	C	0.66
	NB	8.8	A	0.44	9.4	A	0.60	12.5	B	0.72
	SB	15.5	B	0.78	7.9	A	0.45	10.2	B	0.54
	Overall	**15.4**	**B**	**0.78**	**10.5**	**B**	**0.60**	**13.6**	**B**	**0.72**
Green Lane/Pulliam Drive	EB	11.2	B	0.08	10.1	B	0.09	12.0	B	0.11
	WB	13.1	B	0.25	12.0	B	0.13	13.0	B	0.22
	NB	5.5	A	0.34	5.0	A	0.45	5.5	A	0.51
	SB	10.7	B	0.75	4.5	A	0.37	5.3	A	0.45
	Overall	**9.3**	**A**	**0.75**	**5.1**	**A**	**0.45**	**5.8**	**A**	**0.51**
Country Park Drive/Pennie Ann Drive	EB	40.2	D	0.71	21.3	C	0.31	19.0	B	0.41
	WB	0	A	0.02	0	A	0	0.2	A	0.03
	NB	7.3	A	0.40	3.4	A	0.41	4.8	A	0.50
	SB	12.2	B	0.76	3.1	A	0.34	4.4	A	0.46
	Overall	**12.8**	**B**	**0.76**	**3.7**	**A**	**0.41**	**5.1**	**A**	**0.50**

Table 27 – Willow Creek Road Existing Conditions Delay, LOS, and v/c Ratio Analysis										
Willow Creek Road Intersecting Roadway	**Approach**	**AM Peak**			**Mid-Day Peak**			**PM Peak**		
		Delay (s)	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**
Nicholet Trail/Smoke Tree Lane	EB	10.2	B	0.04	9.0	A	0.03	3.9	A	0.01
	WB	10.5	B	0.35	12.0	B	0.30	9.3	A	0.29
	NB	8.9	A	0.48	12.5	B	0.64	11.8	B	0.60
	SB	28.2	C	0.93	10.2	B	0.52	11.6	B	0.53
	Overall	**20.9**	**C**	**0.93**	**11.5**	**B**	**0.64**	**11.5**	**B**	**0.60**
Crossings Drive/College Heights Road	EB	14.1	B	0.32	12.1	B	0.27	10.9	B	0.31
	WB	12.0	B	0.27	4.5	A	0.02	10.5	B	0.06
	NB	8.7	A	0.46	9.3	A	0.57	12.2	B	0.65
	SB	17.6	B	0.81	8.3	A	0.47	10.9	B	0.59
	Overall	**14.1**	**B**	**0.81**	**9.1**	**A**	**0.57**	**11.5**	**B**	**0.65**
Montana Drive	EB	20.9	C	0.15	18.3	B	0.18	23.5	C	0.11
	WB	33.3	C	0.48	16.1	B	0.18	18.7	B	0.31
	NB	4.9	A	0.31	4.2	A	0.43	5.4	A	0.51
	SB	7.1	A	0.57	3.8	A	0.35	4.9	A	0.42
	Overall	**7.9**	**A**	**0.57**	**4.7**	**A**	**0.43**	**5.9**	**A**	**0.51**
Willow Lake Road	EB	-	-	-	-	-	-	-	-	-
	WB	19.6	B	0.41	35.1	D	0.78	37.9	D	0.85
	NB	7.4	A	0.30	9.4	A	0.49	8.6	A	0.46
	SB	6.2	A	0.52	11.6	B	0.85	11.3	B	0.84
	Overall	**8.7**	**A**	**0.52**	**15.6**	**B**	**0.85**	**15.9**	**B**	**0.85**
Sandretto Drive	EB	27.0	C	0.28	14.4	B	0.19	25.7	C	0.37
	WB	39.3	D	0.14	0.2	A	0.02	0.4	A	0.04
	NB	10.2	B	0.77	6.0	A	0.40	7.1	A	0.61
	SB	13.4	B	0.74	10.3	B	0.42	10.6	B	0.51
	Overall	**13.1**	**B**	**0.77**	**8.5**	**A**	**0.42**	**10.2**	**B**	**0.61**
Commerce Drive	EB	16.3	B	0.59	20.7	C	0.54	20.4	C	0.61
	WB	-	-	-	-	-	-	-	-	-
	NB	5.2	A	0.47	4.3	A	0.34	5.5	A	0.47
	SB	18.5	B	0.83	10.8	B	0.38	13.1	B	0.48
	Overall	**14.6**	**B**	**0.83**	**8.7**	**A**	**0.54**	**10.2**	**B**	**0.61**
Unnamed entrance to Tractor Supply Co and Prescott Honda	EB	23.6	C	0.15	17.5	B	0.03	0.1	A	0.02
	WB	16.1	B	0.03	10.3	B	0.06	15.5	B	0.06
	NB	2.1	A	0.23	3.2	A	0.33	3.0	A	0.38
	SB	4.7	A	0.63	2.9	A	0.27	2.7	A	0.31
	Overall	**4.3**	**A**	**0.63**	**3.3**	**A**	**0.33**	**3.0**	**A**	**0.38**
Dan Carrell Drive/Heritage Park Road	EB	30.4	C	0.24	23.5	C	0.25	18.9	B	0.23
	WB	29.7	C	0.11	26.3	C	0.13	35.3	D	0.22
	NB	43.7	D	1.31	2.7	A	0.29	2.7	A	0.36
	SB	5.3	A	0.68	2.5	A	0.23	2.3	A	0.26
	Overall	**15.3**	**B**	**1.31**	**4.1**	**A**	**0.29**	**3.6**	**A**	**0.36**

Table 27 – Willow Creek Road Existing Conditions Delay, LOS, and v/c Ratio Analysis										
Willow Creek Road Intersecting Roadway	**Approach**	**AM Peak**			**Mid-Day Peak**			**PM Peak**		
		Delay (s)	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**	**Delay (s)**	**LOS**	**Max v/c Ratio**
Haas/Whispering Rock Development	EB	37.1	D	0.19	17.6	B	0.21	27.9	C	0.18
	WB	32.7	C	0.01	18.7	B	0.02	22.1	C	0.04
	NB	4.6	A	0.33	6.2	A	0.31	5.5	A	0.39
	SB	19.5	B	0.88	9.9	A	0.31	5.9	A	0.29
	Overall	**16.8**	**B**	**0.88**	**8.6**	**A**	**0.31**	**6.7**	**A**	**0.39**
Pioneer Parkway	EB	40.6	D	0.56	29.4	C	0.41	37.5	D	0.59
	WB	59.9	E	1.04	31.2	C	0.69	35.0	D	0.77
	NB	12.7	B	0.22	6.0	A	0.36	8.0	A	0.47
	SB	41.3	D	0.72	17.0	B	0.15	21.3	C	0.15
	Overall	**46.4**	**D**	**1.04**	**18.4**	**B**	**0.69**	**22.9**	**C**	**0.77**

In general, the LOS analysis determined that the intersection approaches at each intersection along the Willow Creek Road corridor operate at an acceptable level, LOS D or better, in the existing conditions. The exceptions-intersection approaches operating at LOS E or LOS F-follow:

- Pioneer Parkway westbound approach during the AM peak hour: LOS E

Furthermore, the LOS analysis determined that all overall intersections along the corridor operate at an acceptable level, LOS D or better, in the existing conditions. AM, mid-day, and PM peak hour overall intersection LOS summaries are shown in **Figure 86** through **Figure 88**.

Figure 86 – Willow Creek Road AM Peak Hour Levels of Service

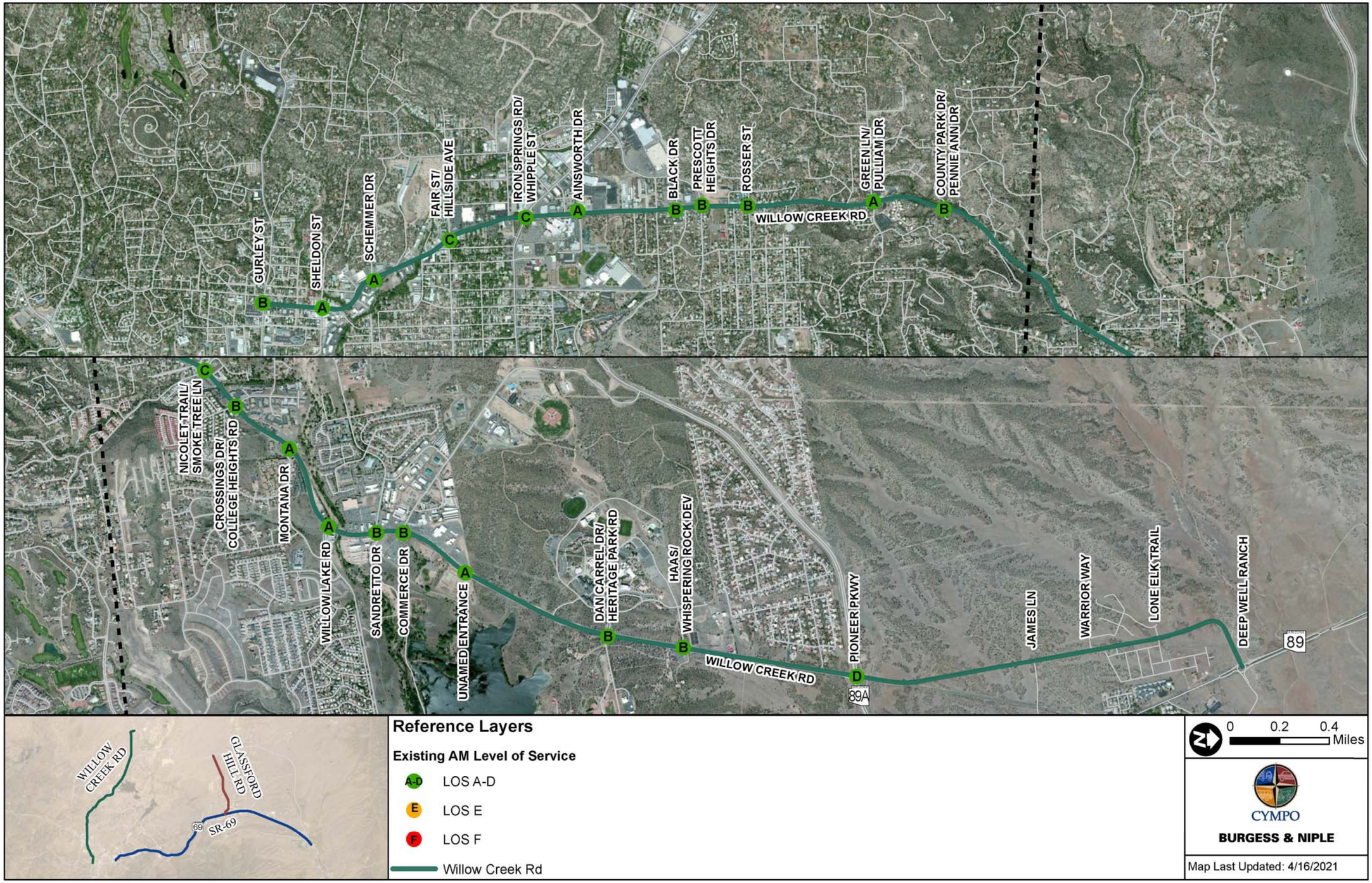


Figure 87 – Willow Creek Road Mid-Day Peak Hour Levels of Service

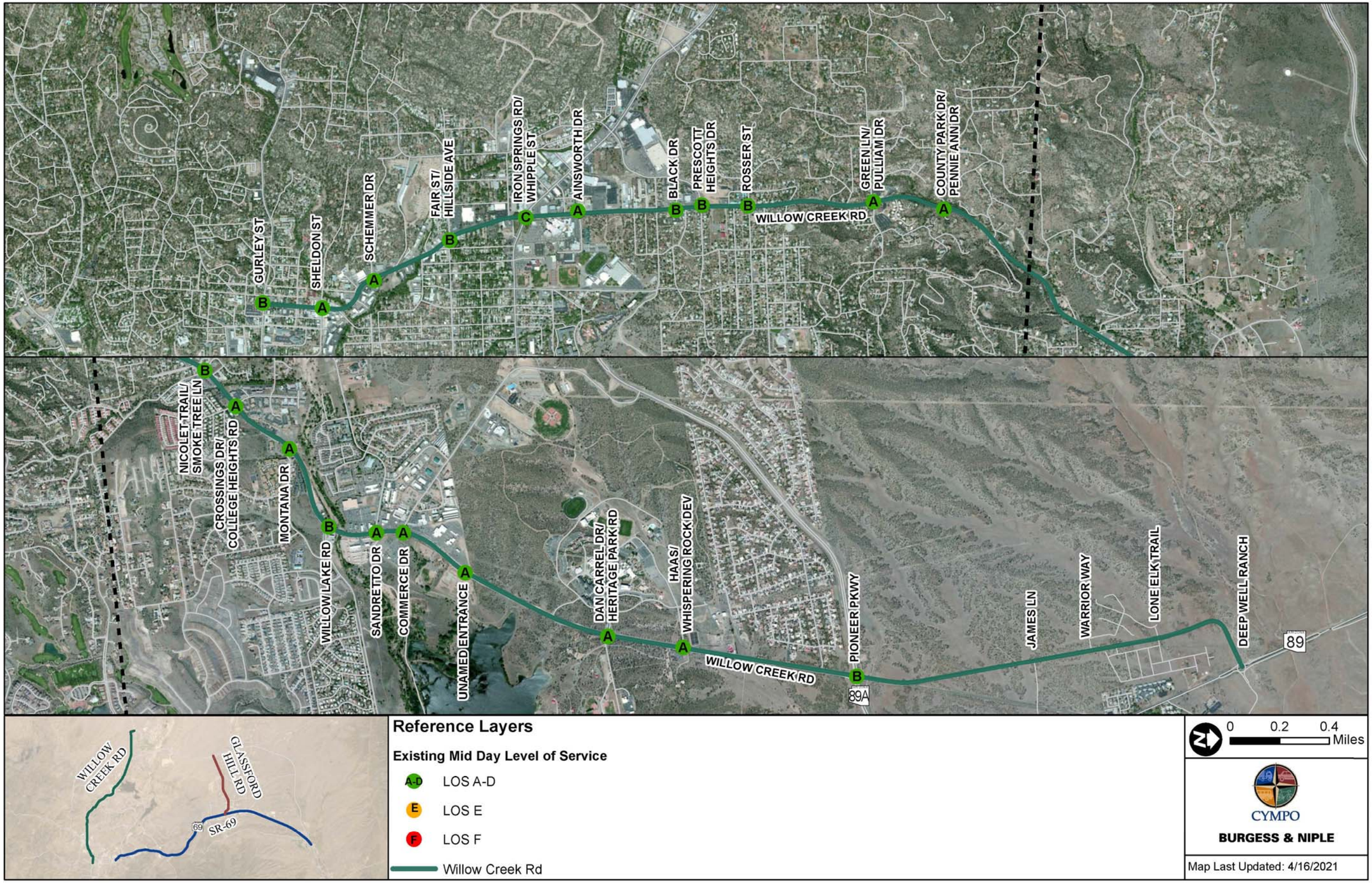
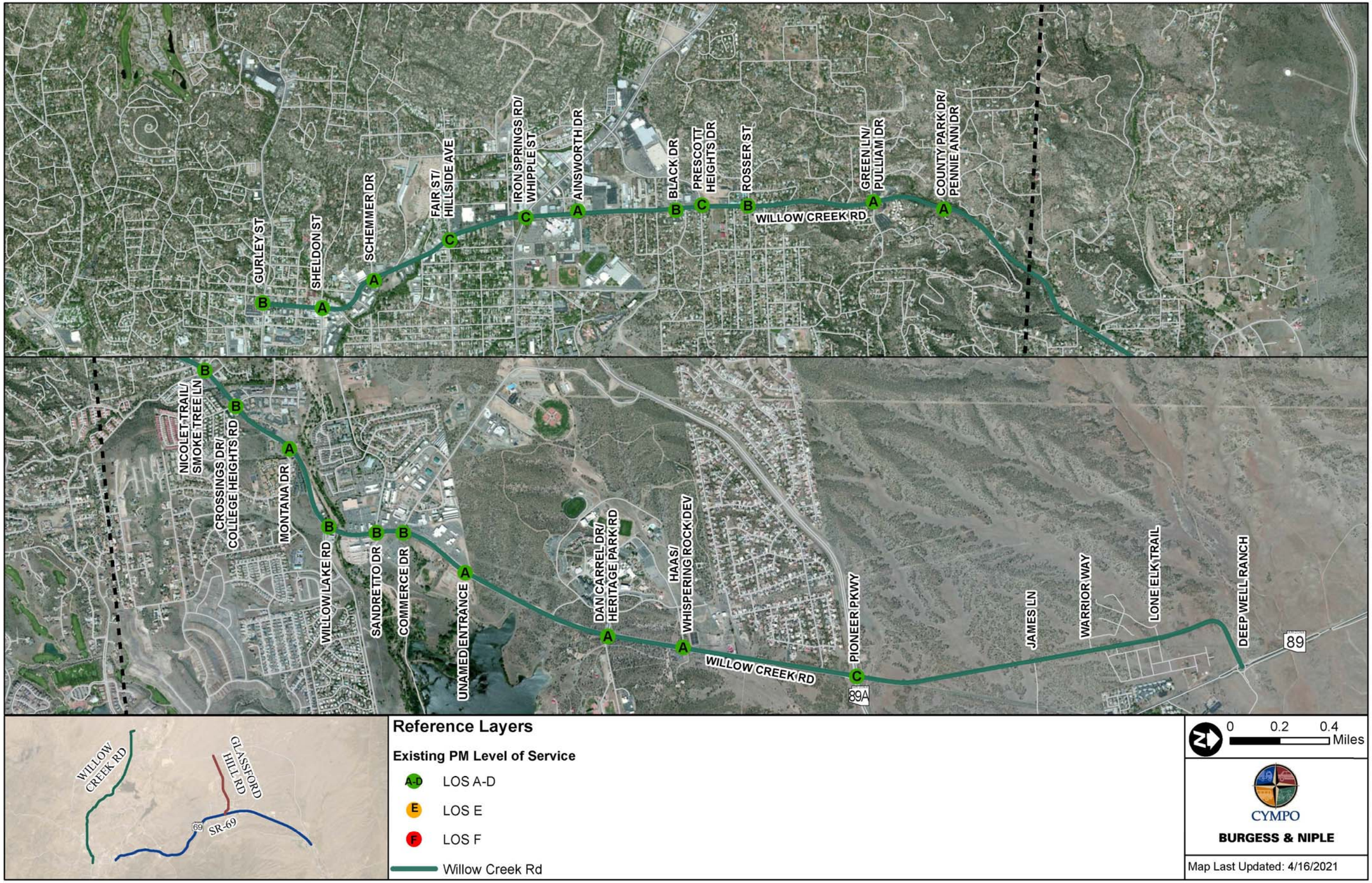


Figure 88 – Willow Creek Road PM Peak Hour Levels of Service



Existing time-space diagrams were not compiled or reviewed for the Willow Creek Road corridor as traffic signals are not coordinated in the existing conditions.

5.10.4. Traffic Predictability

GRIDSMART traffic volumes discussed in **Section 5.10.1** were analyzed to observe travel demand variability or predictability at the Willow Creek Road and Willow Lake Road intersection. The traffic volumes passing through the intersection during the week of November 22, 2020 (Thanksgiving week) are shown in **Figure 89.** The traffic volumes passing through the intersection during the week of December 6, 2020 are shown in **Figure 90** and **Figure 91** for weekdays and weekend, respectively. The weekday volumes by approach for the same week are included in **Figure 92** through **Figure 94**.

Figure 89 – Thanksgiving Week 2020 Traffic Volumes at Willow Creek Road and Willow Lake Road

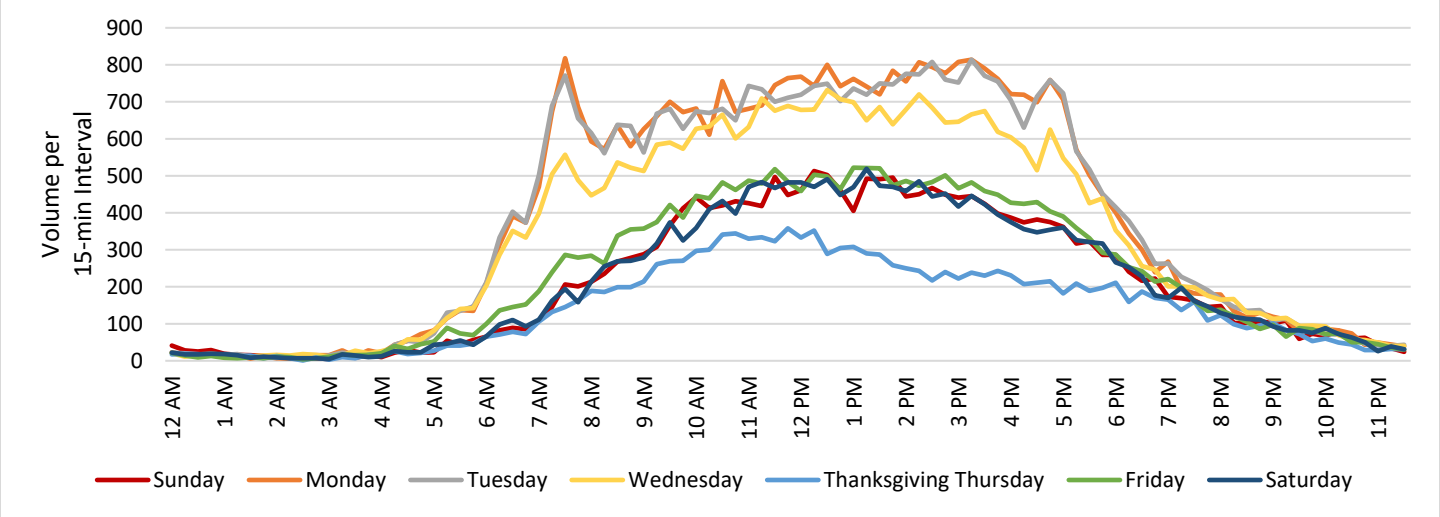


Figure 90 – December 2020 Weekday Traffic Volumes at Willow Creek Road and Willow Lake Road

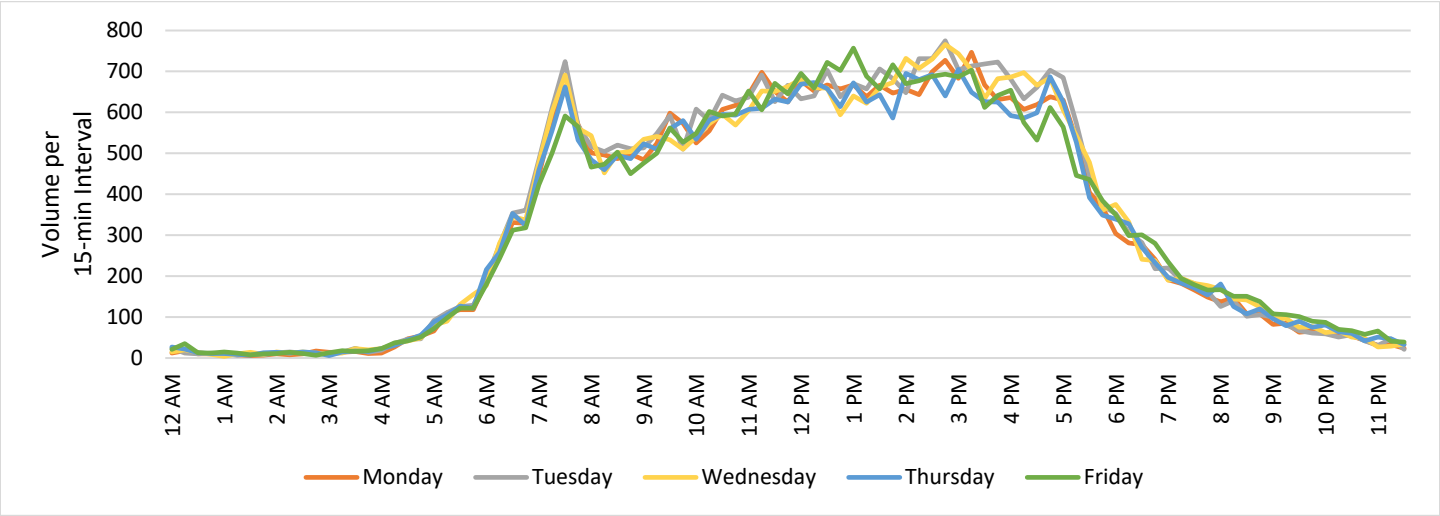


Figure 91 – December 2020 Weekend Traffic Volumes at Willow Creek Road and Willow Lake Road

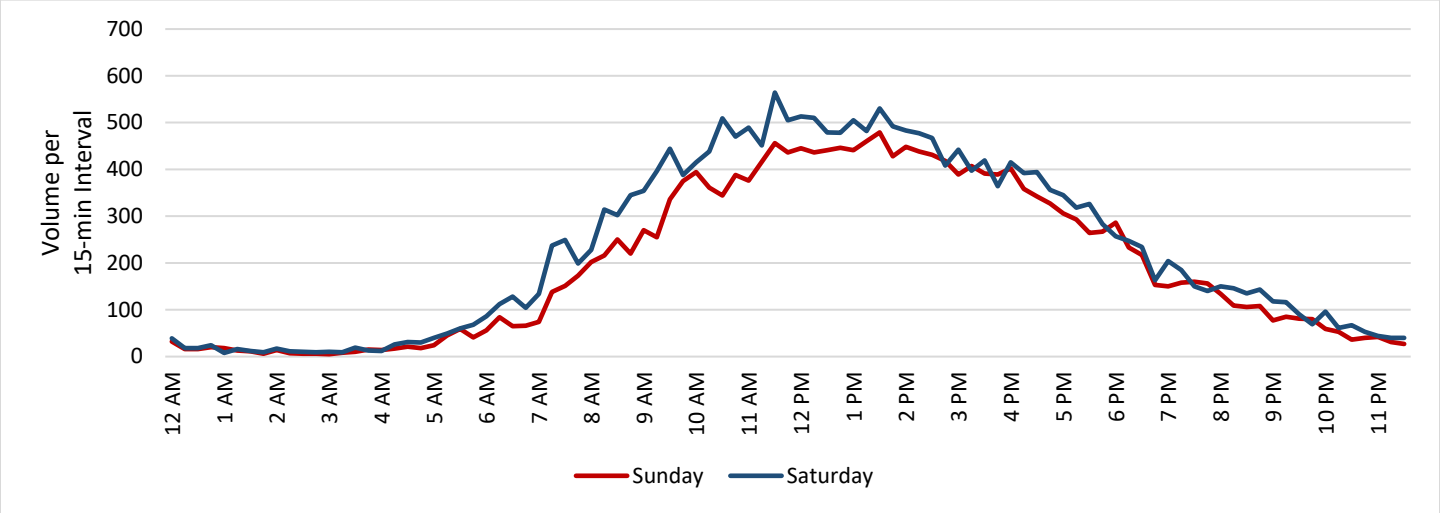


Figure 92 – December 2020 Weekday Willow Creek Road and Willow Lake Road NB Approach Volume

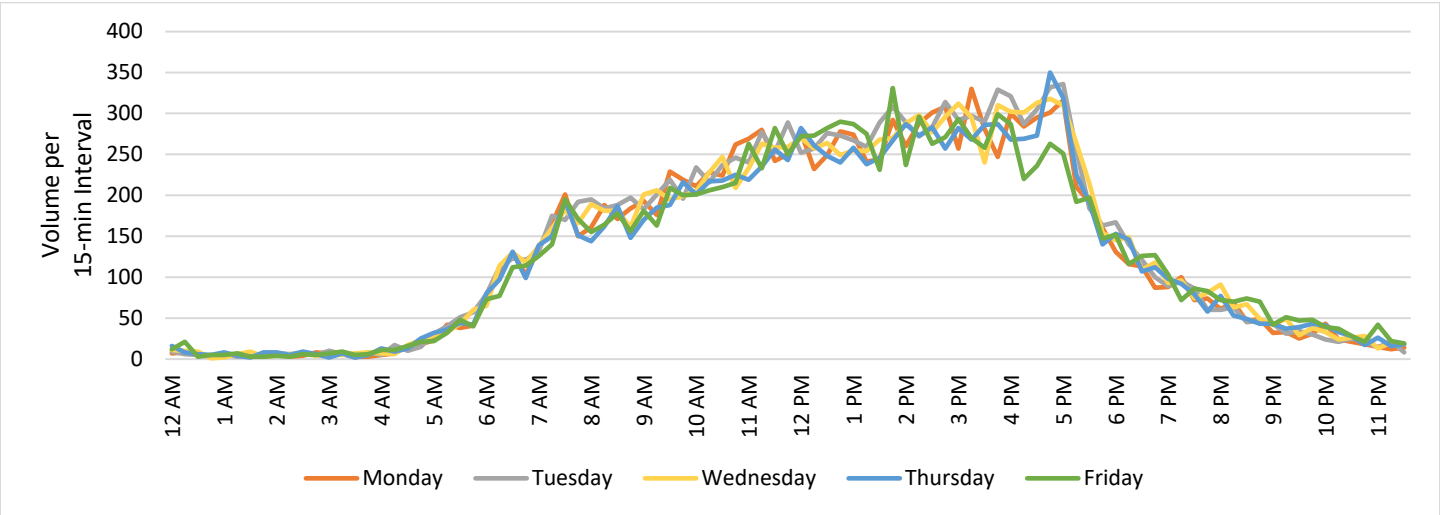


Figure 93 – December 2020 Weekday Willow Creek Road and Willow Lake Road SB Approach Volume

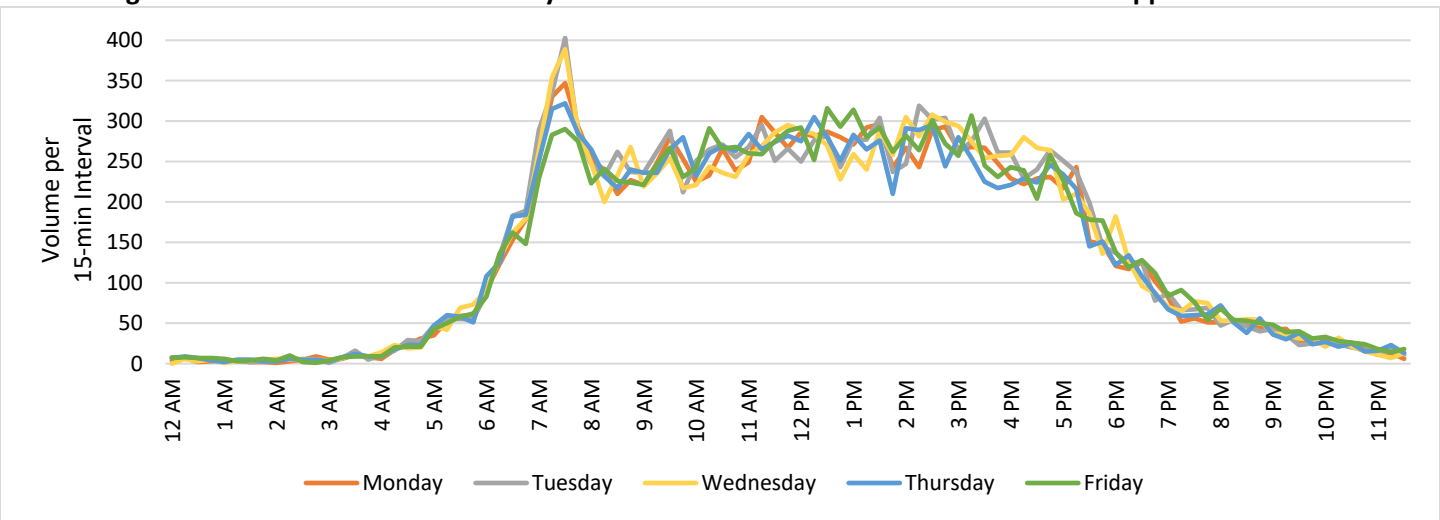


Figure 94 – December 2020 Weekday Willow Creek Road and Willow Lake Road WB Approach Volume

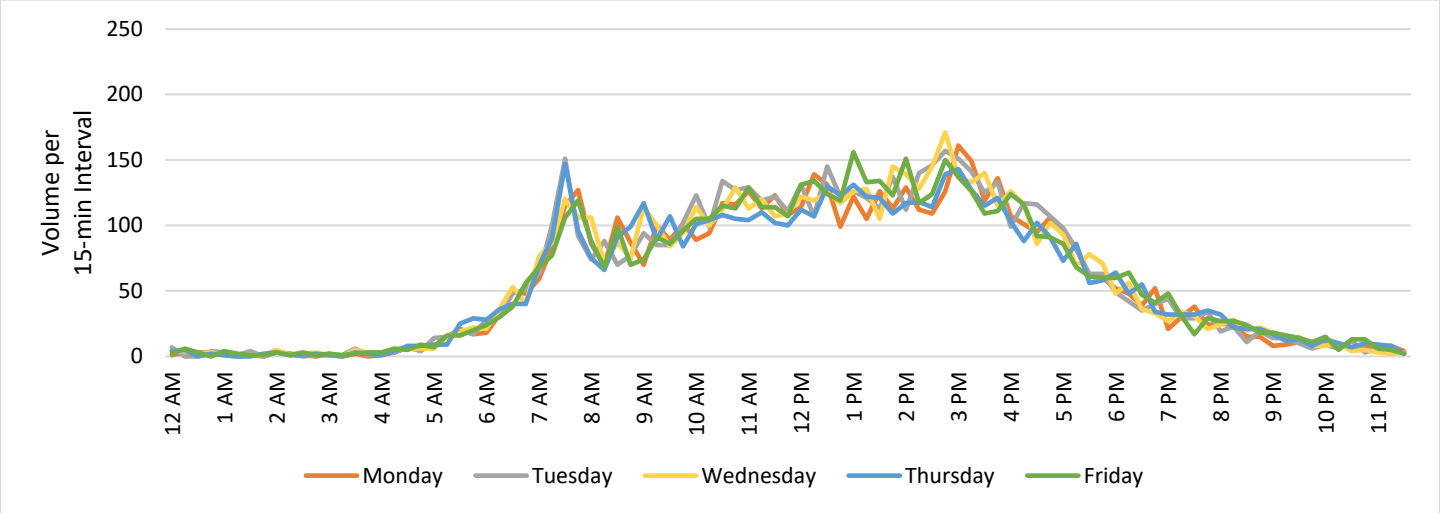


Figure 89 demonstrates travel demand variation during Thanksgiving week, as expected for a holiday week. However, clear trends exist on typical weekdays and weekends. **Figure 90** illustrates notable weekday travel peaks during the morning (7-8 AM) and evening (4-5 PM). Volumes during mid-day are relatively consistent and highest between 12-3 PM. **Figure 91** illustrates a weekend peak in the afternoon (11-2 PM). **Figure 92** through **Figure 94** demonstrate consistent directionality of travelers during typical weekdays. In summary, travel demand at Willow Creek Road and Willow Lake Road is remarkably predictable on typical weekdays and weekends but varies during the holiday week.

Weekday hourly traffic volumes at three locations along the corridor were collected from the Streetlight database at various parts of the year to determine if seasonal traffic exists. Averaged Tuesday-Thursday data for the months of July 2019, October 2019, and January 2020 were collected near the intersections of Willow Creek Road and Iron Springs Road/Whipple Street, shown in **Figure 95**, Willow Creek Road and Country Park Drive/Pennie Ann Drive, shown in **Figure 96,** and Willow Creek Road and Sandretto Drive, shown in **Figure 97**.

Figure 95 – Willow Creek Road Seasonal Traffic Volumes Near Iron Springs Road/Whipple Street

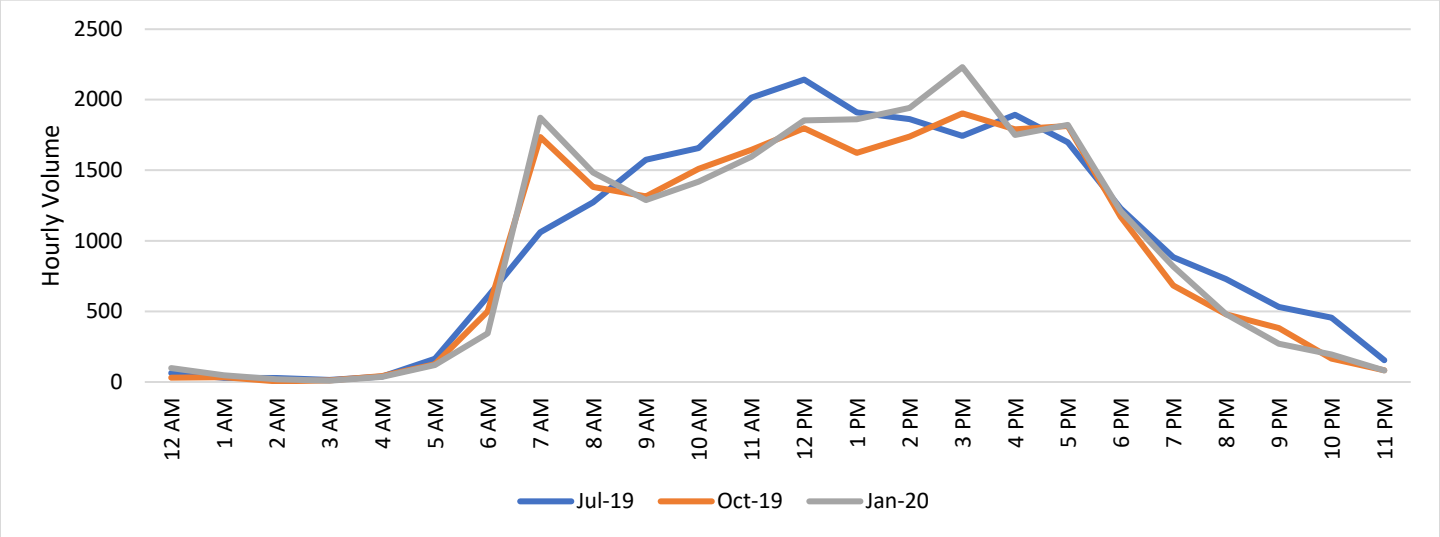


Figure 96 – Willow Creek Road Seasonal Traffic Volumes Near Country Park Drive/Pennie Ann Drive

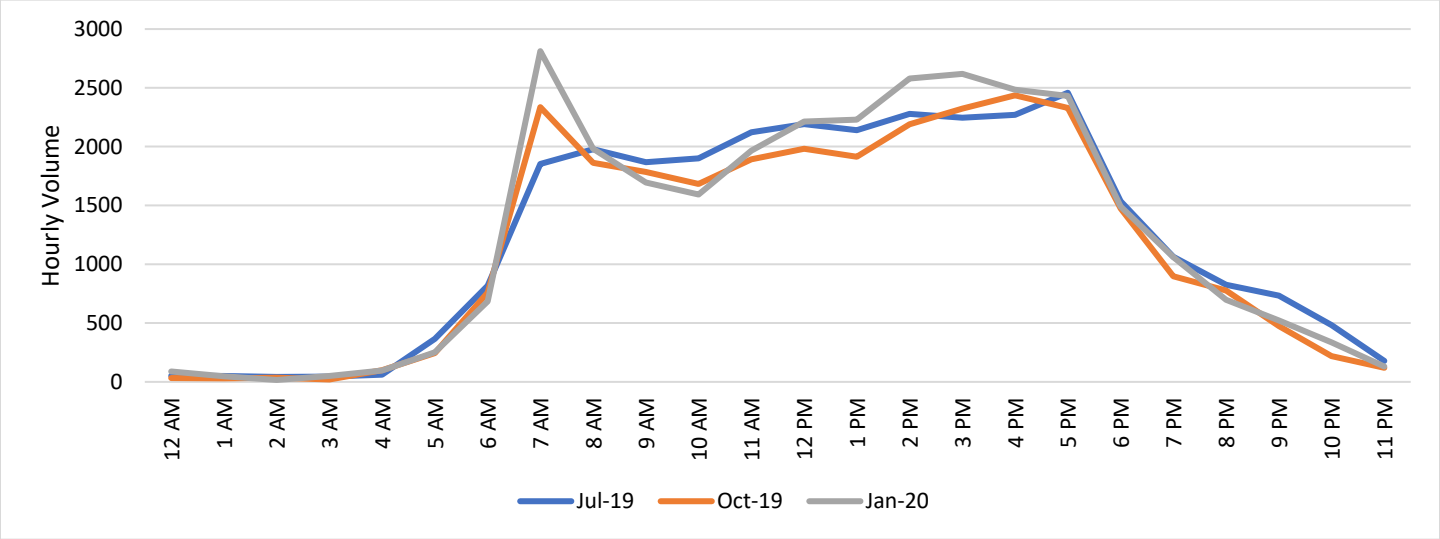


Figure 97 – Willow Creek Road Seasonal Traffic Volumes Near Willow Creek Road and Sandretto Drive

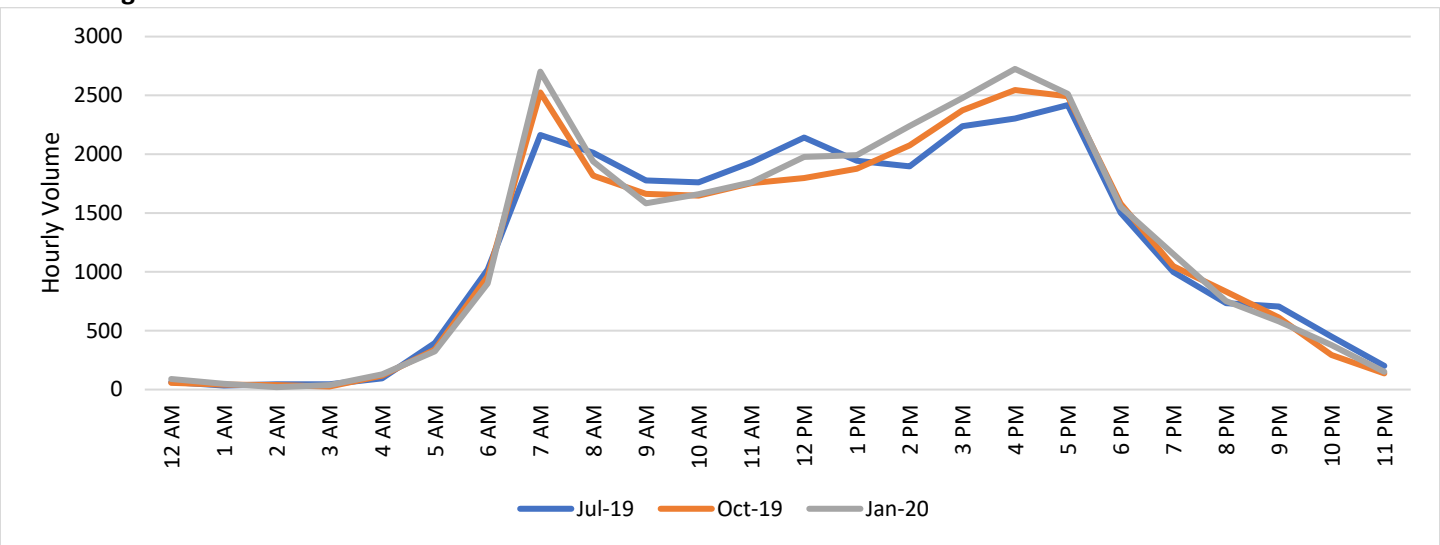


Figure 95 through **Figure 97** illustrate that the traffic volumes along the study corridor during the months of July, October, and January are relatively consistent. Traffic volumes during October and January are exceptionally predictable during all periods of the day. The volumes during the month of July vary slightly, particularly near the intersection of Willow Creek Road and Iron Springs Road/Whipple Street. The largest variation in the July traffic volumes occurs during the morning hours (6-8 AM).

INRIX data for Willow Creek Road was not available at the time of this Plan; average speed, travel time, or special event analysis was not completed for the study corridor.

5.11. Available Funding

5.11.1. Construction Funding

Included in the 2018 Streets Infrastructure Improvement Plan (IIP) is a traffic signal coordination project along Willow Creek Road from Pioneer Parkway to Iron Springs Road/Whipple Street (4-Points). The project includes ITS implementation and coordination of 14 traffic signals. The project cost is $262,000, with 25% to be funded by

Development Impact Fees and 75% to be funded by other City of Prescott revenues such as the 1% dedicated streets sales tax.

A Willow Creek Road Traffic Signals Project has not been added to the five-year Capital Improvement Plan (CIP) primarily due to unknown total cost and this ongoing Plan. However, funding has been allocated for Intersection Signalization Projects as identified in the CIP, all or a portion could be applied to the Willow Creek Road corridor. The funding is budgeted for planning/design and construction of signals/improvements in alternating years. The funding is as follows:

- FY22 - $200,000
- FY23 - $20,000
- FY24 - $200,000
- FY25 - $20,000
- FY26 - $200,000
- FY27 - $20,000

5.11.2. Maintenance Funding

Traffic signal maintenance is currently funded by the City of Prescott's allocated HURF and the 1% dedicated streets sales tax.

5.12. System Functional Capabilities

As stated in **Section 3.12**, the recent growth in Prescott Valley has likely caused changes to the traffic demand in the area, one factor that contributes to the need for traffic signal retiming. Since most of the existing timing plans were implemented several years ago, signal retiming would likely be beneficial for operations along the Willow Creek Road corridor. However, this would not likely result in considerable operational improvements.

With the existing traffic signal infrastructure along the Willow Creek Road corridor, there is potential to develop coordinated time-of-day traffic signal timing plans. However, without controller communications available at several intersections, over time, traffic signals would become out of sync. The installation of GPS clocks or other controller communications infrastructure at traffic signals currently without would allow for continued synchronization of traffic signals and would provide the maximum benefit of coordinated time-of-day plans.

According to the *Manual on Uniform Traffic Control Devices* (MUTCD), where pedestrians who use wheelchairs or walk slower than 3.5 feet per second routinely use the crosswalk, a walking speed of less than 3.5 feet per second should be considered in pedestrian clearance interval computations. The FHWA *Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians* recommends an assumed walking speed of 2.8 feet per second or less for less capable, older pedestrians. According to the US Census Bureau, in 2019, City of Prescott residents ages 60 years and older made up approximately 47% of the total population. Given the high proportion of older residents in the community, it is recommended to compute pedestrian clearance intervals using a reduced walking speed.

Vehicle detection, communications, and controller model upgrades would be necessary at nearly all intersections to implement an adaptive signal control system along the Willow Creek Road corridor.

5.13. Potential Signal Timing Improvements

Coordinated traffic signal timing plans were developed to determine the extent of potential operational improvements by developing optimized time-of-day plans. As mentioned in **Section 5.12**, communications upgrades at most intersections would be necessary to incorporate coordination along the entirety of the corridor. The existing conditions Synchro models were used as the base models for developing the optimized timing plans. The corridor was split into two coordination zones based on intersection proximity. The zones are listed in **Table 28**.

Table 28 – Willow Creek Road Coordination Zones	
Willow Creek Road Intersecting Roadway	**Zone**
Gurley Street	A
Sheldon Street	A
Schemmer Drive	A
Fair Street/Hillside Avenue	A
Iron Springs Road/Whipple Street	A
Ainsworth Drive	A
Black Drive	A
Gail Gardner Way/Prescott Heights Drive	A
Rosser Street	A
Green Lane/Pulliam Drive	A
Country Park Drive/Pennie Ann Drive	B
Nicholet Trail/Smoke Tree Lane	B
Crossings Drive/College Heights Road	B
Montana Drive	B
Willow Lake Road	B
Santretto Drive	B
Commerce Drive	B
Unnamed Entrance to Tractor Supply Co and Prescott Honda	B
Dan Carrell Drive/Heritage Park Road	B
Hass Boulevard/Whispering Rock Development	B
Pioneer Parkway	B

With the coordination zones determined, the traffic signal cycle lengths were optimized between 90 and 150 seconds for the AM, mid-day, and PM peak hour models. Phase split distributions and offsets were optimized as well. The operational assumptions for establishing the updated timing plans include:

- Signal phasing sequence remained unchanged; through movements are the lagging phase.
- Yellow and all-red clearance intervals remained unchanged; guidelines for determining conservative intervals were provided and implemented in the existing timing plans.
- The future traffic signals at Warrior Way and Lone Elk Trail were excluded from coordination as the signals were not constructed at the time of coordination development.

The optimized traffic signal cycle lengths and offsets are included in **Table 29**.

Table 29 – Willow Creek Road Optimized Cycle Lengths and Offsets						
Willow Creek Intersecting Roadway	**AM Peak**		**Mid-Day Peak**		**PM Peak**	
	Cycle Length (s)	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**	**Cycle Length (s)**	**Offset (s)**
Gurley Street	100	92	100	88	100	24
Sheldon Street	100	14	100	5	100	45
Schemmer Drive	100	86	100	89	100	22
Fair Street/Hillside Avenue	100	49	100	48	100	79
Iron Springs Road/Whipple Street	100	17	100	9	100	36
Ainsworth Drive	100	86	100	75	100	98
Black Drive	100	25	100	14	100	35
Gail Gardner Way/Prescott Heights Drive	100	18	100	24	100	35
Rosser Street	100	1	100	7	100	19

Table 29 – Willow Creek Road Optimized Cycle Lengths and Offsets						
Willow Creek Intersecting Roadway	AM Peak		Mid-Day Peak		PM Peak	
	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)	Cycle Length (s)	Offset (s)
Green Lane/Pulliam Drive	100	47	100	52	100	67
Country Park Drive/Pennie Ann Drive	100	33	100	64	100	70
Nicholet Trail/Smoke Tree Lane	100	33	100	72	100	81
Crossings Drive/College Heights Road	100	49	100	80	100	78
Montana Drive	100	28	100	19	100	37
Willow Lake Road	100	32	100	50	100	58
Sandretto Drive	100	86	100	59	100	0
Commerce Drive	100	77	100	52	100	3
Unnamed Entrance to Tractor Supply Co and Prescott Honda	100	44	100	64	100	40
Dan Carrell Drive/Heritage Park Road	100	90	100	10	100	20
Hass Boulevard/Whispering Rock Development	100	66	100	56	100	3
Pioneer Parkway	100	0	100	0	100	0

The overall intersection delay, LOS, and maximum v/c ratio of the existing conditions and updated timing plans were compared for the AM, mid-day, and PM peak hours. The comparisons are included in **Table 30** through **Table 32**. Detailed results of the optimized timing plans can be found in **Appendix SS-18**.

Table 30 – Willow Creek Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Willow Creek Intersecting Roadway	Existing Delay (s)	Updated Delay (s)	Existing LOS	Updated LOS	Existing Max v/c Ratio	Updated Max v/c Ratio
Gurley Street	14.7	10.2	B	B	0.40	0.48
Sheldon Street	9.1	4.8	A	A	0.43	0.50
Schemmer Drive	5.1	2.5	A	A	0.38	0.34
Fair Street/Hillside Avenue	21.6	19.8	C	B	0.78	0.80
Iron Springs Road/Whipple Street	26.3	21.7	C	C	0.71	0.76
Ainsworth Drive	7.3	4.0	A	A	0.48	0.44
Black Drive	16.3	3.4	B	B	0.85	0.63
Gail Gardner Way/Prescott Heights Drive	16.6	12.6	B	B	0.83	0.87
Rosser Street	15.4	9.3	B	A	0.78	0.83
Green Lane/Pulliam Drive	9.3	2.8	A	A	0.75	0.62
Country Park Drive/Pennie Ann Drive	12.8	8.7	B	A	0.76	0.73
Nicholet Trail/Smoke Tree Lane	20.9	6.7	C	A	0.93	0.60
Crossings Drive/College Heights Road	14.1	6.6	B	A	0.81	0.60
Montana Drive	7.9	5.6	A	A	0.57	0.63
Willow Lake Road	8.7	6.3	A	A	0.52	0.51
Sandretto Drive	13.1	6.4	B	A	0.77	0.71
Commerce Drive	14.6	7.4	B	A	0.83	0.76
Unnamed Entrance to Tractor Supply Co and Prescott Honda	4.3	1.6	A	A	0.63	0.64
Dan Carrell Drive/Heritage Park Road	15.3	11.6	B	B	1.31	1.14
Hass Boulevard/Whispering Rock Development	16.8	9.5	B	A	0.88	0.87

Table 30 – Willow Creek Road AM Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Willow Creek Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Pioneer Parkway	46.4	34.8	D	C	1.04	0.95

Table 31 – Willow Creek Road Mid-Day Peak Hour Existing/Updated Delay, LOS, and Maximum v/c Ratio						
Willow Creek Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Gurley Street	15.7	10.3	B	B	0.49	0.54
Sheldon Street	8.5	6.2	A	A	0.60	0.64
Schemmer Drive	8.0	3.9	A	A	0.46	0.39
Fair Street/Hillside Avenue	18.9	17.3	B	B	0.60	0.67
Iron Springs Road/Whipple Street	24.3	22.3	C	C	0.68	0.70
Ainsworth Drive	7.0	3.9	A	A	0.31	0.33
Black Drive	12.4	3.1	B	A	0.62	0.36
Gail Gardner Way/Prescott Heights Drive	17.2	19.3	B	B	0.83	0.97
Rosser Street	10.2	8.1	B	A	0.60	0.63
Green Lane/Pulliam Drive	5.1	2.9	A	A	0.45	0.41
Country Park Drive/Pennie Ann Drive	3.7	2.2	A	A	0.41	0.41
Nicholet Trail/Smoke Tree Lane	11.5	5.5	B	A	0.64	0.50
Crossings Drive/College Heights Road	9.1	5.4	A	A	0.57	0.52
Montana Drive	4.7	3.0	A	A	0.43	0.42
Willow Lake Road	15.6	14.2	B	B	0.85	0.76
Sandretto Drive	8.5	5.0	A	A	0.42	0.36
Commerce Drive	8.7	5.3	A	A	0.54	0.55
Unnamed Entrance to Tractor Supply Co and Prescott Honda	3.3	1.7	A	A	0.33	0.32
Dan Carrell Drive/Heritage Park Road	4.1	2.7	A	A	0.29	0.29
Hass Boulevard/Whispering Rock Development	8.6	4.8	A	A	0.31	0.36
Pioneer Parkway	18.4	22.3	B	C	0.69	0.74

Table 32 – Willow Creek Road PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS						
Willow Creek Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Gurley Street	14.7	9.9	B	A	0.60	0.65
Sheldon Street	9.7	7.4	A	A	0.59	0.60
Schemmer Drive	9.4	5.6	A	A	0.51	0.49
Fair Street/Hillside Avenue	23.4	23.0	C	C	0.80	0.83
Iron Springs Road/Whipple Street	33.9	27.0	C	C	0.90	0.87
Ainsworth Drive	6.3	4.9	A	A	0.42	0.37
Black Drive	13.4	3.0	B	A	0.66	0.39
Gail Gardner Way/Prescott Heights Drive	20.1	18.9	C	B	0.93	0.98
Rosser Street	13.6	10.0	B	A	0.72	0.72
Green Lane/Pulliam Drive	5.8	3.3	A	A	0.51	0.47
Country Park Drive/Pennie Ann Drive	5.1	2.9	A	A	0.50	0.48

Table 32 – Willow Creek Road PM Peak Hour Existing/Updated Cycle Lengths, Offsets, Delay, and LOS						
Willow Creek Intersecting Roadway	**Existing Delay (s)**	**Updated Delay (s)**	**Existing LOS**	**Updated LOS**	**Existing Max v/c Ratio**	**Updated Max v/c Ratio**
Nicholet Trail/Smoke Tree Lane	11.5	3.4	B	A	0.60	0.49
Crossings Drive/College Heights Road	11.5	5.3	B	A	0.65	0.56
Montana Drive	5.9	3.3	A	A	0.51	0.48
Willow Lake Road	15.9	12.9	B	B	0.85	0.77
Sandretto Drive	10.2	7.3	B	A	0.61	0.56
Commerce Drive	10.2	6.8	B	A	0.61	0.63
Unnamed Entrance to Tractor Supply Co and Prescott Honda	3.0	1.7	A	A	0.38	0.38
Dan Carrell Drive/Heritage Park Road	3.6	2.9	A	A	0.36	0.37
Hass Boulevard/Whispering Rock Development	6.7	7.2	A	A	0.39	0.40
Pioneer Parkway	22.9	23.9	C	C	0.77	0.79

The LOS analysis determined that all intersections along the study corridor operate at an acceptable level, D or better, with the optimized timing plans during the AM, mid-day, and PM peak hours. Furthermore, the overall intersection LOS's improve or stay the same from the existing conditions at all study intersections.

Overall, the time-space diagrams of the optimized timing plans illustrate minimal interruptions of traffic flow through the corridor during the AM, mid-day, and PM peak hours. The updated timing plan time-space diagrams are included in **Appendix SS-19**.

5.14. Summary of Findings

The Willow Creek Road corridor was thoroughly examined to provide an overview of current operations at the study intersections and potential improvement strategies. The predominant direction of travel during the morning hours is southbound; traffic volumes are slightly higher in the northbound direction compared to southbound travel.

Traffic volumes during two separate weeks were analyzed to observe travel demand variability or predictability at an intersection along the Willow Creek Road corridor, one holiday week and one typical week. It was found that travel demand at the intersection is remarkably predictable on typical weekdays and weekends but varies during the holiday week. Additionally, traffic volumes during three various months of the year were evaluated to determine if seasonal traffic exists in the area. It was determined that the traffic volumes during the months of July, October, and January are relatively consistent, with some variation in the volumes during July.

Synchro was used to model the existing conditions and to develop the optimized timing plans. It was determined that all overall intersections operate at an acceptable LOS, LOS D or better in the existing conditions and with the optimized timing plans. The overall intersection LOS improves or stays the same with the optimized timing plans at all study intersections compared to the existing conditions. In conclusion, it was determined that optimizing the timing plans for the Willow Creek Road corridor would generate operational benefits.

APPENDIX SS-1

SR 69 Agency Information Request Responses

I have answered most of the questions on the first page that is labeled SR69 and Fain for the whole study of SR69. We only have two intersections without communication and they are labeled on paperwork, attached with this. Question #8- list all relevant studies, SR69/ Mendencino is current under a traffic study, and SR69/ Glassford Hill is having a new Circle K opening soon which will effect traffic counts. If you have any questions please let me know.

Tim Collins

ADOT Traffic Signal Supervisor

928-277-2924- office

928-515-4035- work cell

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber) & Radio
Is there any sort of existing regional communications linkage between the participating agencies? (RCN) NO
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? 3
Part-time? Ø Level of IMSA Certification? Level 2
Is staff aware of ATSMP? Does staff have any experience in ASTPM? NO Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge? NO

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/FAIN
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SW
Controller Make (Econolite) Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.06a.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) None
If Radio, Make/Model (Firetide) [illegible]
Make/model of existing switch (iMPath 4000) None
Available Ports in Existing Switch (None, 1, 2, etc.)
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals) Radio, Switches, Fiber
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
Approximate age of devices? UNKNOWN
Approximate percentage of currently failed devices? Ø

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
Approximate age of devices? UNKNOWN
Approximate percentage of currently failed devices? 0%

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training? Yes NO

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) All- protect
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
Exterior (Two diagonal corners)
Floor (Conduits and how full they are)
Lt/Rt Walls (Wire terminals, power landings, surge protection)
Face on (Show from ceiling to floor, in multiple straight-on shots)
Rear (If rear door, open and repeat process)
Presence of EVP (Yes, No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) DiAlight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69 / Enterprise
Owning Agency (Prescott Valley)

Controller Cabinet:

Controller Corner (NW) NW
Controller Make (Econolite)
Controller Model (Cobalt) ASC/2, ASC/3, 170)
Firmware Version (2.54, 200CA) 32.67.20
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) None
If Radio, Make/Model (Firetide) None
Make/model of existing switch (iMPath 4000) None
Available Ports in Existing Switch (None, 1, 2, etc.) None
Cabinet Type (ADOT Type IV TS-1/ADOT Type IV TS-2)
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals) Radio, switches, Fiber
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
Approximate age of devices? Unknown
Approximate percentage of currently failed devices? 0%

Side Street:

Thru Lanes Adv Detection (None) 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop) Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
Approximate age of devices? UNKNOWN
Approximate percentage of currently failed devices? D

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) All-protect
Approaches without mast arms (NB, SB) NE
Approaches without street lighting (NB, SB) None
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) None
Photos documenting exterior/interior of cabinet:
Exterior (Two diagonal corners)
Floor (Conduits and how full they are)
Lt/Rt Walls (Wire terminals, power landings, surge protection)
Face on (Show from ceiling to floor, in multiple straight-on shots)
Rear (If rear door, open and repeat process)
Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar)
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69 / NAVAJO
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) ECONOLITE
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Fiber
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000)
Available Ports in Existing Switch (None, 1, 2, etc.) 5
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street: Radar @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS +
Approximate percentage of currently failed devices? 2%

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN - protect SIDE - NB left
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/Robert
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170)
Firmware Version (2.54, 200CA) 32.65.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber) Radio, etc.)
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000)
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street: RADAR @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0%
Side Street:

Thru Lanes Adv Detection (None) 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS+
Approximate percentage of currently failed devices? Ø

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN- Protect Side - None
Approaches without mast arms (NB, SB) None
Approaches without street lighting (NB, SB) None
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) None
Photos documenting exterior/interior of cabinet:
Exterior (Two diagonal corners)
Floor (Conduits and how full they are)
Lt/Rt Walls (Wire terminals, power landings, surge protection)
Face on (Show from ceiling to floor, in multiple straight-on shots)
Rear (If rear door, open and repeat process)
Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69 / Windsong
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite)
Controller Model (Cobalt) ASC/2, ASC/3, 170)
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.)
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000)
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2)
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes (No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar @ 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø

Side Street:

Thru Lanes Adv Detection (None) 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS
Approximate percentage of currently failed devices? 0

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - protect, side - No left
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/LAKE VALLEY
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite)
Controller Model (Cobalt) ASC/2, ASC/3, 170)
Firmware Version (2.54, 200CA) 32.64.00
NTCIP Capable (Yes)/No)
Ethernet capable (Yes)/No)
Connected to Central System (Yes)/No)
Communications Media (Fiber) Radio, etc.)
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000)
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2)
Foundation mounted (Yes)/No)
Communications Capable as is (Yes)/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/(No))

Detection:

Main Street: RADAR @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane (radar per lane))
Lt Turn Lane (None, 6x70 Loop (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0

Side Street:

Thru Lanes Adv Detection (None) 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane (radar per lane)
Lt Turn Lane (None, 6x70 Loop (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0%
Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - protect Side - P/P
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
Exterior (Two diagonal corners)
Floor (Conduits and how full they are)
Lt/Rt Walls (Wire terminals, power landings, surge protection)
Face on (Show from ceiling to floor, in multiple straight-on shots)
Rear (If rear door, open and repeat process)
Presence of EVP (Yes/(No))
Excessive Pedestrian use (Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Glassford hill + 69

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No) Yes
Brand and Type of Centrals System (KITS, MaxView) max View
Type of Communications Infrastructure? (Fiber) Fiber
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/Glassford Hill
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No) Y
Ethernet capable (Yes/No) Y
Connected to Central System (Yes/No) Y
Communications Media (Fiber) Radio, etc.) Y
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000)
Available Ports in Existing Switch (None, 1, 2, etc.) 4
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS-1
Foundation mounted (Yes/No) Y
Communications Capable as is (Yes/No) Y
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No) Y

Detection:

Main Street: wave trainik Radar @ 600'

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane (radar per lane))
Lt Turn Lane (None, 6x70 Loop (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? 0

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar), Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0%
Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - Protect Side - Protect
Approaches without mast arms (NB, SB) none
Approaches without street lighting (NB, SB) none
Existing Overhead Restrictions (NE OHE) none
Joint use/owned poles (NE) none
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:
- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)
- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No) Yes
Brand and Type of Centrals System (KITS, MaxView) maxview
Type of Communications Infrastructure? (Fiber) Fiber
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69 / Prescott E. Hwy. ~~Prescott E. Hwy / 69~~
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No) Yes
Ethernet capable (Yes/No) Yes
Connected to Central System (Yes/No) Yes
Communications Media (Fiber) Radio, etc.) Fiber
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000) ~~N/A~~
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) 170-1
Foundation mounted (Yes/No) Yes
Communications Capable as is (Yes/No) Yes
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No) Yes

Detection:

Main Street: wave tronix Radar @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar), Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø
Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN - Protect Side - None
Approaches without mast arms (NB, SB) none
Approaches without street lighting (NB, SB) none
Existing Overhead Restrictions (NE OHE) none
Joint use/owned poles (NE) none
Photos documenting exterior/interior of cabinet:
Exterior (Two diagonal corners)
Floor (Conduits and how full they are)
Lt/Rt Walls (Wire terminals, power landings, surge protection)
Face on (Show from ceiling to floor, in multiple straight-on shots)
Rear (If rear door, open and repeat process)
Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No) Yes
Brand and Type of Centrals System (KITS, MaxView) MaxView
Type of Communications Infrastructure? (Fiber) Fiber
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level: SR69 / StoneRidge

Intersection name (Glassford Hill Rd/Main Street) ~~Stoneridge/SR69~~
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) cobalt
Firmware Version (2.54, 200CA) 32.65.10
NTCIP Capable (Yes/No) Yes
Ethernet capable (Yes/No) Yes
Connected to Central System (Yes/No) Yes
Communications Media (Fiber, Radio, etc.) Fiber
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000) [redacted]
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS-1
Foundation mounted (Yes/No) Yes
Communications Capable as is (Yes/No) Yes
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No) Yes

Detection:

Main Street: wavetronix Radar @ 600'

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') None
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 2%
Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) Main - Protect Side - Protect
Approaches without mast arms (NB, SB) None
Approaches without street lighting (NB, SB) None
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) NO
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No) Yes
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No) Yes
Brand and Type of Centrals System (KITS, MaxView) MaxView
Type of Communications Infrastructure? (Fiber) Radio
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/Sundog Ranch ~~Sundog + 69~~
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SW
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No) Yes
Ethernet capable (Yes/No) Yes
Connected to Central System (Yes/No) Yes
Communications Media (Fiber) Radio, etc.) ~~Radio~~
If Radio, Make/Model (Firetide)
Make/model of existing switch (iMPath 4000) ~~Yes~~
Available Ports in Existing Switch (None, 1, 2, etc.) 4
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS-1
Foundation mounted (Yes/No) Yes
Communications Capable as is (Yes/No) Yes
If No, what is lacking (Comm board, terminals) none
Power outlet available (Yes/No) Yes

Detection:

Main Street: wave tronix RADAR @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? Ø
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') None
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane))
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? As

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) Main - Protect Side - Protect
Approaches without mast arms (NB, SB) None
Approaches without street lighting (NB, SB) NE corner
Existing Overhead Restrictions (NE OHE) none
Joint use/owned poles (NE) none
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:
- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)
- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69 / Diamond ~~Diamond / 69~~
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) Econo
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No) Yes
Ethernet capable (Yes/No) Yes
Connected to Central System (Yes/No) Yes
Communications Media (Fiber, Radio, etc.) Fiber
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) EtherWIN EX7180Z
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS 1 Type 4
Foundation mounted (Yes/No) Yes
Communications Capable as is (Yes/No) Yes
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No) Yes

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') 6001 Wavetronix
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane)
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) M/S front & back
Approximate age of devices? 4 yrs
Approximate percentage of currently failed devices? None

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') None
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane (radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop (Radar) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? None

Room in cabinet for expansion of detection (Yes/No) Yes
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN- Protect Side- None
Approaches without mast arms (NB, SB) NB
Approaches without street lighting (NB, SB) SB
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No) NONE
Excessive Pedestrian use (Yes/No) No Peds
If Yes, Type (Opticom, Tomar)
As-Built Plans (Verified)

General information:

- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69 - RAMADA
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NE
Controller Make (Econolite) Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.65.30
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) [redacted]
Available Ports in Existing Switch (None, 1, 2, etc.)
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? None

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') None
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs
Approximate percentage of currently failed devices? None

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) Main - Protect side - None
Approaches without mast arms (NB, SB) NB
Approaches without street lighting (NB, SB) SB
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) None
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No) No
Excessive Pedestrian use (Yes/No) No Peds
If Yes, Type (Opticom, Tomar)
As-Built Plans (Verified)

General information:
- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)
- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/Robin
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SW
Controller Make (Econolite) Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) R530
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4yrs
Approximate percentage of currently failed devices? Ø

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN Protect side-NONE
Approaches without mast arms (NB, SB) NB
Approaches without street lighting (NB, SB) SB
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use (Yes/No) - NO Peds
If Yes, Type (Opticom, Tomar)
As-Built Plans (Verified)

General information:

- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69 & Sunrise
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NW
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.65.30
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar @ 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, Radar) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? None

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal)
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS
Approximate percentage of currently failed devices? NONE

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN - Protect side - NONE
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:
- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field
- Agency guidelines for ITS and signal installations
- Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)
- Existing ITS inventory (including fiber)
- Right-of-way
- Utilities
- Land use, existing and future
- Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/Lee
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes)/No)
Ethernet capable (Yes)/No)
Connected to Central System (Yes)/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) + Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TSI Type 4
Foundation mounted (Yes)/No)
Communications Capable as is (Yes)/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? none

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) NONE
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? NONE

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN- P Protect Side - NA
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) DiAlight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/WALKER
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes)/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? 0

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs
Approximate percentage of currently failed devices? 0
Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN- Protect Side-Perm
Approaches without mast arms (NB, SB) SB
Approaches without street lighting (NB, SB) NB
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69 / GATEWAY
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Eswalite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.65.30
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, (Radio) etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street: Radar @ 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0%
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - Protect side - NONE
Approaches without mast arms (NB, SB) SB
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP ((Yes)/No)
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Daylight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69 / Prescott Lakes
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) NW
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes)/No)
Ethernet capable (Yes)/No)
Connected to Central System (Yes)/No)
Communications Media (Fiber, (Radio,) etc.)
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 5
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes)/No)
Communications Capable as is (Yes)/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/(No))

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') RADAR @ 600
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, (Radar,) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 9

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') None
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) Radar
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) Main - Protect Side - Protect
Approaches without mast arms (NB, SB) None
Approaches without street lighting (NB, SB) None
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) None
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP ((Yes)/No)
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/ Holiday
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SW
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.65.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, (Radio) etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) TS30
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street: Radar 660'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? 0
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 0

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - Protect Side - Protect
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/YAVPE
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.65.30
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, (Radio), etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 7
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street: Radar- 600'
Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) Radar
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) Radar
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 yrs.
Approximate percentage of currently failed devices? 0
Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) M/A
Approximate age of devices? 4 yrs
Approximate percentage of currently failed devices? Ø

Room in cabinet for expansion of detection ((Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN - Protect side - Protect
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR69/Frontier 1
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SE
Controller Make (Econolite) Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes/No)
Ethernet capable (Yes/No)
Connected to Central System (Yes/No)
Communications Media (Fiber, Radio, etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes/No)
Communications Capable as is (Yes/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') RADAR - 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) Radar
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 2%

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, (radar per lane)) RADAR
Lt Turn Lane (None, 6x70 Loop, (Radar), Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? 2
Room in cabinet for expansion of detection (Yes)/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag) MAIN - Protect Side - Protect
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) NONE
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/(No))
Excessive Pedestrian use ((Yes)/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Agency Level:

Are your signals connected to a central system? (Yes/No)
Brand and Type of Centrals System (KITS, MaxView)
Type of Communications Infrastructure? (Fiber)
Is there any sort of existing regional communications linkage between the participating agencies? (RCN)
Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
Is staff aware of ATSMP? Does staff have any experience in ASTPM? Would staff be open to the benefits of ASTPM, or is the existing situation limited by available staff time/knowledge?

Intersection Level:

Intersection name (Glassford Hill Rd/Main Street) SR 69/ Heather Heights
Owning Agency (Prescott Valley) ADOT

Controller Cabinet:

Controller Corner (NW) SW
Controller Make (Econolite) Econolite
Controller Model (Cobalt) ASC/2, ASC/3, 170) Cobalt
Firmware Version (2.54, 200CA) 32.66.10
NTCIP Capable (Yes)/No)
Ethernet capable (Yes)/No)
Connected to Central System (Yes)/No)
Communications Media (Fiber, (Radio) etc.) Radio
If Radio, Make/Model (Firetide) Ubiquity
Make/model of existing switch (iMPath 4000) RS30
Available Ports in Existing Switch (None, 1, 2, etc.) 6
Cabinet Type (ADOT Type IV TS-1) ADOT Type IV TS-2) TS1 Type 4
Foundation mounted (Yes)/No)
Communications Capable as is (Yes)/No)
If No, what is lacking (Comm board, terminals)
Power outlet available (Yes)/No)

Detection:

Main Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') Radar @ 600'
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane (radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop (Radar) Video, Thermal) RADAR
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø

Side Street:

Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300') NONE
Thru Lanes Stop Line (None, 6x40 Loops each lane, video zones per lane, radar per lane) RADAR
Lt Turn Lane (None, 6x70 Loop, Radar, Video, Thermal) NONE
If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm) N/A
Approximate age of devices? 4 YRS.
Approximate percentage of currently failed devices? Ø

Room in cabinet for expansion of detection (Yes/No)
Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? Can that be resolved with training?

Other:

Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag) MAIN - Protect Side-Non
Approaches without mast arms (NB, SB) NONE
Approaches without street lighting (NB, SB) NONE
Existing Overhead Restrictions (NE OHE) None
Joint use/owned poles (NE) NONE
Photos documenting exterior/interior of cabinet:
- Exterior (Two diagonal corners)
- Floor (Conduits and how full they are)
- Lt/Rt Walls (Wire terminals, power landings, surge protection)
- Face on (Show from ceiling to floor, in multiple straight-on shots)
- Rear (If rear door, open and repeat process)

Presence of EVP (Yes/No)
Excessive Pedestrian use (Yes/No)
If Yes, Type (Opticom, Tomar) Dialight
As-Built Plans (Verified)

General information:

Traffic counts – intersection turning movement by time of day
Traffic counts – segment level counts (24-hours)
Existing signal control plans – as implemented in the field
Agency guidelines for ITS and signal installations
Prior studies on the three corridors, including RTP and AZTDM as developed for RTP

Additional data (GIS preferred)

Existing ITS inventory (including fiber)
Right-of-way
Utilities
Land use, existing and future
Development information

Adaptive Systems Inventory

Intersection Level: City of Prescott

Intersection name: Sheldon Street and Gurley Street (SR 69)
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NW
Controller Make (Econolite, etc.)	ECONOLITE
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC/2S-2100
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	NO
Ethernet capable (Yes/No)	NO
Connected to Central System (Yes/No)	NO
Communications Media (Fiber, Radio, etc.)	N/A
If Radio, Make/Model (Firetide, etc.)	N/A
Make/model of existing switch (iMPath 4000, etc.)	N/A
Available Ports in Existing Switch (None, 1, 2, etc.)	N/A
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-1
Foundation mounted (Yes/No)	YES
Communications Capable as is (Yes/No)	NO
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	YES

Detection:

Main Street: Gurley Street

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  NONE
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  STOP BAR Loops 6x50'
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
  3/10/09
- Approximate percentage of currently failed devices?
  0 %

Side Street: Sheldon Street

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

  NONE

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

  STOP LINE Loops 6X50'

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

  N/A

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

  3/10/09

- Approximate percentage of currently failed devices?

  0 %

1. Is there room in cabinet for expansion of detection (Yes/No)

   YES

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

   NO ISSUES

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

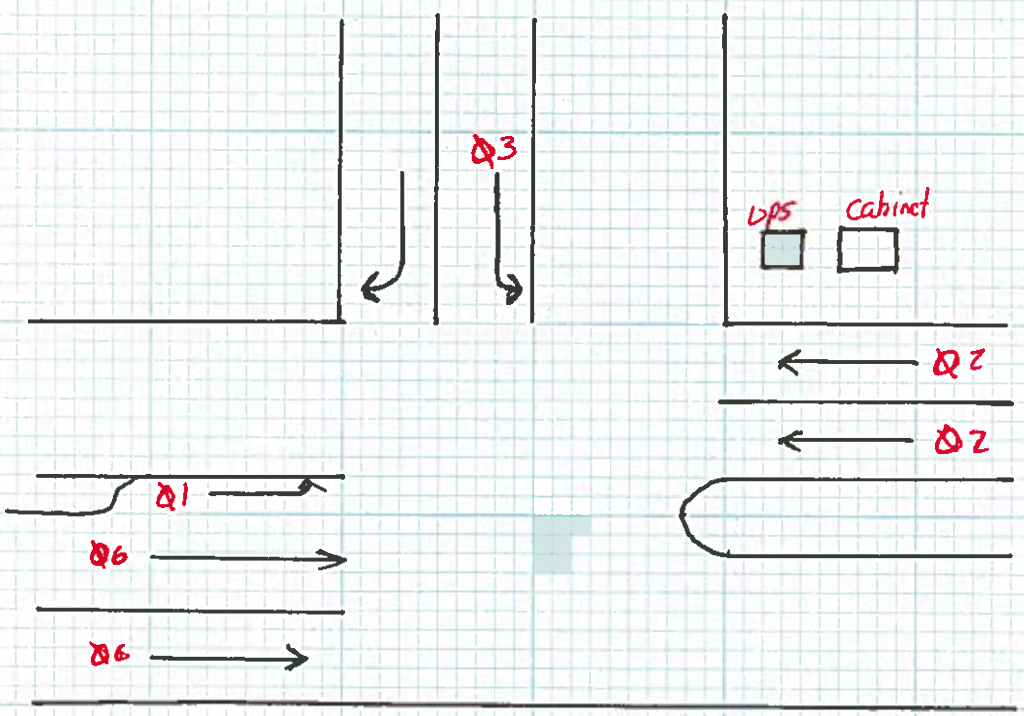
2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

Future Signal at N Mendecino & 69



Controller: Econolite Cobalt
Connected: No
communication: No
cabinet type: ADOT type IV TS-2 Type1
Detection: Radar
Left turn treatments: Protected
No pedestrain movement

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

APPENDIX SS-2

SR 69 Traffic Signal Timing Plans

CITY OF PRESCOTT

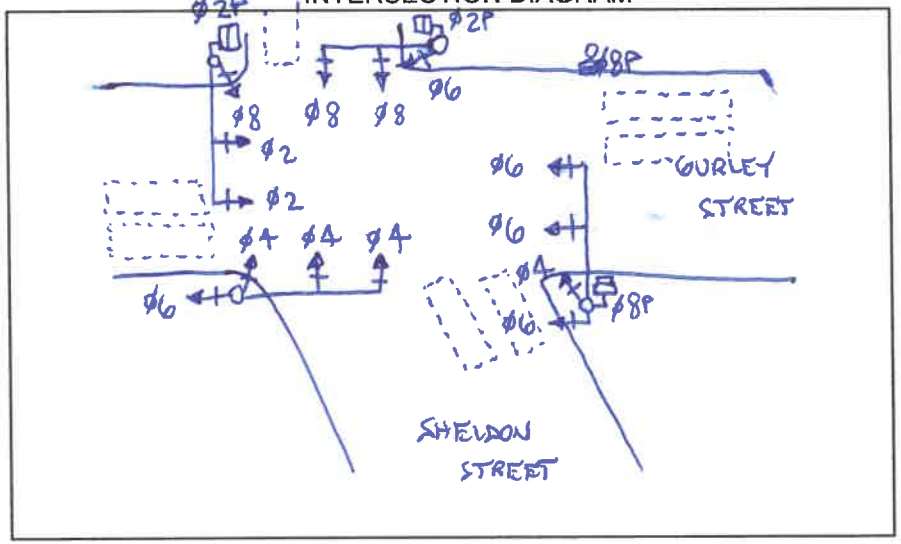
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : _____

MAIN STREET: GURLEY STREET

MINOR STREET: SHELDON [redacted] STREET

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	30 MPH
MINOR STREET:	35 MPH
YELLOW THR. CLR:	VARIES
YELLOW LT CLR:	N/A
ALL-RED THR CLR:	VARIES
ALL-RED LT CLR:	N/A

PED CLEARANCE:

WB:	18
SB:	18
NB:	N/A
EB:	N/A

1/27/2021 DATA

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	N/A	ϕ4	N/A	ϕ6	N/A	ϕ8	N/A	ϕ2
Min. Green		4		15		10		15
Walk		-		-		7		7
Ped Clearance		-		-		18		18
Veh Extension		2.0		4.5		5.0		4.5
Max 1		10		45		55		45
Yellow		3.0		3.6		3.6		3.6
All-Red Clearance Left-Turn		2.0		2.2		4.0		2.2

NO TOD/NIC

* USED TO PROVIDE GAPS IN GURLEY (E.) TRAFFIC FOR BUSINESSES INGRESS/EGRESS.

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4		
SB Crosswalk	4		
EB Crosswalk	4		
NB Crosswalk	4		

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Heather Heights MP: 295.8 Location: Prescott ☑ Active

MU #: 0260S Warrant: UPDATE Timing As Of: ~~8/13/2010~~ 7-1-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	--	SB	WB LT	EB	--	NB
Min Green	10	20	--	15	10	20	--	15
Veh Ext	1.5	6.0	--	2.0	1.5	6.0	--	2.0
Max I	15	50	--	25	15	50	--	25
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	~~10~~ 23	--	~~30~~ 35	--	~~26~~ 20	--	~~30~~ 35
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	~~4.3~~ 3.6	--	3.0	3.0	~~4.3~~ 3.6	--	3.0
Red Clr	~~3.0~~ 3.6	~~1.2~~ 1.5	--	~~3.4~~ 4.2	~~3.0~~ 3.7	~~1.2~~ 1.5	--	~~3.4~~ 4.2
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	Min	--	--	--	Min	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

Removed 8/20/14

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5,6,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap on: Group 1

ARIZONA DEPARTMENT OF TRANSPORTATION - TRAFFIC SIGNAL TIMING CARD

Location: SR 69 @ FRONTIER VILLAGE PRESCOTT

MU #: 0220S Controller Type: NEMA Warrant Timing As Of: 2-3-13

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	SB LT	NB LT	WB LT	EB	NB LT	SB
Min Gm	6	4.5	6	6	6	4.5	6	6
Veh Ext	1.0	6.5	2.0	2.0	1.0	6.5	2.0	2.0
Max 1	15	45	15	35	15	45	15	35
Max 2								
Max 3								
Walk		7		7		7		
Ped Cir		24		34		28		
Max Init		35				35		
Sec Act		1.5				1.5		
TBR								
TTR								
Min Gap								
Guar Pass								
Yellow	3.0	3.6	3.0	3.2	3.0	3.6	3.0	3.2
Red Cir	1.0	1.9	1.0	3.8	1.0	1.9	1.0	3.8
CNA								
Det Memory		ON				ON		
Dual Entry				ON				ON
Recall Mode		MIN V				MIN V		
Ext Start		YEL				YEL		

† 10-0104 R4/02 **TIMING EVALUATION** OVER for Additional Timing

ADDITIONAL TIMING

TIME OF DAY FUNCTIONS

Prgm	Funct'n	On	Off	Skip Days

CONTROLLER/DETECTOR AMPLIFIER TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4,8 RT	Amp	Delay	15

OVERLAPS / TIMING OPTIONAL

O/L (Phases)	Gm	Yel	Red
(A)			
(B)			
(C)			
(D)			
(E)			

PHASE SEQ: R1) 1,2,3,4 R2) 5,6,7,8

EXCLUSIVE LEFT TURN PHASES: 1,3,5,7

EXCL-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ Loops: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐

COORDINATION: ☑

2+6 detectors set to pulse for adv loops.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Frontier Village II MP: 295.11 Location: Prescott ☑ Active

MU #: 0400S Warrant: ADD LEFT TURNS Timing As Of: 3/26/2013

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	SB LT	NB	WB LT	EB	NB LT	SB
Min Green	6	20	6	6	6	20	6	6
Veh Ext	2.0	7.0	2.0	1.5	2.0	7.0	2.0	1.5
Max I	15	45	15	25	15	45	15	25
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	19	--	28	--	25	--	33
Max Init	--	35	--	--	--	35	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.3	3.0	3.6	3.0	4.3	3.0	3.6
Red Clr	4.5	1.9	4.2	3.8	4.1	1.9	4.5	3.8
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4&8 RT	AMP	DELAY	15

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 2,4 R2) 6

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

Loop Detectors 2&6 set to pulse for Adv. Loops. Simultaneous Gap: Group1 ON

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Holiday Drive MP: 294.54 Location: Prescott ☑ Active

MU #: 0550S Warrant: UPDATE TIMING Timing As Of: 7/1/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	SB LT	NB	WB LT	EB	NB LT	SB
Min Green	6	20	6	6	6	20	6	6
Veh Ext	1.5	6.0	1.5	1.5	1.5	6.0	1.5	1.5
Max I	15	90	15	15	25	90	15	15
Max 2	15	90	15	15	25	90	15	15
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	--
Ped Clr	--	20	--	28	--	15	--	--
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.3	3.0	3.8	3.0	4.3	3.0	3.8
Red Clr	3.6	1.3	4.0	3.2	3.7	1.3	3.6	3.2
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4	AMP	DELAY	15

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,3,4 R2) 5,6,7,8

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

Simultaneous Gap Group # 1: ON
Loop Detection, Phases 1,2,3,4
Video Detection, Phases 5,6,7,8
Increased Max Green on phases 5/7 due to heavy traffic, (8/16/2010) as per Bob L.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Prescott Lakes Parkway MP: 293.72 Location: Prescott ☑ Active

MU #: 0490S Warrant: UPDATE TIMING Timing As Of: 09/19/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	NB LT	SB
Min Green	8 14	20	6	6	6	20	6	6
Veh Ext	3.5	6.5	2.5	2.0	2.5	6.5	2.5	2.5
Max I	20	45	20	20	15	45	20	20
Max 2	20	45	20	20	15	45	20	20
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	27	--	37	--	27	--	38
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.5	3.0	3.0	3.0	4.5	3.0	3.0
Red Clr	4.1	1.6	4.1	3.8	3.8	1.6	4.1	3.8
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	RED	--	--	--	RED	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4/8 R/T	AMP	DELAY	16

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,3,4 R2) 5,6,7,8

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☑ LOOPS: ☑

COORDINATION: ☑

SIMULTANEOUS GAP GROUP 1 ON

On 9/24/2007; Adjusted min. green from 6 to 8 sec. on ph. 1 L/T due to traffic not able to cl. up hill turn, as per Ed P.

On 7/27 & 7/28/2010; Adjusted veh. ext. and cl. times to phase 1 L/T as per Ed Pressley, due to left turn conflicts with phase 2 green.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Gateway Mall MP: 293.49 Location: Prescott ☑ Active

MU #: 0110S Warrant: UPDATE TIMING Timing As Of: ~~2/15/2012~~ 6-19-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	--	WB	--	NB	WB LT	EB	--	--
Min Green	--	20	--	7	7	20	--	--
Veh Ext	--	6.5	--	1.5	1.5	6.5	--	--
Max I	--	45	--	20	30	45	--	--
Max 2	--	45	--	20	30	45	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	--	--	7	--	7	--	--
Ped Clr	--	--	--	~~26~~ 30	--	~~18~~ 22	--	--
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	--	4.3	--	3.0	3.0	4.3	--	--
Red Clr	--	1.3	--	3.6	~~3.0~~ 3.6	1.3	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	ON	ON	--	--
Dual Entry	--	--	--	--	--	--	--	--
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

Removed 8/20/14

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 LL	AMP	DELAY	1
4 RT	AMP	DELAY	20

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 2,4 R2) 5,6

PROTECTED LEFT TURN PHASES: 5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☑ LOOPS: ☑

COORDINATION: ☑

Simultanious Gap group 1-ON

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Lee Blvd MP: 293.34 Location: Prescott ☑ Active

MU #: 0090S Warrant: UPDATE TIMING Timing As Of: ~~2/15/2012~~ 6-19-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	--	SB	WB LT	EB	--	NB
Min Green	6	20	--	8	6	20	--	8
Veh Ext	1.0	6.0	--	2.0	1.0	6.0	--	2.0
Max I	20	40	--	20	20	40	--	20
Max 2	20	40	--	20	20	40	--	20
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	~~22~~ 22	--	~~33~~ 33	--	~~22~~ 22	--	~~32~~ 32
Max Init	--	32	--	--	--	32	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	15.0	--	--	--	15.0	--	--
TTR	--	15.0	--	--	--	15.0	--	--
Min Gap	--	3.0	--	--	--	3.0	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.3	4.7	--	~~3.0~~ 3.6	3.3	4.7	--	~~3.0~~ 3.6
Red Clr	~~2.0~~ 3.2	~~1.5~~ 1.4	--	~~3.5~~ 3.6	~~2.0~~ 2.3	~~1.5~~ 1.4	--	~~3.5~~ 3.6
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	ON	--	ON	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

Removed 8-20-14

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4/8	CTRL	DELAY	6

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5, 6,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☑ LOOPS: ☑

COORDINATION: ☑

SIMULTANEOUS GAP GROUP 1 ON.

OLD

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Walker Rd. MP: 293.1 Location: Prescott ☑ Active

MU #: 0240S Warrant: UPDATE TIMING Timing As Of: 06/19/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	--	WB	--	NB	WB LT	EB	--	--
Min Green	--	20	--	10	5	20	--	--
Veh Ext	--	5.1	--	2.5	2.5	5.1	--	--
Max I	--	45	--	25	15	45	--	--
Max 2	--	45	--	25	15	45	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	--	--	7	--	7	--	--
Ped Clr	--	--	--	25	--	16	--	--
Max Init	--	36	--	--	--	36	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	10.0	--	--	--	10.0	--	--
TTR	--	15.0	--	--	--	15.0	--	--
Min Gap	--	3.0	--	--	--	3.0	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	--	5.5	--	3.2	3.0	5.5	--	--
Red Clr	--	1.0	--	2.1	3.5	1.0	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	--	--	ON	--	--
Recall Mode	--	MINV	--	--	--	MINV	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 2,4 R2) 5,6

PROTECTED LEFT TURN PHASES: 5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Sunrise MP: 292.31 Location: Prescott ☑ Active

MU #: 0280S Warrant: UPDATE TIMING Timing As Of: ~~6/30/2006~~ 1-28-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	WB LT	EB	--	NB	EB LT	WB	--	SB
Min Green	8	30	--	8	8	30	--	8
Veh Ext	1.5	6.5	--	1.5	1.5	6.5	--	2.5
Max I	15	65	--	25	15	65	--	25
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	~~23~~ 23	--	~~28~~ 28	--	~~18~~ 18	--	~~29~~ 29
Max Init	--	33	--	--	--	33	--	--
Sec Act	--	2.5	--	--	--	2.5	--	--
TBR	--	15.0	--	--	--	15.0	--	--
TTR	--	10.0	--	--	--	10.0	--	--
Min Gap	--	2.5	--	--	--	2.5	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	~~3.7~~ 4.9	--	3.0	~~3.0~~ 3.4	~~3.7~~ 4.3	--	3.0
Red Clr	~~1.0~~ 2.3	1.1	--	2.9	~~1.0~~ 2.5	1.1	--	2.9
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4	CTRL	DELAY	20
8	CTRL	DELAY	16

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5,6,8

PROTECTED LEFT TURN PHASES: 1, 5

PROT-PRM LEFT TURN PHASES: ~~1~~

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

Ped. Recall on 2/6
Rest in walk on 2/6

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Robin Drive MP: 291.64 Location: Diamond Valley ☑ Active

MU #: 0820S Warrant: UPDATE TIMING Timing As Of: 6/19/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	WB LT	EB	--	SB	EB LT	WB	--	--
Min Green	8	20	--	8	8	20	--	--
Veh Ext	2.0	6.0	--	2.0	2.0	6.0	--	--
Max I	20	60	--	20	25	60	--	--
Max 2	20	60	--	20	25	60	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	--	--	--	--	--	--	--
Ped Clr	--	--	--	--	--	--	--	--
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.7	--	3.3	3.3	4.7	--	--
Red Clr	2.6	1.0	--	2.8	3.2	1.0	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	--	--	--	--	--
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 RT	AMP	DELAY	20
4	AMP	DELAY	3

OVERLAPS

TIMING OPTIONAL

O/L(Phases)		Grn	Yel	Red
	--	--	--	
	--	--	--	
	--	--	--	
	--	--	--	

PHASE SEQ: R1) 1,2,4 R2) 5,6

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Ramada Drive MP: 291.09 Location: Diamond Valley ☑ Active

MU #: 0860s Warrant: UPDATE TIMING Timing As Of: ~~2/14/2012~~ 6-19-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	WB LT	EB	--	SB	EB LT	WB	--	--
Min Green	8	20	--	8	8	20	--	--
Veh Ext	2.0	6.0	--	2.0	2.0	6.0	--	--
Max I	20	60	--	20	20	60	--	--
Max 2	20	60	--	20	20	60	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	--	--	--	--	--	--	--
Ped Clr	--	--	--	--	--	--	--	--
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.3	--	3.4	3.0	4.3	--	--
Red Clr	~~3.0~~ 3.2	1.0	--	3.0	~~3.5~~ 3.0	1.0	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	--	--	--	--	--
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

Removed 8/20/19 CS

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 RT	AMP	DELAY	18
4	AMP	DELAY	3

OVERLAPS

O/L(Phases)		Grn	Yel	Red
	--	--	--	
	--	--	--	
	--	--	--	
	--	--	--	

TIMING OPTIONAL

PHASE SEQ: R1) 1,2,4 r2) 5,6

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Diamond Dr. MP: 290.72 Location: Diamond Valley ☑ Active

MU #: 0840S Warrant: UPDATE TIMING Timing As Of: ~~9/22/2011~~ 7-1-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	--	NB	--	EB	NB LT	SB	--	--
Min Green	--	20	--	8	8	20	--	--
Veh Ext	--	6.0	--	2.0	2.0	6.0	--	--
Max I	--	60	--	20	20	60	--	--
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	--	--	--	--	--	--	--
Ped Clr	--	--	--	--	--	--	--	--
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	--	4.7	--	3.0	3.0	4.7	--	--
Red Clr	--	~~1.0~~ 1.1	--	3.0	~~1.0~~ 3.2	~~1.0~~ 1.1	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	--	--	--	--	--
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

8-19-14 USMW 28

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 RT	AMP	DELAY	16

OVERLAPS / TIMING OPTIONAL

O/L(Phases)		Grn	Yel	Red
	--	--	--	
	--	--	--	
	--	--	--	
	--	--	--	

PHASE SEQ: R1) 2, 4 R2) 5, 6

PROTECTED LEFT TURN PHASES: 5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Sundog Ranch Rd. MP: 290.1 Location: Prescott Valley ☐ Active

MU #: 0570S Warrant: NEW SIGNAL Timing As Of: ~~2/9/2009~~ 7-1-14

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	NB LT	SB	WB LT	EB	SB LT	NB	EB LT	WB
Min Green	8	20	8	8	8	20	8	8
Veh Ext	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max I	20	60	20	20	20	60	20	20
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	~~21~~ 24	--	~~30~~ 34	--	~~21~~ 24	--	~~30~~ 35
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.3	3.0	~~3.0~~ 3.3	3.0	4.3	~~3.0~~ 3.3	3.0
Red Clr	~~1.5~~ 4.7	1.7	~~1.5~~ 4.7	3.8	~~1.5~~ 4.8	1.7	~~1.5~~ 4.6	3.8
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

Revised 8-19-14

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1, 2, 3, 4 R2) 5, 6, 7, 8

PROTECTED LEFT TURN PHASES: 1, 3, 5, 7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Group 1: ON

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Stoneridge Dr. MP: 289.76 Location: Prescott Valley ☑ Active

MU #: 0520S Warrant: UPDATE TIMING Timing As Of: 7/1/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Min Green	6	20	4	6	6	20	4	6
Veh Ext	1.5	6.0	1.5	1.5	1.5	6.0	1.5	1.5
Max I	15	41	14	20	15	41	14	20
Max 2	15	41	14	20	15	41	14	20
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	25	--	35	--	26	--	34
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.3	3.0	3.6	3.0	4.3	3.0	3.6
Red Clr	3.7	1.5	3.9	2.9	3.6	1.5	3.9	2.9
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
1,5 LT	CTRL	DELAY	3
4 RT	AMP	DELAY	8
8 RT	AMP	DELAY	8

OVERLAPS TIMING OPTIONAL

O/L(Phases)		Grn	Yel	Red
	--	--	--	
	--	--	--	
	--	--	--	
	--	--	--	

PHASE SEQ: R1)1,2,3,4 R2)5,6,7,8

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Group 1 - On

File Copy

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Prescott E. Hwy MP: 289.46 Location: Prescott Valley ☑ Active

MU #: 0160S Warrant: UPDATE TIMING Timing As Of: 6/19/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	--	SB	WB LT	EB	--	NB
Min Green	6	20	--	6	6	20	--	6
Veh Ext	1.5	6.0	--	1.5	1.5	6.0	--	1.5
Max I	20	40	--	20	20	40	--	20
Max 2	20	40	--	20	20	40	--	20
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	18	--	32	--	15	--	32
Max Init	--	35	--	--	--	35	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.3	--	3.0	3.0	4.3	--	3.0
Red Clr	4.0	1.3	--	3.8	3.8	1.2	--	3.8
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
1&5	CTRL	DELAY	3

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5,6,8

PROTECTED LEFT TURN PHASES: 1, 5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Group 1 - On.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Glassford Hill Rd. MP: 288.69 Location: Prescott Valley ☑ Active

MU #: 0200S Warrant: UPDATE TIMING Timing As Of: 6/29/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Min Green	8	20	8	8	8	20	8	8
Veh Ext	2.0	6.5	2.0	2.0	2.0	6.5	2.0	2.0
Max I	15	45	15	30	15	45	15	30
Max 2	15	45	15	30	15	45	15	30
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	29	--	30	--	23	--	32
Max Init	--	34	--	--	--	34	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	15.0	--	--	--	15.0	--	--
TTR	--	10.0	--	--	--	10.0	--	--
Min Gap	--	2.5	--	--	--	2.5	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.2	4.4	3.0	3.6	3.1	4.4	3.0	3.6
Red Clr	4.6	1.6	3.4	2.4	4.5	1.6	4.1	2.4
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	ON	--	ON	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,3,4 R2) 5,6,7,8

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Gp1 ON.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: **SR69 @ Lake Valley Road** MP: **288.17** Location: **Prescott Valley** ☑ Active

MU #: 0050S Warrant: L/T CHG. TO PROT. Timing As Of: **2/25/2014**

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Min Green	5	20	6	5	5	20	6	5
Veh Ext	1.0	7.0	1.5	1.5	1.0	7.0	1.5	1.5
Max I	12	40	12	30	12	40	15	30
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	25	--	26	--	20	--	27
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
Red Clr	3.1	1.4	1.0	2.6	3.1	1.4	1.0	2.6
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4,8 RT	CTRL	DELAY	10

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1 1,2,3,4 R2) 5,6,7,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES: 3,7

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Power Start Flash Time - 5 Sec.
Simultaneous Gap Group 1 - On.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Windsong Road MP: 287.76 Location: Prescott Valley ☑ Active

MU #: 0040S Warrant: UPDATE TIMING Timing As Of: 8/14/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB	WB	--	SB	WB	EB	--	NB
Min Green	6	20	--	5	6	20	--	5
Veh Ext	2.0	6.0	--	2.0	1.5	6.0	--	1.5
Max I	20	40	--	20	20	40	--	20
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	18	--	26	--	12	--	28
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	15.0	--	--	--	15.0	--	--
TTR	--	15.0	--	--	--	15.0	--	--
Min Gap	--	3.5	--	--	--	3.5	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.3	--	3.0	3.0	4.3	--	3.0
Red Clr	3.2	1.2	--	2.8	3.0	1.0	--	2.7
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	ON	--	ON	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
5	CTRL	DELAY	3

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 2,4 R2) 6,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Group 1 - On.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Robert Road MP: 287.48 Location: Prescott Valley ☑ Active

MU #: 0180S Warrant: L/T CHG. TO PROT. Timing As Of: 2/21/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	--	SB	WB LT	EB	--	NB
Min Green	5	20	--	6	5	20	--	6
Veh Ext	1.5	5.7	--	2.0	1.5	5.7	--	2.0
Max I	15	45	--	32	15	45	--	32
Max 2	15	45	--	32	15	45	--	32
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	18	--	27	--	14	--	29
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.3	--	3.0	3.0	4.3	--	3.0
Red Clr	2.7	1.3	--	2.6	2.7	1.3	--	2.6
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
1,5	CTRL	DELAY	3
4,8RT	CTRL	DELAY	3

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5,6,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Group 1 - ON

(10/04/10) Increased Ped. Clr. Time due to citizen complaint on phase 8 ped.

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Navajo Drive MP: 287.25 Location: Prescott Valley ☑ Active

MU #: 0030S Warrant: UPDATE TIMING Timing As Of: 8/28/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	--	SB	WB LT	EB	--	NB
Min Green	5	20	--	8	5	20	--	8
Veh Ext	2.0	7.0	--	2.0	1.0	7.0	--	2.0
Max I	20	40	--	20	12	40	--	20
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	24	--	23	--	24	--	24
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	4.3	--	3.0	3.0	4.3	--	3.0
Red Clr	3.3	1.4	--	2.3	3.3	1.4	--	2.6
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	ON	--	ON	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS / TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,4 R2) 5,6,8

PROTECTED LEFT TURN PHASES: 1,5

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneuos Gap Group 1 - On.
Power Start Flash Time - 5 Sec.

ARIZONA DEPARTMENT OF TRANSPORTATION - TRAFFIC SIGNAL TIMING CARD

Location: SR69 @ Enterprise PKwy Prescott Valley

MU #: 08905 Controller Type: NEMA Warrant NEW Signal Timing As Of: 5-27-15

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB		SB		EB		
Min Gm	8	20		8		20		
Veh Ext	2.0	6.0		2.0		6.0		
Max 1	20	45		20		45		
Max 2								
Max 3								
Walk								
Ped Cir								
Max Init		30				30		
Sec Act		1.5				1.5		
TBR								
TTR								
Min Gap								
Guar Pass								
Yellow	3.0	5.5		3.7		5.5		
Red Cir	4.1	1.8		2.7		1.8		
CNA								
Det Memory		ON				ON		
Dual Entry								
Recall Mode		MIN V				MINV		
Ext Start		RED				RED		

†● 10-0104 R4/02

TIMING EVALUATION

OVER for Additional Timing

ADDITIONAL TIMING

TIME OF DAY FUNCTIONS

Prgm	Funct'n	On	Off	Skip Days

CONTROLLER/DETECTOR AMPLIFIER TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4CL+CC	ctrl	Delay	10

OVERLAPS

TIMING OPTIONAL

O/L (Phases)	Gm	Yel	Red
(A)			
(B)			
(C)			
(D)			
(E)			

PHASE SEQ: R1) 1,2,4 R2) 6

EXCLUSIVE LEFT TURN PHASES: 1

EXCL-PRM LEFT TURN PHASES: 0

RAILROAD PRE-EMPTION: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐

COORDINATION: ☐

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Prescott Country Club MP: 283.5 Location: Dewey ☑ Active

MU #: 0140S Warrant: L/T MODIFICATION Timing As Of: 2/6/2015

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Min Green	6	20	8	6	6	20	8	6
Veh Ext	1.5	6.5	2.0	1.5	1.5	6.5	2.0	1.5
Max I	20	40	30	20	20	40	30	20
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	--	--	7	--	7
Ped Clr	--	22	--	--	--	18	--	20
Max Init	--	30	--	--	--	30	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.0	5.5	3.0	3.6	3.0	5.5	3.0	3.6
Red Clr	3.1	1.2	3.6	2.1	3.5	1.2	3.6	2.1
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	--	--	ON	--	--	--	ON
Recall Mode	--	MINV	--	--	--	MINV	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 RT	AMP	DELAY	10
8 RT	AMP	DELAY	10
1,5	CTRL	DELAY	3

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,3,4, R2) 5,6,7,8,

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

Simultaneous Gap Goup #1 - On.

ADOT Traffic Signals Coordination

SR 69 /Navajo Dr. to Heather Heights

Day plan 1 – Weekdays (Action# is Pattern)

Day Plans

1 2 3 4 5 6 7 8 9 ...

Event	Start Time - Hour	Start Time - Minute	Action Number
1	0	0	100
2	6	30	2
3	9	0	5
4	14	0	7
5	19	0	100

Day plan 2 - Weekends (Action # 100 is Free)

Day Plans

1 2 3 4 5 6 7 8 9 ...

Event	Start Time - Hour	Start Time - Minute	Action Number
1	0	0	100
2	8	0	5
3	19	0	100
4	0	0	0
5	0	0	0

Heather Heights

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	135	0	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	0	Enabled
6	6	0	0	Disabled
7	7	135	0	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	30	.
2	69	X
3	0	.
4	36	.
5	30	.
6	69	X
7	0	.
8	36	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	30	.
2	69	X
3	0	.
4	36	.
5	30	.
6	69	X
7	0	.
8	36	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	30	.
2	69	X
3	0	.
4	36	.
5	30	.
6	69	X
7	0	.
8	36	.

Frontier Village 1

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	135	105	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	79	Enabled
6	6	0	0	Disabled
7	7	135	30	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	26	.
2	51	X
3	33	.
4	25	.
5	26	.
6	51	X
7	33	.
8	25	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	26	.
2	51	X
3	33	.
4	25	.
5	26	.
6	51	X
7	33	.
8	25	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	26	.
2	51	X
3	33	.
4	25	.
5	26	.
6	51	X
7	33	.
8	25	.

Frontier Village 2

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	135	75	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	76	Enabled
6	6	0	0	Disabled
7	7	135	59	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Holiday Dr.

(Day plan 3 for Sunday Church)

Day Plans

1 2 3 4 5 6 7 8 9 ...

Event	Start Time - Hour	Start Time - Minute	Action Number
1	0	0	100
2	9	0	5
3	10	0	100
4	10	30	5
5	18	0	100

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	135	40	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	9	Enabled
6	6	0	0	Disabled
7	7	135	94	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	25	.
2	52	X
3	25	.
4	33	.
5	25	.
6	52	X
7	25	.
8	33	.

Prescott Lakes Pkwy.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	8	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	120	0	Enabled
6	6	0	0	Disabled
7	7	120	5	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	27	.
4	30	.
5	23	.
6	40	X
7	27	.
8	30	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	32	.
4	25	.
5	23	.
6	40	X
7	32	.
8	25	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	23	.
2	40	X
3	27	.
4	30	.
5	23	.
6	40	X
7	27	.
8	30	.

Gateway.
(mall entrance)

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	100	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	120	4	Enabled
6	6	0	0	Disabled
7	7	120	10	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Lee Blvd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	89	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	120	48	Enabled
6	6	0	0	Disabled
7	7	120	28	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	59	X
3	0	.
4	36	.
5	25	.
6	59	X
7	0	.
8	36	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	59	X
3	0	.
4	36	.
5	25	.
6	59	X
7	0	.
8	36	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	25	.
2	59	X
3	0	.
4	36	.
5	25	.
6	59	X
7	0	.
8	36	.

Walker Rd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	75	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	120	35	Enabled
6	6	0	0	Disabled
7	7	120	47	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	0	.
2	87	X
3	0	.
4	33	.
5	28	.
6	59	X
7	0	.
8	0	.

Sunrise Blvd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	32	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	32	Enabled
6	6	0	0	Disabled
7	7	135	33	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	60	X
3	0	.
4	35	.
5	25	.
6	60	X
7	0	.
8	35	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	75	X
3	0	.
4	35	.
5	25	.
6	75	X
7	0	.
8	35	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	25	.
2	75	X
3	0	.
4	35	.
5	25	.
6	75	X
7	0	.
8	35	.

Robin Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	2	120	116	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	31	Enabled
6	6	0	0	Disabled
7	7	135	69	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	26	.
2	60	X
3	0	.
4	34	.
5	26	.
6	60	X
7	0	.
8	0	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	26	.
2	75	X
3	0	.
4	34	.
5	26	.
6	75	X
7	0	.
8	0	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	26	.
2	75	X
3	0	.
4	34	.
5	26	.
6	75	X
7	0	.
8	0	.

Ramada Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	0	0	Disabled
2	7	120	73	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	108	Enabled
6	6	0	0	Disabled
7	7	135	112	Enabled

Split Patterns

1 2 3 4

Phase	Split Time	Coord
1	25	.
2	60	X
3	0	.
4	35	.
5	25	.
6	60	X
7	0	.
8	0	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	25	.
2	75	X
3	0	.
4	35	.
5	25	.
6	75	X
7	0	.
8	0	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	25	.
2	75	X
3	0	.
4	35	.
5	25	.
6	75	X
7	0	.
8	0	.

Diamond Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	81	Enabled
2	2	120	49	Enabled
3	3	0	0	Disabled
4	4	0	0	Disabled
5	5	135	49	Enabled
6	6	108	60	Enabled
7	7	135	34	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	90	X
3	0	.
4	30	.
5	30	.
6	60	X
7	0	.
8	0	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	0	.
2	105	X
3	0	.
4	30	.
5	30	.
6	75	X
7	0	.
8	0	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	0	.
2	105	X
3	0	.
4	30	.
5	30	.
6	75	X
7	0	.
8	0	.

Sundog Ranch Rd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	21	Enabled
2	2	120	117	Enabled
3	3	90	5	Enabled
4	4	108	0	Enabled
5	5	135	0	Enabled
6	6	108	0	Enabled
7	7	135	0	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	22	.
4	35	.
5	23	.
6	40	X
7	22	.
8	35	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Stoneridge Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	98	Enabled
2	2	120	86	Enabled
3	3	90	30	Enabled
4	4	108	24	Enabled
5	5	135	14	Enabled
6	6	108	31	Enabled
7	7	135	29	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	22	.
4	35	.
5	23	.
6	40	X
7	22	.
8	35	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Prescott East Hwy.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	77	Enabled
2	2	120	65	Enabled
3	3	90	50	Enabled
4	4	108	53	Enabled
5	5	135	19	Enabled
6	6	108	52	Enabled
7	7	135	72	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	50	X
3	0	.
4	38	.
5	32	.
6	50	X
7	0	.
8	38	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Glassford Hill Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	11	Enabled
2	2	120	119	Enabled
3	3	90	30	Enabled
4	4	108	0	Enabled
5	5	135	66	Enabled
6	6	108	10	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	22	.
4	35	.
5	23	.
6	40	X
7	27	.
8	30	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	33	.
2	55	X
3	20	.
4	27	.
5	33	.
6	55	X
7	25	.
8	22	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	40	.
2	50	X
3	18	.
4	27	.
5	31	.
6	59	X
7	25	.
8	20	.

Lake Valley Rd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	77	Enabled
2	2	120	77	Enabled
3	3	90	73	Enabled
4	4	108	49	Enabled
5	5	135	134	Enabled
6	6	108	52	Enabled
7	7	135	18	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	40	X
3	22	.
4	35	.
5	23	.
6	40	X
7	22	.
8	35	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	23	.
2	55	X
3	22	.
4	35	.
5	23	.
6	55	X
7	22	.
8	35	.

Windsong Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	42	Enabled
2	2	120	42	Enabled
3	3	90	46	Enabled
4	4	108	80	Enabled
5	5	135	5	Enabled
6	6	108	87	Enabled
7	7	135	63	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	50	X
3	0	.
4	38	.
5	32	.
6	50	X
7	0	.
8	38	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Robert Rd.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	19	Enabled
2	2	120	19	Enabled
3	3	90	22	Enabled
4	4	108	107	Enabled
5	5	135	80	Enabled
6	6	108	2	Enabled
7	7	135	85	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	50	X
3	0	.
4	38	.
5	32	.
6	50	X
7	0	.
8	38	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Navajo Dr.

Patterns

Pattern	Split Number	Cycle Time	Offset	Actuated Coord
1	1	108	0	Enabled
2	2	120	0	Enabled
3	3	90	45	Enabled
4	4	108	0	Enabled
5	5	135	99	Enabled
6	6	108	21	Enabled
7	7	135	104	Enabled

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	50	X
3	0	.
4	38	.
5	32	.
6	50	X
7	0	.
8	38	.

Split Patterns

1 2 3 4 5

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

Split Patterns

... 3 4 5 6 7

Phase	Split Time	Coord
1	32	.
2	65	X
3	0	.
4	38	.
5	32	.
6	65	X
7	0	.
8	38	.

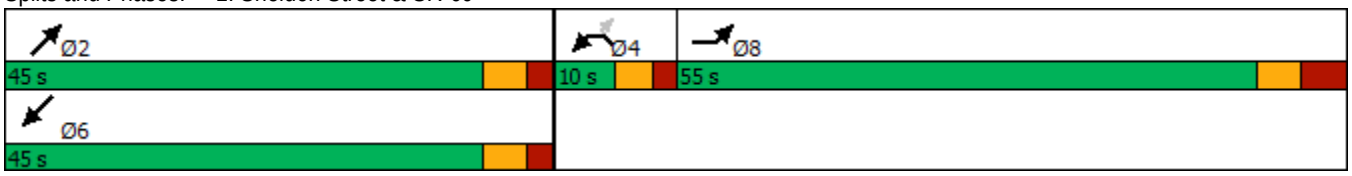
APPENDIX SS-3

SR 69 Existing Delay and Capacity Analysis Results

Lane Group	EBL	NWL2	NET	SWT	SWR
Lane Configurations					
Traffic Volume (vph)	279	20	323	514	934
Future Volume (vph)	279	20	323	514	934
Turn Type	Prot	Prot	NA	NA	Free
Protected Phases	8	4	2	6	
Permitted Phases					Free
Detector Phase	8	4	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.0	20.8	20.8	
Total Split (s)	55.0	10.0	45.0	45.0	
Total Split (%)	50.0%	9.1%	40.9%	40.9%	
Yellow Time (s)	3.6	3.0	3.6	3.6	
All-Red Time (s)	4.0	2.0	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.0	5.8	5.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	
Act Effct Green (s)	10.9	4.9	16.8	16.8	42.9
Actuated g/C Ratio	0.25	0.11	0.39	0.39	1.00
v/c Ratio	0.24	0.11	0.18	0.40	0.36
Control Delay	14.4	21.6	9.3	11.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	21.6	9.3	11.1	0.4
LOS	B	C	A	B	A
Approach Delay	14.4		9.3	4.2	
Approach LOS	B		A	A	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 42.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 40.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	18	531	7	22	1470	8	13	0	10	10
Future Volume (vph)	18	531	7	22	1470	8	13	0	10	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	16.6	25.1	25.1	16.7	25.1	25.1	22.2	22.2	22.2	22.2
Total Split (s)	30.0	69.0	69.0	30.0	69.0	69.0	36.0	36.0	36.0	36.0
Total Split (%)	22.2%	51.1%	51.1%	22.2%	51.1%	51.1%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	1.5	1.5	3.7	1.5	1.5	4.2	4.2	4.2	4.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.1	5.1	6.7	5.1	5.1	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.0	108.6	108.6	10.0	108.7	108.7	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.07	0.80	0.80	0.07	0.81	0.81	0.11	0.11	0.11	0.11
v/c Ratio	0.15	0.14	0.01	0.18	0.39	0.01	0.09	0.01	0.07	0.14
Control Delay	61.6	5.6	0.0	89.0	2.0	0.0	55.6	0.0	55.1	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	5.6	0.0	89.0	2.0	0.0	55.6	0.0	55.1	31.8
LOS	E	A	A	F	A	A	E	A	E	C
Approach Delay		7.4			3.3			35.4		38.3
Approach LOS		A			A			D		D

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

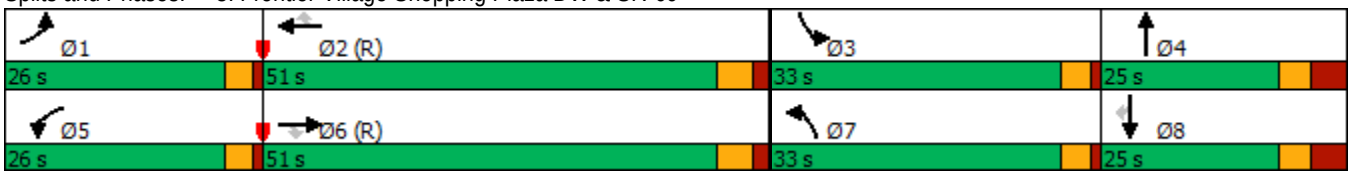
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	513	27	62	1434	66	0			
Future Volume (vph)	513	27	62	1434	66	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	50.5	50.5	10.0	50.5	10.0	13.0	10.0	10.0	13.0
Total Split (s)	51.0	51.0	26.0	51.0	33.0	25.0	26.0	33.0	25.0
Total Split (%)	37.8%	37.8%	19.3%	37.8%	24.4%	18.5%	19%	24%	19%
Yellow Time (s)	3.6	3.6	3.0	3.6	3.0	3.2	3.0	3.0	3.2
All-Red Time (s)	1.9	1.9	1.0	1.9	1.0	3.8	1.0	1.0	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	5.5	5.5	4.0	5.5	4.0	7.0			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	111.5	111.5	6.6	120.1	8.5	6.1			
Actuated g/C Ratio	0.83	0.83	0.05	0.89	0.06	0.05			
v/c Ratio	0.13	0.02	0.40	0.34	0.33	0.05			
Control Delay	3.2	0.0	78.6	0.4	64.5	0.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	3.2	0.0	78.6	0.4	64.5	0.2			
LOS	A	A	E	A	E	A			
Approach Delay	3.0			3.6		43.5			
Approach LOS	A			A		D			

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 105 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Frontier Village Shopping Plaza DW & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	473	26	38	1478	51	29	23	16	18	39	30
Future Volume (vph)	49	473	26	38	1478	51	29	23	16	18	39	30
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.5	26.2	26.2	13.1	26.2		13.5	13.4	13.4	13.2	13.4	13.4
Total Split (s)	25.0	52.0	52.0	25.0	52.0		25.0	33.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%		18.5%	24.4%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3		3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	4.5	1.9	1.9	4.1	1.9		4.5	3.8	3.8	4.2	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.2	6.2	7.1	6.2		7.5	7.4	7.4	7.2	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	6.8	98.5	98.5	6.5	97.8	135.0	6.3	7.9	7.9	6.1	7.5	7.5
Actuated g/C Ratio	0.05	0.73	0.73	0.05	0.72	1.00	0.05	0.06	0.06	0.05	0.06	0.06
v/c Ratio	0.31	0.14	0.02	0.25	0.44	0.03	0.20	0.23	0.07	0.13	0.41	0.15
Control Delay	87.1	3.4	0.5	85.7	3.4	0.0	64.8	64.8	0.6	63.8	72.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.1	3.4	0.5	85.7	3.4	0.0	64.8	64.8	0.6	63.8	72.9	1.4
LOS	F	A	A	F	A	A	E	E	A	E	E	A
Approach Delay		10.7			5.3			50.1			46.2	
Approach LOS		B			A			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 75 (56%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	16	466	8	29	1555	46	28	10	14	10	53
Future Volume (vph)	16	466	8	29	1555	46	28	10	14	10	53
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.6	25.6	25.6	12.7	25.6	25.6	12.6	13.0	13.0	13.0	13.0
Total Split (s)	25.0	52.0	52.0	25.0	52.0	52.0	25.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%	38.5%	18.5%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.8	3.0	3.8	3.8
All-Red Time (s)	3.6	1.3	1.3	3.7	1.3	1.3	3.6	3.2	4.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.6	5.6	6.7	5.6	5.6	6.6	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	6.3	103.0	103.0	7.0	106.3	106.3	6.9	9.3	6.0	6.1	6.1
Actuated g/C Ratio	0.05	0.76	0.76	0.05	0.79	0.79	0.05	0.07	0.04	0.05	0.05
v/c Ratio	0.21	0.19	0.01	0.35	0.61	0.04	0.33	0.12	0.10	0.13	0.29
Control Delay	57.9	6.4	0.1	71.9	10.6	0.1	71.4	49.9	63.4	65.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	6.4	0.1	71.9	10.6	0.1	71.4	49.9	63.4	65.6	3.8
LOS	E	A	A	E	B	A	E	D	E	E	A
Approach Delay		7.9			11.4			64.2		22.5	
Approach LOS		A			B			E		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 40 (30%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

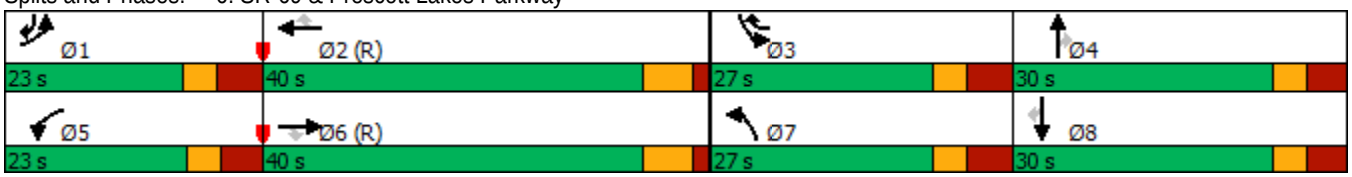
Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	434	17	12	1542	467	16	38	8	190	15	96
Future Volume (vph)	33	434	17	12	1542	467	16	38	8	190	15	96
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	21.1	26.1	26.1	12.8	26.1	13.1	13.1	12.8	12.8	13.1	12.8	21.1
Total Split (s)	23.0	40.0	40.0	23.0	40.0	27.0	27.0	30.0	30.0	27.0	30.0	23.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	22.5%	22.5%	25.0%	25.0%	22.5%	25.0%	19.2%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.1	1.6	1.6	3.8	1.6	4.1	4.1	3.8	3.8	4.1	3.8	4.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.1	6.1	6.8	6.1	7.1	7.1	6.8	6.8	7.1	6.8	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	77.3	77.3	6.4	61.8	80.1	6.1	7.4	7.4	12.3	18.9	39.7
Actuated g/C Ratio	0.12	0.64	0.64	0.05	0.52	0.67	0.05	0.06	0.06	0.10	0.16	0.33
v/c Ratio	0.09	0.14	0.02	0.14	0.64	0.41	0.10	0.36	0.04	0.59	0.05	0.18
Control Delay	48.0	10.6	0.0	72.8	17.7	2.5	55.6	62.0	0.2	58.1	42.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	10.6	0.0	72.8	17.7	2.5	55.6	62.0	0.2	58.1	42.9	6.1
LOS	D	B	A	E	B	A	E	E	A	E	D	A
Approach Delay		12.8			14.5			52.1			40.8	
Approach LOS		B			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8 (7%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	617	15	38	2079	9	2
Future Volume (vph)	617	15	38	2079	9	2
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.6	25.6	13.6	25.6	13.6	13.6
Total Split (s)	59.0	59.0	28.0	87.0	33.0	28.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	23.3%
Yellow Time (s)	4.3	4.3	3.0	4.3	3.0	3.0
All-Red Time (s)	1.3	1.3	3.6	1.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.6	5.6	6.6	6.6
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes	Yes			Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	101.9	101.9	7.0	116.2	7.0	9.7
Actuated g/C Ratio	0.85	0.85	0.06	0.97	0.06	0.08
v/c Ratio	0.16	0.01	0.20	0.46	0.05	0.02
Control Delay	1.7	0.8	55.3	0.8	54.0	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	0.8	55.3	0.8	54.0	31.5
LOS	A	A	E	A	D	C
Approach Delay	1.7			1.7	50.3	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 100 (83%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 1.9	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	570	16	50	1773	44	67	2	8	25	10	277
Future Volume (vph)	20	570	16	50	1773	44	67	2	8	25	10	277
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.5	26.1	26.1	12.6	26.1	26.1	15.2	15.2	15.2	15.2	15.2	15.2
Total Split (s)	25.0	59.0	59.0	25.0	59.0	59.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	20.8%	49.2%	49.2%	20.8%	49.2%	49.2%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.3	4.7	4.7	3.3	4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	3.2	1.4	1.4	3.3	1.4	1.4	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.1	6.1	6.6	6.1	6.1	7.2	7.2	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.2	83.5	83.5	7.6	87.5	87.5	11.5	11.5	11.5	11.5	11.5	11.5
Actuated g/C Ratio	0.05	0.70	0.70	0.06	0.73	0.73	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.24	0.18	0.02	0.48	0.52	0.04	0.55	0.01	0.04	0.20	0.06	0.74
Control Delay	64.1	6.1	0.4	67.6	7.5	0.3	66.3	46.0	0.4	51.7	47.6	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	6.1	0.4	67.6	7.5	0.3	66.3	46.0	0.4	51.7	47.6	19.0
LOS	E	A	A	E	A	A	E	D	A	D	D	B
Approach Delay		7.9			9.0			58.7			22.5	
Approach LOS		A			A			E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 89 (74%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 75.2%	ICU Level of Service D
Analysis Period (min) 15	

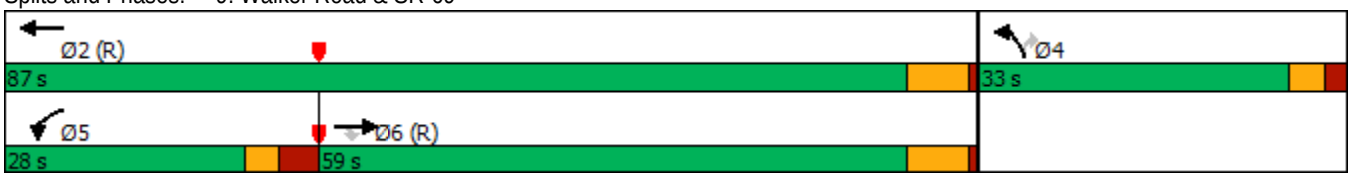
Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	543	60	59	1754	113	16
Future Volume (vph)	543	60	59	1754	113	16
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	26.5	26.5	24.5	26.5	23.3	23.3
Total Split (s)	59.0	59.0	28.0	87.0	33.0	33.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	27.5%
Yellow Time (s)	5.5	5.5	3.0	5.5	3.2	3.2
All-Red Time (s)	1.0	1.0	3.5	1.0	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.3	5.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	84.4	84.4	9.2	97.8	10.4	10.4
Actuated g/C Ratio	0.70	0.70	0.08	0.82	0.09	0.09
v/c Ratio	0.16	0.06	0.47	0.66	0.41	0.11
Control Delay	6.2	3.2	49.2	6.5	56.1	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	3.2	49.2	6.5	56.1	22.6
LOS	A	A	D	A	E	C
Approach Delay	5.9			7.9	52.1	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 75 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

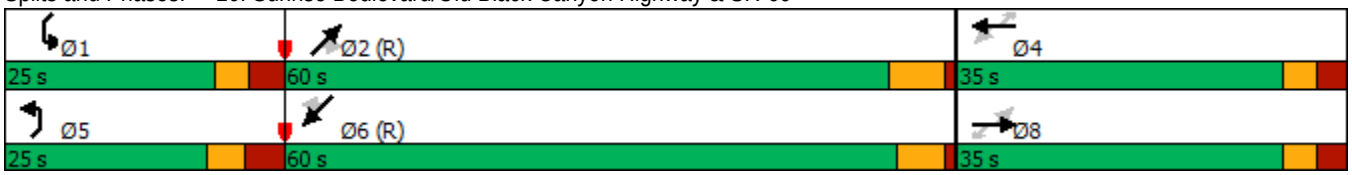
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	33	4	22	108	8	32	8	578	6	8	1811	50
Future Volume (vph)	33	4	22	108	8	32	8	578	6	8	1811	50
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	13.9	13.9	13.9	13.9	13.9	13.9	14.9	36.0	36.0	14.3	35.4	35.4
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	25.0	60.0	60.0	25.0	60.0	60.0
Total Split (%)	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%	20.8%	50.0%	50.0%	20.8%	50.0%	50.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.4	4.9	4.9	3.0	4.3	4.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.5	1.1	1.1	3.3	1.1	1.1
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.9	6.0	6.0	6.3	5.4	5.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.4	15.4		15.4	15.4	8.0	89.9	89.9	8.0	90.4	90.4
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.07	0.75	0.75	0.07	0.75	0.75
v/c Ratio		0.29	0.09		0.75	0.12	0.08	0.24	0.01	0.08	0.74	0.04
Control Delay		50.6	0.6		74.6	0.9	77.0	2.5	0.2	74.2	5.6	0.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		50.6	0.6		74.6	0.9	77.0	2.5	0.2	74.2	5.6	0.3
LOS		D	A		E	A	E	A	A	E	A	A
Approach Delay		31.8			58.6			3.5			5.8	
Approach LOS		C			E			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 32 (27%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 77.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	7	83	17	626	1786	16	
Future Volume (vph)	7	83	17	626	1786	16	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.1	14.1	14.5	25.7	25.7	25.7	13.6
Total Split (s)	34.0	34.0	26.0	60.0	60.0	60.0	26.0
Total Split (%)	28.3%	28.3%	21.7%	50.0%	50.0%	50.0%	22%
Yellow Time (s)	3.3	3.3	3.3	4.7	4.7	4.7	3.0
All-Red Time (s)	2.8	2.8	3.2	1.0	1.0	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.1	6.1	6.5	5.7	5.7	5.7	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.4	8.4	8.0	99.8	94.0	94.0	
Actuated g/C Ratio	0.07	0.07	0.07	0.83	0.78	0.78	
v/c Ratio	0.07	0.47	0.15	0.23	0.70	0.01	
Control Delay	53.0	18.9	68.0	2.6	2.0	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.0	18.9	68.0	2.6	2.0	0.0	
LOS	D	B	E	A	A	A	
Approach Delay	21.7			4.2	2.0		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 116 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	25	93	24	652	1731	8	
Future Volume (vph)	25	93	24	652	1731	8	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.4	14.4	14.0	25.3	25.3	25.3	14.2
Total Split (s)	35.0	35.0	25.0	60.0	60.0	60.0	25.0
Total Split (%)	29.2%	29.2%	20.8%	50.0%	50.0%	50.0%	21%
Yellow Time (s)	3.4	3.4	3.0	4.3	4.3	4.3	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	1.0	1.0	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.0	5.3	5.3	5.3	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.4	8.4	8.1	99.9	91.3	91.3	
Actuated g/C Ratio	0.07	0.07	0.07	0.83	0.76	0.76	
v/c Ratio	0.22	0.50	0.22	0.24	0.70	0.01	
Control Delay	56.7	18.8	43.6	3.9	3.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.7	18.8	43.6	3.9	3.5	0.1	
LOS	E	B	D	A	A	A	
Approach Delay	26.8			5.3	3.5		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 73 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	105	15	708	1634	37
Future Volume (vph)	41	105	15	708	1634	37
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	14.0	14.0	14.2	25.8	25.8	25.8
Total Split (s)	30.0	30.0	30.0	90.0	60.0	60.0
Total Split (%)	25.0%	25.0%	25.0%	75.0%	50.0%	50.0%
Yellow Time (s)	3.0	3.0	3.0	4.7	4.7	4.7
All-Red Time (s)	3.0	3.0	3.2	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.2	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.7	8.7	8.0	99.5	93.9	93.9
Actuated g/C Ratio	0.07	0.07	0.07	0.83	0.78	0.78
v/c Ratio	0.35	0.52	0.14	0.26	0.64	0.03
Control Delay	60.6	18.3	66.5	3.0	7.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	18.3	66.5	3.0	7.3	0.4
LOS	E	B	E	A	A	A
Approach Delay	30.3			4.3	7.1	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

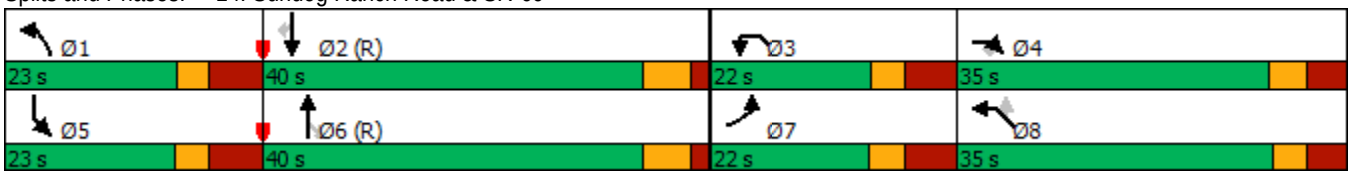
Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	23	3	27	15	838	27	20	1662	37	26	3	12
Future Volume (vph)	23	3	27	15	838	27	20	1662	37	26	3	12
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.9	12.1	12.1	12.7	11.0	11.0	12.8	11.0	11.0	12.7	11.8	11.8
Total Split (s)	22.0	35.0	35.0	23.0	40.0	40.0	23.0	40.0	40.0	22.0	35.0	35.0
Total Split (%)	18.3%	29.2%	29.2%	19.2%	33.3%	33.3%	19.2%	33.3%	33.3%	18.3%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0
All-Red Time (s)	4.6	3.8	3.8	4.7	1.7	1.7	4.8	1.7	1.7	4.7	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.9	7.1	7.1	7.7	6.0	6.0	7.8	6.0	6.0	7.7	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	7.9	5.1	5.1	5.3	92.7	92.7	5.4	95.4	95.4	5.6	5.2	5.2
Actuated g/C Ratio	0.07	0.04	0.04	0.04	0.77	0.77	0.04	0.80	0.80	0.05	0.04	0.04
v/c Ratio	0.11	0.04	0.13	0.11	0.23	0.02	0.14	0.45	0.03	0.17	0.04	0.06
Control Delay	53.8	56.3	1.1	64.7	6.8	0.0	76.2	1.6	0.0	57.2	55.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	56.3	1.1	64.7	6.8	0.0	76.2	1.6	0.0	57.2	55.7	0.5
LOS	D	E	A	E	A	A	E	A	A	E	E	A
Approach Delay	27.2				7.5			2.4			40.3	
Approach LOS	C				A			A			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

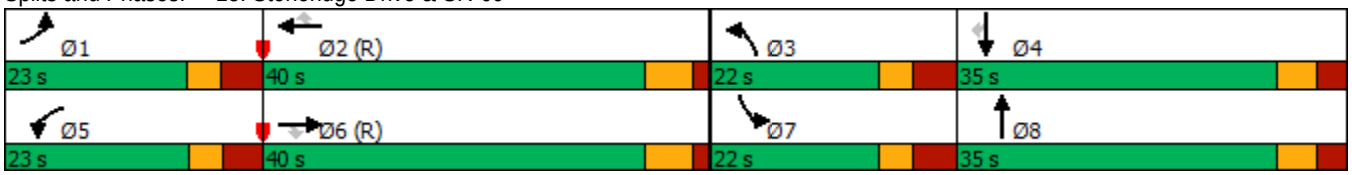
Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	853	11	67	1606	118	71	19	19	12	70
Future Volume (vph)	24	853	11	67	1606	118	71	19	19	12	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.7	25.8	25.8	12.6	25.8	25.8	10.9	12.5	10.9	12.5	12.5
Total Split (s)	23.0	40.0	40.0	23.0	40.0	40.0	22.0	35.0	22.0	35.0	35.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	33.3%	18.3%	29.2%	18.3%	29.2%	29.2%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	3.7	1.5	1.5	3.6	1.5	1.5	3.9	2.9	3.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.8	5.8	6.6	5.8	5.8	6.9	6.5	6.9	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	6.6	77.2	77.2	9.1	82.2	82.2	6.6	12.4	4.8	6.1	6.1
Actuated g/C Ratio	0.06	0.64	0.64	0.08	0.68	0.68	0.06	0.10	0.04	0.05	0.05
v/c Ratio	0.27	0.28	0.01	0.54	0.50	0.11	0.41	0.32	0.15	0.14	0.34
Control Delay	51.0	10.5	0.0	83.3	3.9	0.2	60.8	15.6	57.8	57.8	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	10.5	0.0	83.3	3.9	0.2	60.8	15.6	57.8	57.8	4.2
LOS	D	B	A	F	A	A	E	B	E	E	A
Approach Delay		11.5			6.7			32.1		20.8	
Approach LOS		B			A			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 86 (72%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Stoneridge Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	792	54	22	1448	186	56	7	5	114	38	287
Future Volume (vph)	130	792	54	22	1448	186	56	7	5	114	38	287
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.0	25.5	25.5	12.8	25.6	25.6	12.8	12.8	12.8	12.8	12.8	12.8
Total Split (s)	32.0	50.0	50.0	32.0	50.0	50.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	26.7%	41.7%	41.7%	26.7%	41.7%	41.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	1.2	1.2	3.8	1.3	1.3	3.8	3.8	3.8	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.5	5.5	6.8	5.6	5.6	6.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	8.8	84.8	84.8	6.5	77.0	77.0	14.8	14.8	14.8	14.8	14.8	14.8
Actuated g/C Ratio	0.07	0.71	0.71	0.05	0.64	0.64	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.56	0.24	0.05	0.25	0.48	0.19	0.37	0.03	0.02	0.72	0.18	0.67
Control Delay	53.8	9.6	5.1	75.6	4.5	0.4	52.5	42.9	0.2	72.3	46.4	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	9.6	5.1	75.6	4.5	0.4	52.5	42.9	0.2	72.3	46.4	12.3
LOS	D	A	A	E	A	A	D	D	A	E	D	B
Approach Delay		15.2			5.0			47.9			30.8	
Approach LOS		B			A			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 65 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

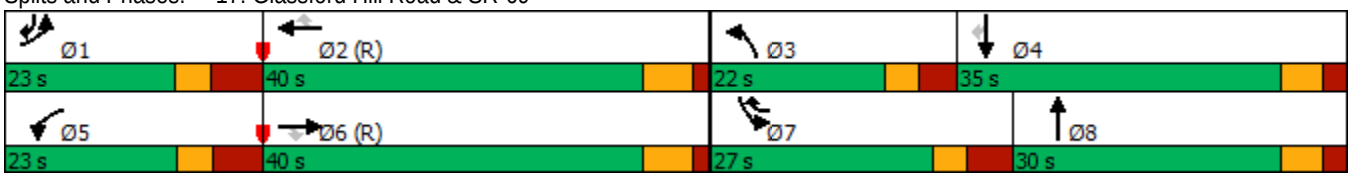
Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Future Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	23.0	40.0	40.0	23.0	40.0	27.0	22.0	30.0	27.0	35.0	23.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	22.5%	18.3%	25.0%	22.5%	29.2%	19.2%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	15.3	71.1	71.1	8.6	61.1	77.5	8.0	9.1	10.4	18.1	39.4
Actuated g/C Ratio	0.13	0.59	0.59	0.07	0.51	0.65	0.07	0.08	0.09	0.15	0.33
v/c Ratio	0.72	0.34	0.02	0.33	0.54	0.15	0.17	0.30	0.56	0.44	0.62
Control Delay	72.3	6.1	0.0	81.3	8.1	1.8	56.4	38.6	59.8	51.6	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.3	6.1	0.0	81.3	8.1	1.8	56.4	38.6	59.8	51.6	15.0
LOS	E	A	A	F	A	A	E	D	E	D	B
Approach Delay		25.9			9.4			42.1		31.4	
Approach LOS		C			A			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 119 (99%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

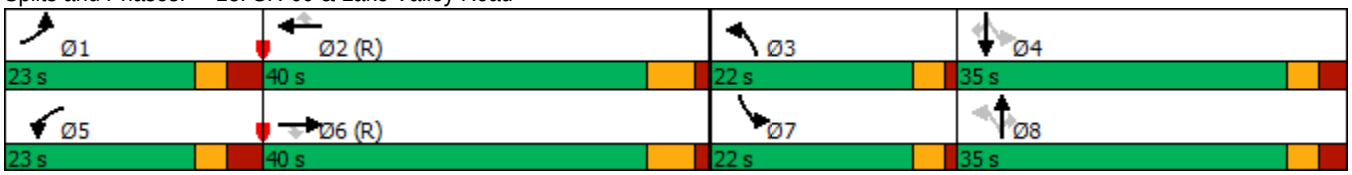
Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	671	48	121	1398	87	17	18	33	31	8	69
Future Volume (vph)	99	671	48	121	1398	87	17	18	33	31	8	69
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	11.1	25.7	25.7	11.1	25.7	25.7	10.0	10.6	10.6	10.0	10.6	10.6
Total Split (s)	23.0	40.0	40.0	23.0	40.0	40.0	22.0	35.0	35.0	22.0	35.0	35.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	33.3%	18.3%	29.2%	29.2%	18.3%	29.2%	29.2%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.1	1.4	1.4	3.1	1.4	1.4	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.7	5.7	6.1	5.7	5.7	4.0	5.6	5.6	4.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	10.7	79.9	79.9	12.4	81.6	81.6	10.9	5.7	5.7	12.9	8.3	8.3
Actuated g/C Ratio	0.09	0.67	0.67	0.10	0.68	0.68	0.09	0.05	0.05	0.11	0.07	0.07
v/c Ratio	0.68	0.31	0.05	0.73	0.63	0.09	0.12	0.23	0.19	0.22	0.07	0.35
Control Delay	64.4	11.0	3.6	80.0	4.6	0.4	45.3	60.8	2.3	47.8	52.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	11.0	3.6	80.0	4.6	0.4	45.3	60.8	2.3	47.8	52.8	7.1
LOS	E	B	A	E	A	A	D	E	A	D	D	A
Approach Delay		17.0			10.0			28.6			22.3	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 77 (64%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

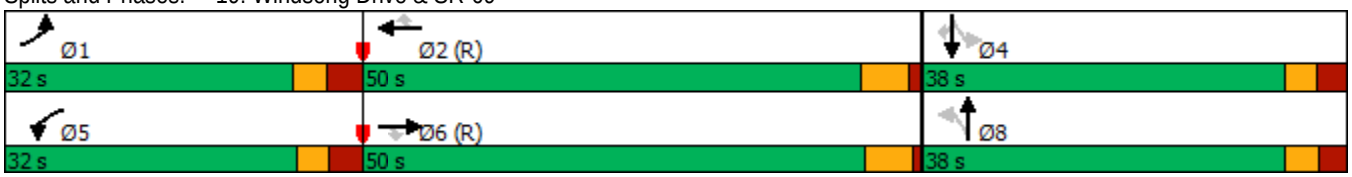
Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	615	3	5	1555	271	7	7	85	3	91
Future Volume (vph)	89	615	3	5	1555	271	7	7	85	3	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.2	25.3	25.3	12.0	25.5	25.5	10.7	10.7	10.8	10.8	10.8
Total Split (s)	32.0	50.0	50.0	32.0	50.0	50.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	26.7%	41.7%	41.7%	26.7%	41.7%	41.7%	31.7%	31.7%	31.7%	31.7%	31.7%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.2	1.0	1.0	3.0	1.2	1.2	2.7	2.7	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.2	5.3	5.3	6.0	5.5	5.5		5.7		5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	11.0	93.6	93.6	6.0	78.6	78.6		13.0		12.9	12.9
Actuated g/C Ratio	0.09	0.78	0.78	0.05	0.66	0.66		0.11		0.11	0.11
v/c Ratio	0.60	0.24	0.00	0.06	0.73	0.27		0.10		0.66	0.38
Control Delay	48.4	10.9	0.0	62.8	6.5	0.9		43.1		71.6	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	48.4	10.9	0.0	62.8	6.5	0.9		43.1		71.6	13.3
LOS	D	B	A	E	A	A		D		E	B
Approach Delay		15.6			5.8			43.1		41.9	
Approach LOS		B			A			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 42 (35%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Windsong Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	104	573	13	53	1441	137	51	15	117	34	346
Future Volume (vph)	104	573	13	53	1441	137	51	15	117	34	346
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.6	25.6	10.7	25.6	25.6	11.6	11.6	11.6	11.6	11.6
Total Split (s)	32.0	50.0	50.0	32.0	50.0	50.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	26.7%	41.7%	41.7%	26.7%	41.7%	41.7%	31.7%	31.7%	31.7%	31.7%	31.7%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	1.3	1.3	2.7	1.3	1.3	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.6	5.6	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	11.6	81.0	81.0	8.0	75.3	75.3	16.2	16.2	16.2	16.2	16.2
Actuated g/C Ratio	0.10	0.68	0.68	0.07	0.63	0.63	0.14	0.14	0.14	0.14	0.14
v/c Ratio	0.66	0.26	0.01	0.49	0.71	0.15	0.30	0.12	0.69	0.15	0.70
Control Delay	71.0	5.5	0.3	84.4	11.8	1.4	48.6	28.5	66.9	44.2	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.0	5.5	0.3	84.4	11.8	1.4	48.6	28.5	66.9	44.2	11.8
LOS	E	A	A	F	B	A	D	C	E	D	B
Approach Delay		15.3			13.3			41.7		27.0	
Approach LOS		B			B			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 19 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	604	16	14	1227	86	25	3	14	48	53	379
Future Volume (vph)	82	604	16	14	1227	86	25	3	14	48	53	379
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	11.3	25.7	25.7	11.3	25.7	25.7	13.6	13.6	13.6	13.3	13.3	13.3
Total Split (s)	32.0	50.0	50.0	32.0	50.0	50.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	26.7%	41.7%	41.7%	26.7%	41.7%	41.7%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.3	1.4	1.4	3.3	1.4	1.4	2.6	2.6	2.6	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	5.7	5.7	6.3	5.7	5.7	5.6	5.6	5.6	5.3	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	10.4	92.4	92.4	5.3	80.5	80.5	11.5	11.5	11.5	11.8	11.8	11.8
Actuated g/C Ratio	0.09	0.77	0.77	0.04	0.67	0.67	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.58	0.24	0.01	0.19	0.56	0.09	0.21	0.02	0.07	0.38	0.32	0.79
Control Delay	65.0	6.9	2.1	60.9	12.9	3.1	51.4	45.0	0.6	56.6	53.1	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	6.9	2.1	60.9	12.9	3.1	51.4	45.0	0.6	56.6	53.1	16.9
LOS	E	A	A	E	B	A	D	D	A	E	D	B
Approach Delay		13.6			12.8			34.1			24.9	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	631	1336	30	13	20
Future Volume (vph)	20	631	1336	30	13	20
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	15.1	27.3	27.3	27.3	14.4	14.4
Total Split (s)	20.0	65.0	45.0	45.0	20.0	20.0
Total Split (%)	23.5%	76.5%	52.9%	52.9%	23.5%	23.5%
Yellow Time (s)	3.0	5.5	5.5	5.5	3.7	3.7
All-Red Time (s)	4.1	1.8	1.8	1.8	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.3	7.3	7.3	6.4	6.4
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	8.2	56.8	51.6	51.6	8.2	8.2
Actuated g/C Ratio	0.13	0.88	0.80	0.80	0.13	0.13
v/c Ratio	0.10	0.22	0.51	0.03	0.03	0.10
Control Delay	29.9	2.3	8.9	3.8	29.0	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	2.3	8.9	3.8	29.0	14.9
LOS	C	A	A	A	C	B
Approach Delay		3.1	8.8		20.4	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 64.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 55.0%	ICU Level of Service B
Analysis Period (min) 15	

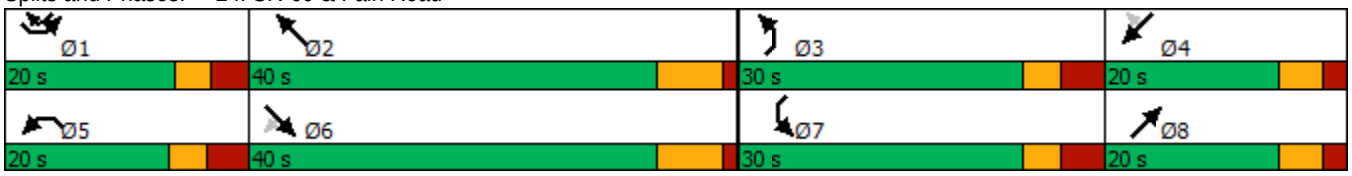
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	37	512	63	60	1026	348	285	82	282	46	49
Future Volume (vph)	37	512	63	60	1026	348	285	82	282	46	49
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.1	26.7	26.7	12.5	26.7		14.6	11.7	14.6	11.7	12.1
Total Split (s)	20.0	40.0	40.0	20.0	40.0		30.0	20.0	30.0	20.0	20.0
Total Split (%)	18.2%	36.4%	36.4%	18.2%	36.4%		27.3%	18.2%	27.3%	18.2%	18.2%
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5		3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.1	1.2	1.2	3.5	1.2		3.6	2.1	3.6	2.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.7	6.5	6.7		6.6	5.7	6.6	5.7	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None	None	None	None
Act Effct Green (s)	6.9	33.3	33.3	7.8	34.5	89.3	21.5	12.9	12.5	7.1	16.7
Actuated g/C Ratio	0.08	0.37	0.37	0.09	0.39	1.00	0.24	0.14	0.14	0.08	0.19
v/c Ratio	0.29	0.42	0.10	0.42	0.82	0.24	0.73	0.57	0.64	0.34	0.14
Control Delay	48.6	24.6	0.3	50.4	32.9	0.4	45.0	38.9	44.1	48.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	24.6	0.3	50.4	32.9	0.4	45.0	38.9	44.1	48.9	1.4
LOS	D	C	A	D	C	A	D	D	D	D	A
Approach Delay		23.6			25.7			42.9		39.1	
Approach LOS		C			C			D		D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 89.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

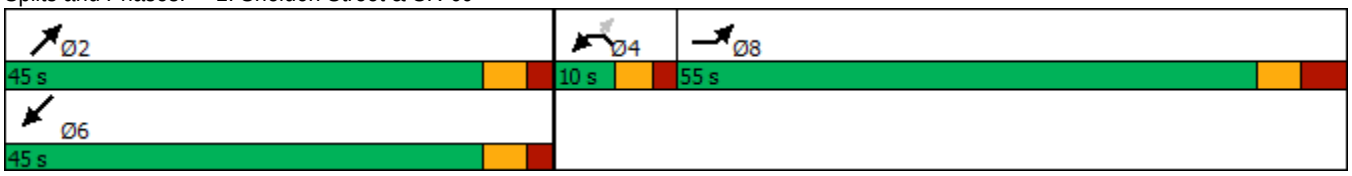
Splits and Phases: 24: SR-69 & Fain Road



Lane Group	EBL	NWL2	NWR	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	799	14	13	686	657	655
Future Volume (vph)	799	14	13	686	657	655
Turn Type	Prot	Prot	Perm	NA	NA	Free
Protected Phases	8	4		2	6	
Permitted Phases			4			Free
Detector Phase	8	4	4	2	6	
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.0	9.0	20.8	20.8	
Total Split (s)	55.0	10.0	10.0	45.0	45.0	
Total Split (%)	50.0%	9.1%	9.1%	40.9%	40.9%	
Yellow Time (s)	3.6	3.0	3.0	3.6	3.6	
All-Red Time (s)	4.0	2.0	2.0	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.0	5.0	5.8	5.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	
Act Effct Green (s)	22.5	5.1	5.1	23.0	23.0	62.9
Actuated g/C Ratio	0.36	0.08	0.08	0.37	0.37	1.00
v/c Ratio	0.49	0.10	0.06	0.42	0.55	0.26
Control Delay	17.9	36.8	0.5	16.6	18.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	36.8	0.5	16.6	18.9	0.2
LOS	B	D	A	B	B	A
Approach Delay	17.9			16.6	9.6	
Approach LOS	B			B	A	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 62.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	21	1418	7	18	1283	21	25	7	46	10
Future Volume (vph)	21	1418	7	18	1283	21	25	7	46	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	16.6	25.1	25.1	16.7	25.1	25.1	22.2	22.2	22.2	22.2
Total Split (s)	30.0	69.0	69.0	30.0	69.0	69.0	36.0	36.0	36.0	36.0
Total Split (%)	22.2%	51.1%	51.1%	22.2%	51.1%	51.1%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	1.5	1.5	3.7	1.5	1.5	4.2	4.2	4.2	4.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.1	5.1	6.7	5.1	5.1	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.0	103.1	103.1	10.0	103.2	103.2	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.07	0.76	0.76	0.07	0.76	0.76	0.11	0.11	0.11	0.11
v/c Ratio	0.18	0.40	0.01	0.15	0.36	0.02	0.18	0.17	0.33	0.10
Control Delay	62.1	7.9	0.0	89.8	0.9	0.0	57.6	26.3	61.9	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.1	7.9	0.0	89.8	0.9	0.0	57.6	26.3	61.9	38.0
LOS	E	A	A	F	A	A	E	C	E	D
Approach Delay		8.7			2.1			40.1		55.1
Approach LOS		A			A			D		E

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

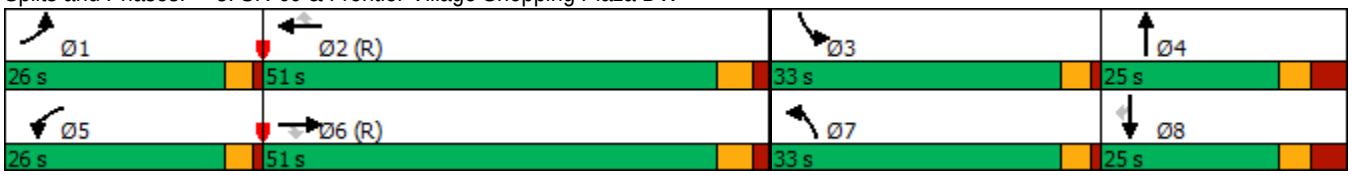
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	1317	158	114	1205	117	0			
Future Volume (vph)	1317	158	114	1205	117	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	50.5	50.5	10.0	50.5	10.0	13.0	10.0	10.0	13.0
Total Split (s)	51.0	51.0	26.0	51.0	33.0	25.0	26.0	33.0	25.0
Total Split (%)	37.8%	37.8%	19.3%	37.8%	24.4%	18.5%	19%	24%	19%
Yellow Time (s)	3.6	3.6	3.0	3.6	3.0	3.2	3.0	3.0	3.2
All-Red Time (s)	1.9	1.9	1.0	1.9	1.0	3.8	1.0	1.0	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	5.5	5.5	4.0	5.5	4.0	7.0			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	103.0	103.0	8.4	115.4	10.1	7.1			
Actuated g/C Ratio	0.76	0.76	0.06	0.85	0.07	0.05			
v/c Ratio	0.37	0.14	0.58	0.30	0.50	0.27			
Control Delay	8.9	4.0	69.7	0.6	66.7	1.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	8.9	4.0	69.7	0.6	66.7	1.1			
LOS	A	A	E	A	E	A			
Approach Delay	8.3			6.6		28.9			
Approach LOS	A			A		C			

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 79 (59%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: SR-69 & Frontier Village Shopping Plaza DW



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	1329	88	108	1194	38	64	41	71	46	93	70
Future Volume (vph)	39	1329	88	108	1194	38	64	41	71	46	93	70
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.5	26.2	26.2	13.1	26.2		13.5	13.4	13.4	13.2	13.4	13.4
Total Split (s)	25.0	52.0	52.0	25.0	52.0		25.0	33.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%		18.5%	24.4%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3		3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	4.5	1.9	1.9	4.1	1.9		4.5	3.8	3.8	4.2	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.2	6.2	7.1	6.2		7.5	7.4	7.4	7.2	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	6.5	81.9	81.9	9.0	86.6	135.0	7.4	12.1	12.1	6.7	11.2	11.2
Actuated g/C Ratio	0.05	0.61	0.61	0.07	0.64	1.00	0.05	0.09	0.09	0.05	0.08	0.08
v/c Ratio	0.25	0.47	0.09	0.51	0.40	0.03	0.37	0.27	0.28	0.29	0.65	0.29
Control Delay	86.2	5.6	0.2	59.1	20.0	0.0	66.9	59.5	2.5	66.0	78.6	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.2	5.6	0.2	59.1	20.0	0.0	66.9	59.5	2.5	66.0	78.6	2.7
LOS	F	A	A	E	B	A	E	E	A	E	E	A
Approach Delay		7.4			22.5			39.4			50.4	
Approach LOS		A			C			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 76 (56%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	58	1376	22	21	1307	36	21	0	38	4	74
Future Volume (vph)	58	1376	22	21	1307	36	21	0	38	4	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.6	25.6	25.6	12.7	25.6	25.6	12.6	13.0	13.0	13.0	13.0
Total Split (s)	25.0	52.0	52.0	25.0	52.0	52.0	25.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%	38.5%	18.5%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.8	3.0	3.8	3.8
All-Red Time (s)	3.6	1.3	1.3	3.7	1.3	1.3	3.6	3.2	4.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.6	5.6	6.7	5.6	5.6	6.6	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	9.0	100.0	100.0	6.6	95.2	95.2	6.6	6.1	6.3	6.1	6.1
Actuated g/C Ratio	0.07	0.74	0.74	0.05	0.71	0.71	0.05	0.05	0.05	0.05	0.05
v/c Ratio	0.54	0.57	0.02	0.27	0.57	0.03	0.27	0.05	0.26	0.05	0.41
Control Delay	88.7	14.9	0.1	69.5	13.0	0.1	69.5	0.2	66.1	63.0	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.7	14.9	0.1	69.5	13.0	0.1	69.5	0.2	66.1	63.0	7.2
LOS	F	B	A	E	B	A	E	A	E	E	A
Approach Delay		17.6			13.6			33.4		28.3	
Approach LOS		B			B			C		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 9 (7%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

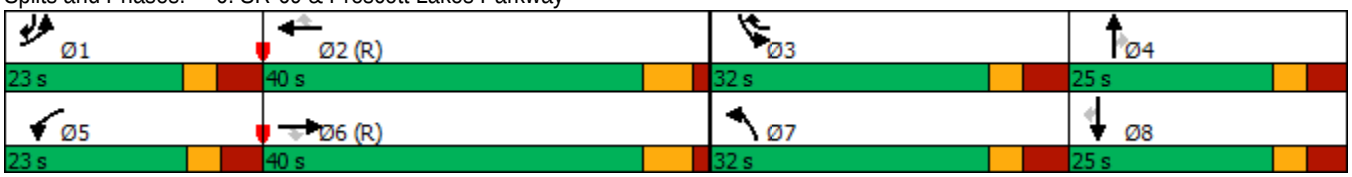
Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	1128	101	33	1141	252	44	50	43	588	108	231
Future Volume (vph)	208	1128	101	33	1141	252	44	50	43	588	108	231
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	21.1	26.1	26.1	12.8	26.1	13.1	13.1	12.8	12.8	13.1	12.8	21.1
Total Split (s)	23.0	40.0	40.0	23.0	40.0	32.0	32.0	25.0	25.0	32.0	25.0	23.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	26.7%	26.7%	20.8%	20.8%	26.7%	20.8%	19.2%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.1	1.6	1.6	3.8	1.6	4.1	4.1	3.8	3.8	4.1	3.8	4.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.1	6.1	6.8	6.1	7.1	7.1	6.8	6.8	7.1	6.8	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	15.0	60.8	60.8	7.6	47.9	78.4	6.8	8.2	8.2	24.3	25.7	47.5
Actuated g/C Ratio	0.12	0.51	0.51	0.06	0.40	0.65	0.06	0.07	0.07	0.20	0.21	0.40
v/c Ratio	0.53	0.48	0.12	0.32	0.61	0.24	0.25	0.43	0.19	0.92	0.29	0.32
Control Delay	53.6	22.5	1.1	80.5	26.1	6.1	56.9	63.5	1.6	66.3	41.2	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	22.5	1.1	80.5	26.1	6.1	56.9	63.5	1.6	66.3	41.2	3.7
LOS	D	C	A	F	C	A	E	E	A	E	D	A
Approach Delay		25.5			23.8			41.8			47.8	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1690	69	122	1401	89	78
Future Volume (vph)	1690	69	122	1401	89	78
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.6	25.6	13.6	25.6	13.6	13.6
Total Split (s)	59.0	59.0	28.0	87.0	33.0	28.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	23.3%
Yellow Time (s)	4.3	4.3	3.0	4.3	3.0	3.0
All-Red Time (s)	1.3	1.3	3.6	1.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.6	5.6	6.6	6.6
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes	Yes			Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	84.5	84.5	8.8	99.9	7.9	23.3
Actuated g/C Ratio	0.70	0.70	0.07	0.83	0.07	0.19
v/c Ratio	0.51	0.07	0.53	0.36	0.43	0.28
Control Delay	11.3	3.9	44.8	8.0	59.8	41.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	3.9	44.8	8.0	59.8	41.4
LOS	B	A	D	A	E	D
Approach Delay	11.0			11.0	51.2	
Approach LOS	B			B	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	1515	81	54	1364	72	67	9	50	81	22	92
Future Volume (vph)	169	1515	81	54	1364	72	67	9	50	81	22	92
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.5	26.1	26.1	12.6	26.1	26.1	15.2	15.2	15.2	15.2	15.2	15.2
Total Split (s)	25.0	59.0	59.0	25.0	59.0	59.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	20.8%	49.2%	49.2%	20.8%	49.2%	49.2%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.3	4.7	4.7	3.3	4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	3.2	1.4	1.4	3.3	1.4	1.4	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.1	6.1	6.6	6.1	6.1	7.2	7.2	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	82.4	82.4	7.9	72.0	72.0	12.3	12.3	12.3	12.3	12.3	12.3
Actuated g/C Ratio	0.13	0.69	0.69	0.07	0.60	0.60	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.78	0.47	0.08	0.51	0.49	0.08	0.52	0.05	0.22	0.62	0.13	0.40
Control Delay	66.5	18.7	5.3	75.5	16.2	2.8	63.0	46.6	5.1	69.1	48.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	18.7	5.3	75.5	16.2	2.8	63.0	46.6	5.1	69.1	48.4	13.8
LOS	E	B	A	E	B	A	E	D	A	E	D	B
Approach Delay		22.7			17.8			39.0			40.7	
Approach LOS		C			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48 (40%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

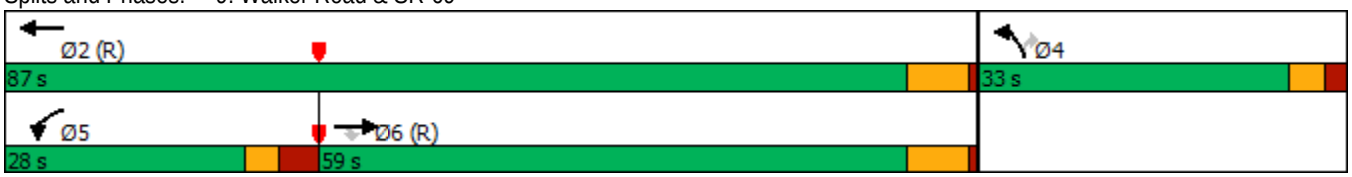
Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1449	197	81	1294	196	49
Future Volume (vph)	1449	197	81	1294	196	49
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	26.5	26.5	24.5	26.5	23.3	23.3
Total Split (s)	59.0	59.0	28.0	87.0	33.0	33.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	27.5%
Yellow Time (s)	5.5	5.5	3.0	5.5	3.2	3.2
All-Red Time (s)	1.0	1.0	3.5	1.0	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.3	5.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	78.3	78.3	10.8	95.6	12.6	12.6
Actuated g/C Ratio	0.65	0.65	0.09	0.80	0.10	0.10
v/c Ratio	0.47	0.19	0.55	0.50	0.59	0.25
Control Delay	3.6	0.6	64.7	5.0	58.0	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	0.6	64.7	5.0	58.0	15.6
LOS	A	A	E	A	E	B
Approach Delay	3.3			8.5	49.6	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 35 (29%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

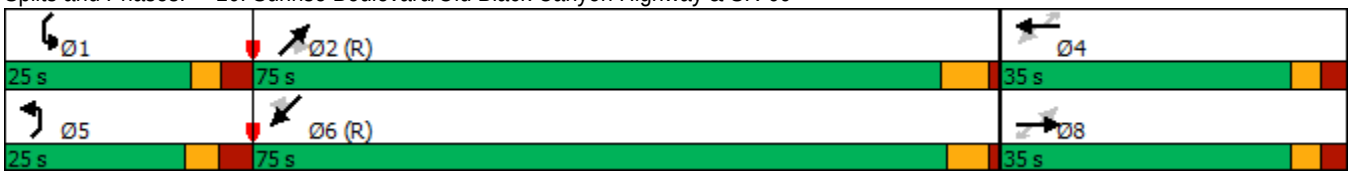
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	33	0	34	43	1	24	28	1381	61	11	1340	30
Future Volume (vph)	33	0	34	43	1	24	28	1381	61	11	1340	30
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	13.9	13.9	13.9	13.9	13.9	13.9	14.9	36.0	36.0	14.3	35.4	35.4
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	25.0	75.0	75.0	25.0	75.0	75.0
Total Split (%)	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	18.5%	55.6%	55.6%	18.5%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.4	4.9	4.9	3.0	4.3	4.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.5	1.1	1.1	3.3	1.1	1.1
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.9	6.0	6.0	6.3	5.4	5.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		9.7	9.7		9.7	9.7	8.2	111.6	111.6	8.0	108.7	108.7
Actuated g/C Ratio		0.07	0.07		0.07	0.07	0.06	0.83	0.83	0.06	0.81	0.81
v/c Ratio		0.37	0.20		0.51	0.14	0.28	0.51	0.05	0.12	0.51	0.03
Control Delay		69.8	2.3		78.7	1.5	67.5	6.3	1.0	64.8	0.8	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		69.8	2.3		78.7	1.5	67.5	6.3	1.0	64.8	0.8	0.0
LOS		E	A		E	A	E	A	A	E	A	A
Approach Delay		35.6			51.6			7.2			1.3	
Approach LOS		D			D			A			A	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 32 (24%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	5	23	19	1419	1358	10	
Future Volume (vph)	5	23	19	1419	1358	10	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.1	14.1	14.5	25.7	25.7	25.7	13.6
Total Split (s)	34.0	34.0	26.0	75.0	75.0	75.0	26.0
Total Split (%)	25.2%	25.2%	19.3%	55.6%	55.6%	55.6%	19%
Yellow Time (s)	3.3	3.3	3.3	4.7	4.7	4.7	3.0
All-Red Time (s)	2.8	2.8	3.2	1.0	1.0	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.1	6.1	6.5	5.7	5.7	5.7	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	8.1	123.1	114.4	114.4	
Actuated g/C Ratio	0.06	0.06	0.06	0.91	0.85	0.85	
v/c Ratio	0.05	0.21	0.20	0.48	0.49	0.01	
Control Delay	61.0	25.6	58.3	2.2	10.3	1.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.0	25.6	58.3	2.2	10.3	1.6	
LOS	E	C	E	A	B	A	
Approach Delay	31.5			2.9	10.2		
Approach LOS	C			A	B		

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 31 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

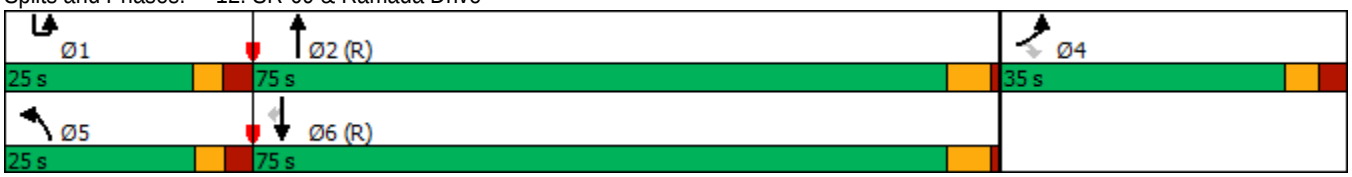
Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	25	18	1417	1331	8	
Future Volume (vph)	15	25	18	1417	1331	8	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.4	14.4	14.0	25.3	25.3	25.3	14.2
Total Split (s)	35.0	35.0	25.0	75.0	75.0	75.0	25.0
Total Split (%)	25.9%	25.9%	18.5%	55.6%	55.6%	55.6%	19%
Yellow Time (s)	3.4	3.4	3.0	4.3	4.3	4.3	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	1.0	1.0	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.0	5.3	5.3	5.3	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	8.0	123.2	114.7	114.7	
Actuated g/C Ratio	0.06	0.06	0.06	0.91	0.85	0.85	
v/c Ratio	0.15	0.23	0.19	0.48	0.48	0.01	
Control Delay	63.9	25.0	76.2	1.1	11.5	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	25.0	76.2	1.1	11.5	4.4	
LOS	E	C	E	A	B	A	
Approach Delay	39.4			2.1	11.4		
Approach LOS	D			A	B		

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 108 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

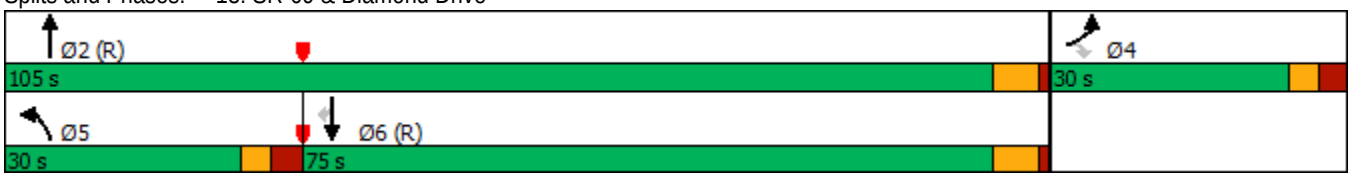
Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	26	28	1435	1313	38
Future Volume (vph)	34	26	28	1435	1313	38
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	14.0	14.0	14.2	25.8	25.8	25.8
Total Split (s)	30.0	30.0	30.0	105.0	75.0	75.0
Total Split (%)	22.2%	22.2%	22.2%	77.8%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	4.7	4.7	4.7
All-Red Time (s)	3.0	3.0	3.2	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.2	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.5	8.5	8.3	118.6	109.8	109.8
Actuated g/C Ratio	0.06	0.06	0.06	0.88	0.81	0.81
v/c Ratio	0.33	0.22	0.28	0.50	0.50	0.03
Control Delay	68.5	23.8	56.2	6.2	3.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	23.8	56.2	6.2	3.3	0.1
LOS	E	C	E	A	A	A
Approach Delay	49.2			7.2	3.2	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 49 (36%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

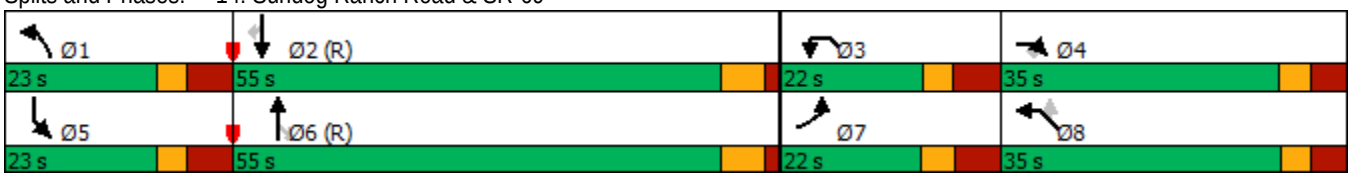
Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	145	16	28	47	1353	116	158	1130	151	89	14	84
Future Volume (vph)	145	16	28	47	1353	116	158	1130	151	89	14	84
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.9	12.1	12.1	12.7	11.0	11.0	12.8	11.0	11.0	12.7	11.8	11.8
Total Split (s)	22.0	35.0	35.0	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	35.0
Total Split (%)	16.3%	25.9%	25.9%	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	25.9%
Yellow Time (s)	3.3	3.3	3.3	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0
All-Red Time (s)	4.6	3.8	3.8	4.7	1.7	1.7	4.8	1.7	1.7	4.7	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.9	7.1	7.1	7.7	6.0	6.0	7.8	6.0	6.0	7.7	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	10.6	7.9	7.9	6.5	78.9	78.9	11.1	86.1	86.1	10.9	5.9	5.9
Actuated g/C Ratio	0.08	0.06	0.06	0.05	0.58	0.58	0.08	0.64	0.64	0.08	0.04	0.04
v/c Ratio	0.59	0.18	0.13	0.31	0.49	0.13	0.61	0.38	0.15	0.35	0.19	0.43
Control Delay	68.8	64.1	1.1	57.3	22.2	6.2	57.2	20.8	11.4	63.5	67.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	64.1	1.1	57.3	22.2	6.2	57.2	20.8	11.4	63.5	67.6	6.6
LOS	E	E	A	E	C	A	E	C	B	E	E	A
Approach Delay	58.5				22.0			23.8			38.3	
Approach LOS	E				C			C			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	116	1451	47	133	1269	35	49	4	40	15	66
Future Volume (vph)	116	1451	47	133	1269	35	49	4	40	15	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.7	25.8	25.8	12.6	25.8	25.8	10.9	12.5	10.9	12.5	12.5
Total Split (s)	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	22.0	35.0	35.0
Total Split (%)	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	16.3%	25.9%	25.9%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	3.7	1.5	1.5	3.6	1.5	1.5	3.9	2.9	3.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.8	5.8	6.6	5.8	5.8	6.9	6.5	6.9	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	13.5	84.2	84.2	15.0	85.6	85.6	6.0	6.6	5.6	6.2	6.2
Actuated g/C Ratio	0.10	0.62	0.62	0.11	0.63	0.63	0.04	0.05	0.04	0.05	0.05
v/c Ratio	0.72	0.50	0.05	0.74	0.43	0.04	0.35	0.21	0.30	0.19	0.36
Control Delay	84.2	8.1	0.1	83.3	7.2	0.1	68.4	1.0	67.8	67.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	8.1	0.1	83.3	7.2	0.1	68.4	1.0	67.8	67.1	5.0
LOS	F	A	A	F	A	A	E	A	E	E	A
Approach Delay		13.3			14.0			24.3		33.2	
Approach LOS		B			B			C		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 14 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: SR-69 & Stoneridge Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1337	94	35	1180	100	64	19	33	114	34	193
Future Volume (vph)	148	1337	94	35	1180	100	64	19	33	114	34	193
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.0	25.5	25.5	12.8	25.6	25.6	12.8	12.8	12.8	12.8	12.8	12.8
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	1.2	1.2	3.8	1.3	1.3	3.8	3.8	3.8	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.5	5.5	6.8	5.6	5.6	6.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	10.2	95.1	95.1	7.4	89.3	89.3	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.08	0.70	0.70	0.05	0.66	0.66	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.62	0.41	0.09	0.40	0.38	0.10	0.43	0.10	0.14	0.76	0.17	0.56
Control Delay	79.3	2.7	0.2	98.7	7.7	0.5	61.9	50.9	1.2	83.5	52.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	2.7	0.2	98.7	7.7	0.5	61.9	50.9	1.2	83.5	52.6	12.5
LOS	E	A	A	F	A	A	E	D	A	F	D	B
Approach Delay		9.7			9.6			42.8			40.2	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 19 (14%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 59.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Future Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	33.0	55.0	55.0	33.0	55.0	25.0	20.0	22.0	25.0	27.0	33.0
Total Split (%)	24.4%	40.7%	40.7%	24.4%	40.7%	18.5%	14.8%	16.3%	18.5%	20.0%	24.4%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	23.4	76.9	76.9	9.6	59.7	78.4	8.5	12.2	12.7	22.9	52.4
Actuated g/C Ratio	0.17	0.57	0.57	0.07	0.44	0.58	0.06	0.09	0.09	0.17	0.39
v/c Ratio	0.85	0.55	0.02	0.47	0.40	0.12	0.32	0.68	0.66	0.34	0.52
Control Delay	80.3	14.4	0.0	73.6	20.0	9.6	68.1	60.4	68.7	53.4	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	14.4	0.0	73.6	20.0	9.6	68.1	60.4	68.7	53.4	18.0
LOS	F	B	A	E	C	A	E	E	E	D	B
Approach Delay		34.5			21.8			61.4		39.0	
Approach LOS		C			C			E		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 66 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	972	76	100	900	82	17	33	96	132	28	103
Future Volume (vph)	157	972	76	100	900	82	17	33	96	132	28	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	11.1	25.7	25.7	11.1	25.7	25.7	10.0	10.6	10.6	10.0	10.6	10.6
Total Split (s)	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	35.0	22.0	35.0	35.0
Total Split (%)	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	25.9%	16.3%	25.9%	25.9%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.1	1.4	1.4	3.1	1.4	1.4	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.7	5.7	6.1	5.7	5.7	4.0	5.6	5.6	4.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	16.9	80.7	80.7	11.7	75.5	75.5	14.7	6.9	6.9	26.8	21.0	21.0
Actuated g/C Ratio	0.13	0.60	0.60	0.09	0.56	0.56	0.11	0.05	0.05	0.20	0.16	0.16
v/c Ratio	0.77	0.50	0.08	0.71	0.49	0.10	0.11	0.38	0.58	0.52	0.10	0.33
Control Delay	82.1	10.8	2.2	70.8	22.7	10.6	43.1	72.4	24.1	53.0	49.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.1	10.8	2.2	70.8	22.7	10.6	43.1	72.4	24.1	53.0	49.8	11.5
LOS	F	B	A	E	C	B	D	E	C	D	D	B
Approach Delay		19.6			26.3			37.3			36.4	
Approach LOS		B			C			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 134 (99%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	982	19	3	1016	193	10	5	179	14	122
Future Volume (vph)	106	982	19	3	1016	193	10	5	179	14	122
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.2	25.3	25.3	12.0	25.5	25.5	10.7	10.7	10.8	10.8	10.8
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.2	1.0	1.0	3.0	1.2	1.2	2.7	2.7	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.2	5.3	5.3	6.0	5.5	5.5		5.7		5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	13.2	96.7	96.7	6.0	79.5	79.5		24.9		24.8	24.8
Actuated g/C Ratio	0.10	0.72	0.72	0.04	0.59	0.59		0.18		0.18	0.18
v/c Ratio	0.67	0.42	0.02	0.04	0.53	0.21		0.07		0.85	0.33
Control Delay	83.6	5.9	0.0	69.0	27.1	10.6		35.1		80.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	83.6	5.9	0.0	69.0	27.1	10.6		35.1		80.9	8.9
LOS	F	A	A	E	C	B		D		F	A
Approach Delay		13.2			24.6			35.1		53.0	
Approach LOS		B			C			D		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 5 (4%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: SR-69 & Windsong Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	177	891	53	17	931	82	53	25	103	49	252
Future Volume (vph)	177	891	53	17	931	82	53	25	103	49	252
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.6	25.6	10.7	25.6	25.6	11.6	11.6	11.6	11.6	11.6
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	1.3	1.3	2.7	1.3	1.3	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.6	5.6	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	18.5	102.8	102.8	5.8	83.6	83.6	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.14	0.76	0.76	0.04	0.62	0.62	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.79	0.36	0.05	0.24	0.46	0.09	0.36	0.23	0.70	0.24	0.64
Control Delay	78.4	8.5	2.8	65.6	12.4	3.8	59.2	32.5	79.0	54.3	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	8.5	2.8	65.6	12.4	3.8	59.2	32.5	79.0	54.3	12.8
LOS	E	A	A	E	B	A	E	C	E	D	B
Approach Delay		19.3			12.6			46.6		34.7	
Approach LOS		B			B			D		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 80 (59%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	818	50	17	817	65	43	26	11	64	22	170
Future Volume (vph)	149	818	50	17	817	65	43	26	11	64	22	170
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	11.3	25.7	25.7	11.3	25.7	25.7	13.6	13.6	13.6	13.3	13.3	13.3
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.3	1.4	1.4	3.3	1.4	1.4	2.6	2.6	2.6	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	5.7	5.7	6.3	5.7	5.7	5.6	5.6	5.6	5.3	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	16.7	107.2	107.2	5.5	89.2	89.2	11.5	11.5	11.5	11.8	11.8	11.8
Actuated g/C Ratio	0.12	0.79	0.79	0.04	0.66	0.66	0.09	0.09	0.09	0.09	0.09	0.09
v/c Ratio	0.74	0.32	0.04	0.25	0.38	0.07	0.40	0.18	0.06	0.59	0.15	0.60
Control Delay	94.7	3.2	0.3	70.9	11.9	2.6	67.5	58.3	0.5	78.0	57.3	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.7	3.2	0.3	70.9	11.9	2.6	67.5	58.3	0.5	78.0	57.3	16.2
LOS	F	A	A	E	B	A	E	E	A	E	E	B
Approach Delay		16.4			12.3			55.3			35.2	
Approach LOS		B			B			E			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 99 (73%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	756	830	8	22	6
Future Volume (vph)	10	756	830	8	22	6
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	15.1	27.3	27.3	27.3	14.4	14.4
Total Split (s)	20.0	65.0	45.0	45.0	20.0	20.0
Total Split (%)	23.5%	76.5%	52.9%	52.9%	23.5%	23.5%
Yellow Time (s)	3.0	5.5	5.5	5.5	3.7	3.7
All-Red Time (s)	4.1	1.8	1.8	1.8	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.3	7.3	7.3	6.4	6.4
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	8.4	44.5	42.4	42.4	8.4	8.4
Actuated g/C Ratio	0.16	0.86	0.82	0.82	0.16	0.16
v/c Ratio	0.04	0.27	0.31	0.01	0.04	0.03
Control Delay	25.2	2.8	5.3	4.5	24.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	2.8	5.3	4.5	24.5	17.2
LOS	C	A	A	A	C	B
Approach Delay		3.1	5.2		22.8	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 51.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 41.0%	ICU Level of Service A
Analysis Period (min) 15	

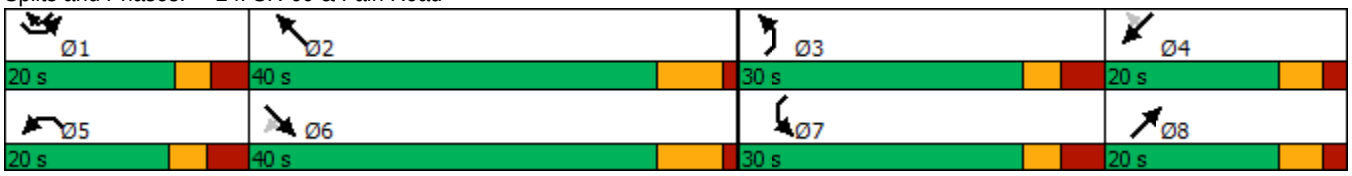
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	16	614	178	53	595	220	136	55	251	69	20
Future Volume (vph)	16	614	178	53	595	220	136	55	251	69	20
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.1	26.7	26.7	12.5	26.7		14.6	11.7	14.6	11.7	12.1
Total Split (s)	20.0	40.0	40.0	20.0	40.0		30.0	20.0	30.0	20.0	20.0
Total Split (%)	18.2%	36.4%	36.4%	18.2%	36.4%		27.3%	18.2%	27.3%	18.2%	18.2%
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5		3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.1	1.2	1.2	3.5	1.2		3.6	2.1	3.6	2.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.7	6.5	6.7		6.6	5.7	6.6	5.7	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None	None	None	None
Act Effct Green (s)	6.4	28.6	28.6	7.5	32.7	79.8	11.9	9.3	11.5	13.2	25.5
Actuated g/C Ratio	0.08	0.36	0.36	0.09	0.41	1.00	0.15	0.12	0.14	0.17	0.32
v/c Ratio	0.12	0.53	0.28	0.35	0.45	0.15	0.56	0.61	0.55	0.25	0.04
Control Delay	43.2	23.5	4.7	44.9	19.8	0.2	43.4	35.7	39.1	39.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	23.5	4.7	44.9	19.8	0.2	43.4	35.7	39.1	39.5	0.1
LOS	D	C	A	D	B	A	D	D	D	D	A
Approach Delay		19.7			16.4			39.5		36.8	
Approach LOS		B			B			D		D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 79.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

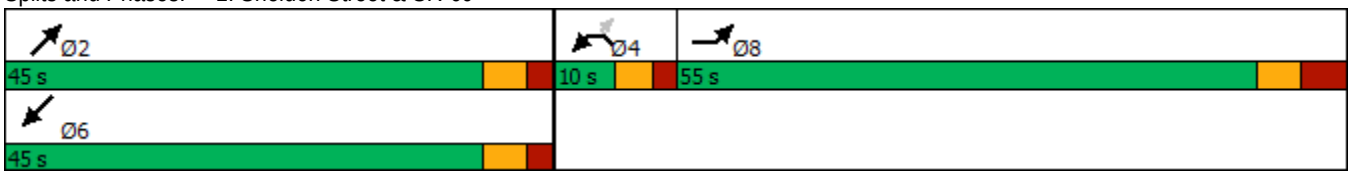
Splits and Phases: 24: SR-69 & Fain Road



Lane Group	EBL	NWL2	NWR	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1068	17	13	734	523	635
Future Volume (vph)	1068	17	13	734	523	635
Turn Type	Prot	Prot	Perm	NA	NA	Free
Protected Phases	8	4		2	6	
Permitted Phases			4			Free
Detector Phase	8	4	4	2	6	
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.0	9.0	20.8	20.8	
Total Split (s)	55.0	10.0	10.0	45.0	45.0	
Total Split (%)	50.0%	9.1%	9.1%	40.9%	40.9%	
Yellow Time (s)	3.6	3.0	3.0	3.6	3.6	
All-Red Time (s)	4.0	2.0	2.0	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.0	5.0	5.8	5.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	
Act Effct Green (s)	30.0	5.1	5.1	23.4	23.4	72.9
Actuated g/C Ratio	0.41	0.07	0.07	0.32	0.32	1.00
v/c Ratio	0.56	0.15	0.07	0.50	0.50	0.25
Control Delay	18.6	43.6	0.6	22.5	23.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	43.6	0.6	22.5	23.3	0.2
LOS	B	D	A	C	C	A
Approach Delay	18.6			22.5	10.7	
Approach LOS	B			C	B	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 72.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 52.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	53	1804	12	21	1166	39	26	6	46	7
Future Volume (vph)	53	1804	12	21	1166	39	26	6	46	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	16.6	25.1	25.1	16.7	25.1	25.1	22.2	22.2	22.2	22.2
Total Split (s)	30.0	69.0	69.0	30.0	69.0	69.0	36.0	36.0	36.0	36.0
Total Split (%)	22.2%	51.1%	51.1%	22.2%	51.1%	51.1%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	1.5	1.5	3.7	1.5	1.5	4.2	4.2	4.2	4.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.1	5.1	6.7	5.1	5.1	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.4	103.1	103.1	10.0	99.5	99.5	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.08	0.76	0.76	0.07	0.74	0.74	0.11	0.11	0.11	0.11
v/c Ratio	0.43	0.50	0.01	0.18	0.34	0.04	0.19	0.15	0.33	0.20
Control Delay	69.2	9.1	0.0	81.4	5.7	1.0	57.9	26.3	61.9	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	9.1	0.0	81.4	5.7	1.0	57.9	26.3	61.9	24.1
LOS	E	A	A	F	A	A	E	C	E	C
Approach Delay		10.8			6.9			41.3		44.7
Approach LOS		B			A			D		D

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

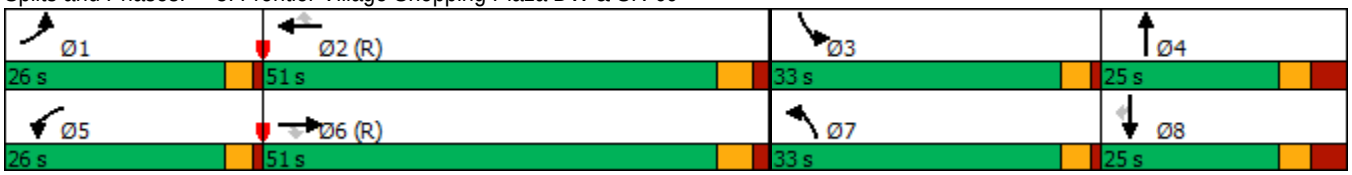
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	1793	125	74	1140	86	0			
Future Volume (vph)	1793	125	74	1140	86	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	50.5	50.5	10.0	50.5	10.0	13.0	10.0	10.0	13.0
Total Split (s)	51.0	51.0	26.0	51.0	33.0	25.0	26.0	33.0	25.0
Total Split (%)	37.8%	37.8%	19.3%	37.8%	24.4%	18.5%	19%	24%	19%
Yellow Time (s)	3.6	3.6	3.0	3.6	3.0	3.2	3.0	3.0	3.2
All-Red Time (s)	1.9	1.9	1.0	1.9	1.0	3.8	1.0	1.0	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	5.5	5.5	4.0	5.5	4.0	7.0			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	105.2	105.2	7.0	116.2	9.3	6.3			
Actuated g/C Ratio	0.78	0.78	0.05	0.86	0.07	0.05			
v/c Ratio	0.49	0.11	0.45	0.28	0.39	0.21			
Control Delay	4.2	1.0	63.3	2.8	65.1	0.8			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	4.2	1.0	63.3	2.8	65.1	0.8			
LOS	A	A	E	A	E	A			
Approach Delay	4.0			6.5		27.4			
Approach LOS	A			A		C			

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 30 (22%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Frontier Village Shopping Plaza DW & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1818	67	109	1074	30	81	54	92	46	94	79
Future Volume (vph)	55	1818	67	109	1074	30	81	54	92	46	94	79
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.5	26.2	26.2	13.1	26.2		13.5	13.4	13.4	13.2	13.4	13.4
Total Split (s)	25.0	52.0	52.0	25.0	52.0		25.0	33.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%		18.5%	24.4%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3		3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	4.5	1.9	1.9	4.1	1.9		4.5	3.8	3.8	4.2	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.2	6.2	7.1	6.2		7.5	7.4	7.4	7.2	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	7.0	78.5	78.5	9.0	82.7	135.0	8.0	15.5	15.5	6.7	11.3	11.3
Actuated g/C Ratio	0.05	0.58	0.58	0.07	0.61	1.00	0.06	0.11	0.11	0.05	0.08	0.08
v/c Ratio	0.34	0.67	0.07	0.52	0.37	0.02	0.44	0.28	0.32	0.29	0.65	0.32
Control Delay	81.1	11.6	0.5	57.0	21.9	0.0	67.7	58.3	4.6	66.0	78.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	11.6	0.5	57.0	21.9	0.0	67.7	58.3	4.6	66.0	78.6	3.2
LOS	F	B	A	E	C	A	E	E	A	E	E	A
Approach Delay		13.2			24.5			39.9			48.7	
Approach LOS		B			C			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 59 (44%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	36	1947	11	39	1171	31	20	0	45	8	67
Future Volume (vph)	36	1947	11	39	1171	31	20	0	45	8	67
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.6	25.6	25.6	12.7	25.6	25.6	12.6	13.0	13.0	13.0	13.0
Total Split (s)	25.0	52.0	52.0	25.0	52.0	52.0	25.0	33.0	25.0	33.0	33.0
Total Split (%)	18.5%	38.5%	38.5%	18.5%	38.5%	38.5%	18.5%	24.4%	18.5%	24.4%	24.4%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.8	3.0	3.8	3.8
All-Red Time (s)	3.6	1.3	1.3	3.7	1.3	1.3	3.6	3.2	4.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	5.6	5.6	6.7	5.6	5.6	6.6	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	7.4	97.5	97.5	7.6	97.8	97.8	6.5	6.0	6.5	8.8	8.8
Actuated g/C Ratio	0.05	0.72	0.72	0.06	0.72	0.72	0.05	0.04	0.05	0.07	0.07
v/c Ratio	0.40	0.83	0.01	0.42	0.50	0.03	0.26	0.09	0.30	0.07	0.32
Control Delay	85.9	14.3	0.0	73.9	11.7	0.0	69.2	0.4	66.7	63.1	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.9	14.3	0.0	73.9	11.7	0.0	69.2	0.4	66.7	63.1	3.8
LOS	F	B	A	E	B	A	E	A	E	E	A
Approach Delay		15.5			13.4			24.5		31.4	
Approach LOS		B			B			C		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 94 (70%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

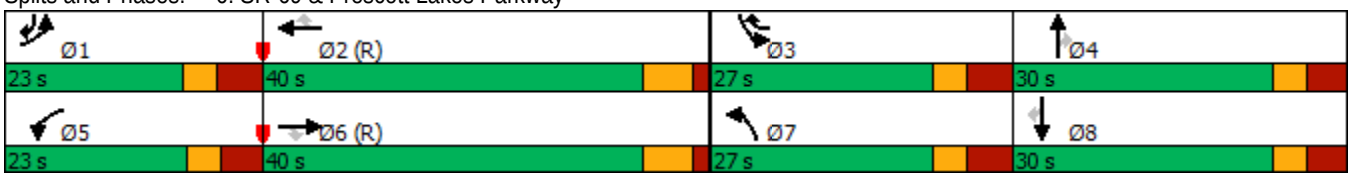
Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1711	94	35	1032	262	51	50	45	658	114	214
Future Volume (vph)	225	1711	94	35	1032	262	51	50	45	658	114	214
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	21.1	26.1	26.1	12.8	26.1	13.1	13.1	12.8	12.8	13.1	12.8	21.1
Total Split (s)	23.0	40.0	40.0	23.0	40.0	27.0	27.0	30.0	30.0	27.0	30.0	23.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	22.5%	22.5%	25.0%	25.0%	22.5%	25.0%	19.2%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.1	1.6	1.6	3.8	1.6	4.1	4.1	3.8	3.8	4.1	3.8	4.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.1	6.1	6.8	6.1	7.1	7.1	6.8	6.8	7.1	6.8	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	15.4	65.1	65.1	7.8	52.0	78.0	7.0	8.2	8.2	19.9	21.1	43.3
Actuated g/C Ratio	0.13	0.54	0.54	0.06	0.43	0.65	0.06	0.07	0.07	0.17	0.18	0.36
v/c Ratio	0.56	0.67	0.11	0.33	0.51	0.25	0.28	0.43	0.19	1.26	0.38	0.32
Control Delay	54.0	24.0	0.6	55.0	42.6	6.3	57.2	63.5	1.7	170.7	47.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	24.0	0.6	55.0	42.6	6.3	57.2	63.5	1.7	170.7	47.2	4.3
LOS	D	C	A	D	D	A	E	E	A	F	D	A
Approach Delay		26.2			35.8			42.1			120.3	
Approach LOS		C			D			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 5 (4%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 50.2	Intersection LOS: D
Intersection Capacity Utilization 79.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2324	90	99	1351	77	86
Future Volume (vph)	2324	90	99	1351	77	86
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.6	25.6	13.6	25.6	13.6	13.6
Total Split (s)	59.0	59.0	28.0	87.0	33.0	28.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	23.3%
Yellow Time (s)	4.3	4.3	3.0	4.3	3.0	3.0
All-Red Time (s)	1.3	1.3	3.6	1.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.6	5.6	6.6	6.6
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes	Yes			Yes
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	88.2	88.2	8.1	104.1	7.6	19.6
Actuated g/C Ratio	0.74	0.74	0.07	0.87	0.06	0.16
v/c Ratio	0.68	0.08	0.47	0.33	0.39	0.36
Control Delay	9.6	2.7	48.9	2.0	59.1	46.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.7	48.9	2.0	59.1	46.7
LOS	A	A	D	A	E	D
Approach Delay	9.3			5.3	52.6	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 10 (8%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	2142	65	88	1263	78	84	33	77	43	2	103
Future Volume (vph)	174	2142	65	88	1263	78	84	33	77	43	2	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.5	26.1	26.1	12.6	26.1	26.1	15.2	15.2	15.2	15.2	15.2	15.2
Total Split (s)	25.0	59.0	59.0	25.0	59.0	59.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	20.8%	49.2%	49.2%	20.8%	49.2%	49.2%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.3	4.7	4.7	3.3	4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	3.2	1.4	1.4	3.3	1.4	1.4	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.1	6.1	6.6	6.1	6.1	7.2	7.2	7.2	7.2	7.2	7.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	16.3	77.6	77.6	10.1	71.4	71.4	12.5	12.5	12.5	12.5	12.5	12.5
Actuated g/C Ratio	0.14	0.65	0.65	0.08	0.60	0.60	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.79	0.71	0.07	0.65	0.45	0.09	0.62	0.19	0.35	0.33	0.01	0.42
Control Delay	76.7	9.5	0.8	76.0	12.4	1.3	69.0	49.5	12.8	54.7	45.0	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.7	9.5	0.8	76.0	12.4	1.3	69.0	49.5	12.8	54.7	45.0	13.5
LOS	E	A	A	E	B	A	E	D	B	D	D	B
Approach Delay		14.2			15.7			43.3			25.9	
Approach LOS		B			B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 28 (23%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

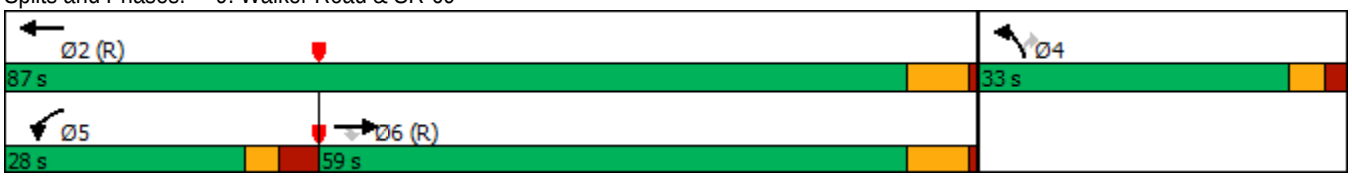
Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2001	261	47	1234	195	69
Future Volume (vph)	2001	261	47	1234	195	69
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	26.5	26.5	24.5	26.5	23.3	23.3
Total Split (s)	59.0	59.0	28.0	87.0	33.0	33.0
Total Split (%)	49.2%	49.2%	23.3%	72.5%	27.5%	27.5%
Yellow Time (s)	5.5	5.5	3.0	5.5	3.2	3.2
All-Red Time (s)	1.0	1.0	3.5	1.0	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.3	5.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.1	83.1	8.4	95.7	12.5	12.5
Actuated g/C Ratio	0.69	0.69	0.07	0.80	0.10	0.10
v/c Ratio	0.62	0.24	0.41	0.48	0.59	0.32
Control Delay	1.5	0.3	62.7	4.8	58.0	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	0.3	62.7	4.8	58.0	14.5
LOS	A	A	E	A	E	B
Approach Delay	1.3			6.9	46.7	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 47 (39%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

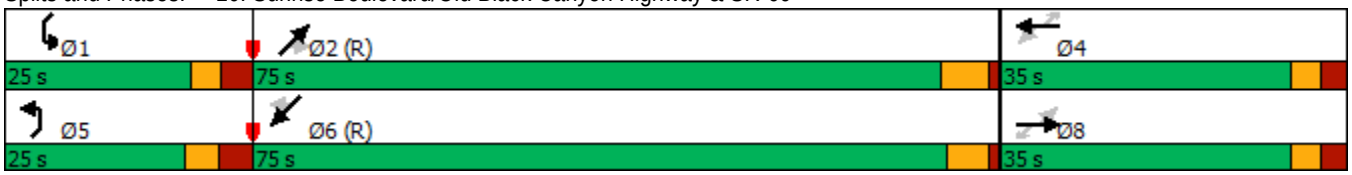
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	0	20	37	3	26	33	1913	71	32	1275	35
Future Volume (vph)	37	0	20	37	3	26	33	1913	71	32	1275	35
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	13.9	13.9	13.9	13.9	13.9	13.9	14.9	36.0	36.0	14.3	35.4	35.4
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	25.0	75.0	75.0	25.0	75.0	75.0
Total Split (%)	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	18.5%	55.6%	55.6%	18.5%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.4	4.9	4.9	3.0	4.3	4.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.5	1.1	1.1	3.3	1.1	1.1
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.9	6.0	6.0	6.3	5.4	5.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		9.7	9.7		9.7	9.7	8.3	108.5	108.5	8.3	105.6	105.6
Actuated g/C Ratio		0.07	0.07		0.07	0.07	0.06	0.80	0.80	0.06	0.78	0.78
v/c Ratio		0.41	0.12		0.45	0.15	0.33	0.73	0.06	0.32	0.50	0.03
Control Delay		72.1	1.2		74.8	1.7	69.0	11.6	1.3	51.1	9.7	3.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		72.1	1.2		74.8	1.7	69.0	11.6	1.3	51.1	9.7	3.0
LOS		E	A		E	A	E	B	A	D	A	A
Approach Delay		47.0			46.0			12.2			10.6	
Approach LOS		D			D			B			B	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 33 (24%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	26	51	1925	1316	3	
Future Volume (vph)	15	26	51	1925	1316	3	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.1	14.1	14.5	25.7	25.7	25.7	13.6
Total Split (s)	34.0	34.0	26.0	75.0	75.0	75.0	26.0
Total Split (%)	25.2%	25.2%	19.3%	55.6%	55.6%	55.6%	19%
Yellow Time (s)	3.3	3.3	3.3	4.7	4.7	4.7	3.0
All-Red Time (s)	2.8	2.8	3.2	1.0	1.0	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.1	6.1	6.5	5.7	5.7	5.7	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	9.4	123.1	109.0	109.0	
Actuated g/C Ratio	0.06	0.06	0.07	0.91	0.81	0.81	
v/c Ratio	0.15	0.23	0.45	0.65	0.50	0.00	
Control Delay	63.9	24.8	82.2	0.9	19.0	10.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	24.8	82.2	0.9	19.0	10.7	
LOS	E	C	F	A	B	B	
Approach Delay	39.0			2.9	19.0		
Approach LOS	D			A	B		

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 69 (51%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	12	64	1940	1292	6	
Future Volume (vph)	15	12	64	1940	1292	6	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	14.4	14.4	14.0	25.3	25.3	25.3	14.2
Total Split (s)	35.0	35.0	25.0	75.0	75.0	75.0	25.0
Total Split (%)	25.9%	25.9%	18.5%	55.6%	55.6%	55.6%	19%
Yellow Time (s)	3.4	3.4	3.0	4.3	4.3	4.3	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	1.0	1.0	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.0	5.3	5.3	5.3	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	10.2	123.2	108.7	108.7	
Actuated g/C Ratio	0.06	0.06	0.08	0.91	0.81	0.81	
v/c Ratio	0.15	0.12	0.53	0.65	0.49	0.01	
Control Delay	63.9	29.4	85.3	0.9	13.0	6.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	29.4	85.3	0.9	13.0	6.8	
LOS	E	C	F	A	B	A	
Approach Delay	48.4			3.6	13.0		
Approach LOS	D			A	B		

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 112 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

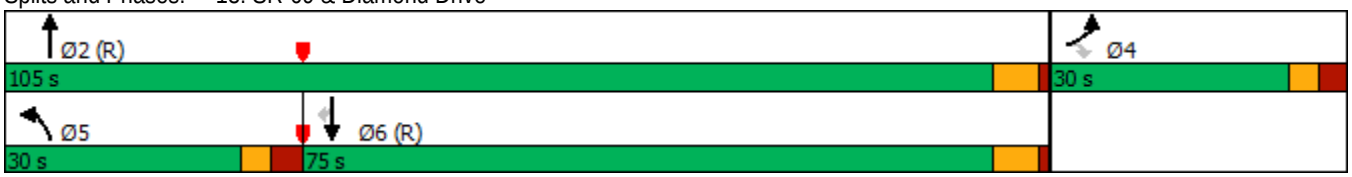
Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	18	52	1921	1280	54
Future Volume (vph)	47	18	52	1921	1280	54
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	14.0	14.0	14.2	25.8	25.8	25.8
Total Split (s)	30.0	30.0	30.0	105.0	75.0	75.0
Total Split (%)	22.2%	22.2%	22.2%	77.8%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	4.7	4.7	4.7
All-Red Time (s)	3.0	3.0	3.2	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.2	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	9.2	9.2	9.5	118.0	105.1	105.1
Actuated g/C Ratio	0.07	0.07	0.07	0.87	0.78	0.78
v/c Ratio	0.42	0.16	0.46	0.68	0.50	0.05
Control Delay	70.9	24.7	74.8	9.6	6.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.9	24.7	74.8	9.6	6.2	0.2
LOS	E	C	E	A	A	A
Approach Delay	57.9			11.3	6.0	
Approach LOS	E			B	A	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 34 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

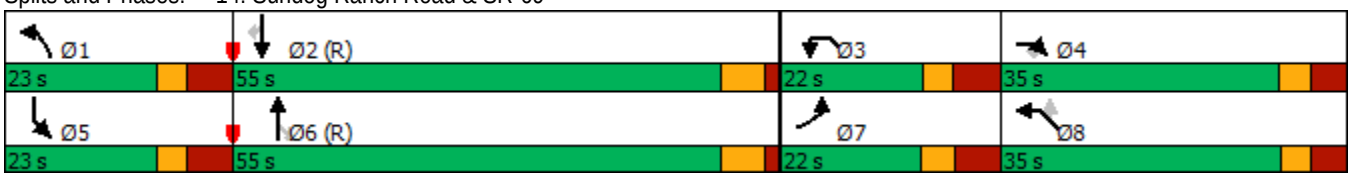
Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	121	14	27	93	1810	119	108	1234	150	57	15	109
Future Volume (vph)	121	14	27	93	1810	119	108	1234	150	57	15	109
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.9	12.1	12.1	12.7	11.0	11.0	12.8	11.0	11.0	12.7	11.8	11.8
Total Split (s)	22.0	35.0	35.0	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	35.0
Total Split (%)	16.3%	25.9%	25.9%	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	25.9%
Yellow Time (s)	3.3	3.3	3.3	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0
All-Red Time (s)	4.6	3.8	3.8	4.7	1.7	1.7	4.8	1.7	1.7	4.7	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.9	7.1	7.1	7.7	6.0	6.0	7.8	6.0	6.0	7.7	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	9.6	10.7	10.7	8.4	81.9	81.9	9.0	82.6	82.6	9.8	6.1	6.1
Actuated g/C Ratio	0.07	0.08	0.08	0.06	0.61	0.61	0.07	0.61	0.61	0.07	0.05	0.05
v/c Ratio	0.54	0.12	0.11	0.47	0.64	0.13	0.51	0.43	0.16	0.25	0.20	0.55
Control Delay	68.6	60.9	0.9	60.8	31.8	5.9	56.7	18.8	9.5	62.2	67.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	60.9	0.9	60.8	31.8	5.9	56.7	18.8	9.5	62.2	67.4	13.8
LOS	E	E	A	E	C	A	E	B	A	E	E	B
Approach Delay	56.8				31.6			20.6			33.5	
Approach LOS	E				C			C			C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	96	1944	62	160	1448	87	51	4	60	14	68
Future Volume (vph)	96	1944	62	160	1448	87	51	4	60	14	68
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.7	25.8	25.8	12.6	25.8	25.8	10.9	12.5	10.9	12.5	12.5
Total Split (s)	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	22.0	35.0	35.0
Total Split (%)	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	16.3%	25.9%	25.9%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	3.7	1.5	1.5	3.6	1.5	1.5	3.9	2.9	3.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.8	5.8	6.6	5.8	5.8	6.9	6.5	6.9	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	11.8	81.1	81.1	17.8	87.0	87.0	6.1	6.1	6.5	6.4	6.4
Actuated g/C Ratio	0.09	0.60	0.60	0.13	0.64	0.64	0.05	0.05	0.05	0.05	0.05
v/c Ratio	0.68	0.69	0.07	0.75	0.48	0.09	0.35	0.33	0.40	0.17	0.37
Control Delay	97.9	10.2	0.1	55.0	32.7	10.9	68.4	2.0	69.0	66.1	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.9	10.2	0.1	55.0	32.7	10.9	68.4	2.0	69.0	66.1	5.1
LOS	F	B	A	D	C	B	E	A	E	E	A
Approach Delay		13.9			33.6			20.2		38.0	
Approach LOS		B			C			C		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 29 (21%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Stoneridge Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	1715	129	40	1355	144	99	56	44	207	91	241
Future Volume (vph)	291	1715	129	40	1355	144	99	56	44	207	91	241
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.0	25.5	25.5	12.8	25.6	25.6	12.8	12.8	12.8	12.8	12.8	12.8
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	1.2	1.2	3.8	1.3	1.3	3.8	3.8	3.8	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.5	5.5	6.8	5.6	5.6	6.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	16.3	84.9	84.9	7.7	73.4	73.4	25.9	25.9	25.9	25.9	25.9	25.9
Actuated g/C Ratio	0.12	0.63	0.63	0.06	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.76	0.58	0.13	0.43	0.53	0.17	0.44	0.17	0.13	0.88	0.28	0.51
Control Delay	60.7	22.6	5.2	84.7	23.4	6.6	52.5	44.7	3.4	84.6	47.0	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	22.6	5.2	84.7	23.4	6.6	52.5	44.7	3.4	84.6	47.0	8.5
LOS	E	C	A	F	C	A	D	D	A	F	D	A
Approach Delay		26.8			23.4			39.4			44.2	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 72 (53%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Future Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	40.0	59.0	59.0	31.0	50.0	25.0	18.0	20.0	25.0	27.0	40.0
Total Split (%)	29.6%	43.7%	43.7%	23.0%	37.0%	18.5%	13.3%	14.8%	18.5%	20.0%	29.6%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	29.8	68.4	68.4	10.8	49.2	70.3	9.0	14.0	15.1	23.7	59.5
Actuated g/C Ratio	0.22	0.51	0.51	0.08	0.36	0.52	0.07	0.10	0.11	0.18	0.44
v/c Ratio	0.89	0.83	0.02	0.56	0.65	0.18	0.40	0.82	0.74	0.44	0.65
Control Delay	81.6	21.7	0.1	47.3	62.1	19.2	70.4	69.9	69.9	55.3	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.6	21.7	0.1	47.3	62.1	19.2	70.4	69.9	69.9	55.3	26.6
LOS	F	C	A	D	E	B	E	E	E	E	C
Approach Delay		40.0			56.6			70.0		44.3	
Approach LOS		D			E			E		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 110 (81%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 47.9	Intersection LOS: D
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1428	75	105	1073	89	17	30	132	133	15	129
Future Volume (vph)	116	1428	75	105	1073	89	17	30	132	133	15	129
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	11.1	25.7	25.7	11.1	25.7	25.7	10.0	10.6	10.6	10.0	10.6	10.6
Total Split (s)	23.0	55.0	55.0	23.0	55.0	55.0	22.0	35.0	35.0	22.0	35.0	35.0
Total Split (%)	17.0%	40.7%	40.7%	17.0%	40.7%	40.7%	16.3%	25.9%	25.9%	16.3%	25.9%	25.9%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.1	1.4	1.4	3.1	1.4	1.4	1.0	2.6	2.6	1.0	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.7	5.7	6.1	5.7	5.7	4.0	5.6	5.6	4.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.0	80.1	80.1	12.1	79.2	79.2	14.8	7.1	7.1	27.0	21.2	21.2
Actuated g/C Ratio	0.10	0.59	0.59	0.09	0.59	0.59	0.11	0.05	0.05	0.20	0.16	0.16
v/c Ratio	0.74	0.74	0.08	0.72	0.56	0.10	0.11	0.34	0.66	0.52	0.05	0.38
Control Delay	91.4	12.9	0.5	67.8	28.8	9.5	42.6	70.2	23.8	52.8	48.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.4	12.9	0.5	67.8	28.8	9.5	42.6	70.2	23.8	52.8	48.6	10.9
LOS	F	B	A	E	C	A	D	E	C	D	D	B
Approach Delay		17.9			30.7			33.4			33.1	
Approach LOS		B			C			C			C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 18 (13%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	136	1551	12	16	1133	170	3	8	252	3	121
Future Volume (vph)	136	1551	12	16	1133	170	3	8	252	3	121
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.2	25.3	25.3	12.0	25.5	25.5	10.7	10.7	10.8	10.8	10.8
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.2	1.0	1.0	3.0	1.2	1.2	2.7	2.7	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.2	5.3	5.3	6.0	5.5	5.5		5.7		5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	15.7	88.6	88.6	6.3	71.6	71.6		30.3		30.2	30.2
Actuated g/C Ratio	0.12	0.66	0.66	0.05	0.53	0.53		0.22		0.22	0.22
v/c Ratio	0.72	0.73	0.01	0.21	0.66	0.21		0.05		0.93	0.30
Control Delay	80.0	11.4	0.0	50.4	32.5	15.1		27.5		88.9	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	80.0	11.4	0.0	50.4	32.5	15.1		27.5		88.9	13.2
LOS	E	B	A	D	C	B		C		F	B
Approach Delay		16.9			30.5			27.5		64.5	
Approach LOS		B			C			C		E	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 63 (47%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Windsong Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	317	1364	63	40	948	114	52	39	127	28	267
Future Volume (vph)	317	1364	63	40	948	114	52	39	127	28	267
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.6	25.6	10.7	25.6	25.6	11.6	11.6	11.6	11.6	11.6
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	1.3	1.3	2.7	1.3	1.3	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.6	5.6	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	32.8	94.0	94.0	7.4	66.5	66.5	18.8	18.8	18.8	18.8	18.8
Actuated g/C Ratio	0.24	0.70	0.70	0.05	0.49	0.49	0.14	0.14	0.14	0.14	0.14
v/c Ratio	0.80	0.60	0.06	0.44	0.59	0.15	0.30	0.26	0.75	0.12	0.62
Control Delay	70.4	5.1	0.1	62.3	22.4	10.9	53.9	36.5	78.7	48.6	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.4	5.1	0.1	62.3	22.4	10.9	53.9	36.5	78.7	48.6	11.2
LOS	E	A	A	E	C	B	D	D	E	D	B
Approach Delay		16.8			22.6			44.4		34.0	
Approach LOS		B			C			D		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 85 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	1175	24	7	825	85	47	36	23	79	15	230
Future Volume (vph)	316	1175	24	7	825	85	47	36	23	79	15	230
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	11.3	25.7	25.7	11.3	25.7	25.7	13.6	13.6	13.6	13.3	13.3	13.3
Total Split (s)	32.0	65.0	65.0	32.0	65.0	65.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	23.7%	48.1%	48.1%	23.7%	48.1%	48.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	4.3	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.3	1.4	1.4	3.3	1.4	1.4	2.6	2.6	2.6	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	5.7	5.7	6.3	5.7	5.7	5.6	5.6	5.6	5.3	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	34.9	108.3	108.3	5.1	69.4	69.4	13.1	13.1	13.1	13.4	13.4	13.4
Actuated g/C Ratio	0.26	0.80	0.80	0.04	0.51	0.51	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.75	0.45	0.02	0.12	0.49	0.11	0.38	0.22	0.11	0.64	0.09	0.65
Control Delay	68.9	2.1	0.0	66.7	23.5	6.8	63.6	57.0	1.0	78.4	53.5	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.9	2.1	0.0	66.7	23.5	6.8	63.6	57.0	1.0	78.4	53.5	14.9
LOS	E	A	A	E	C	A	E	E	A	E	D	B
Approach Delay		16.0			22.3			47.8			32.1	
Approach LOS		B			C			D			C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 104 (77%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 65.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	1186	758	14	34	3
Future Volume (vph)	6	1186	758	14	34	3
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	15.1	27.3	27.3	27.3	14.4	14.4
Total Split (s)	20.0	65.0	45.0	45.0	20.0	20.0
Total Split (%)	23.5%	76.5%	52.9%	52.9%	23.5%	23.5%
Yellow Time (s)	3.0	5.5	5.5	5.5	3.7	3.7
All-Red Time (s)	4.1	1.8	1.8	1.8	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.3	7.3	7.3	6.4	6.4
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	8.5	54.8	52.3	52.3	8.5	8.5
Actuated g/C Ratio	0.13	0.83	0.79	0.79	0.13	0.13
v/c Ratio	0.03	0.44	0.29	0.01	0.08	0.01
Control Delay	32.0	4.0	5.3	3.6	31.7	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	4.0	5.3	3.6	31.7	22.3
LOS	C	A	A	A	C	C
Approach Delay		4.1	5.3		31.0	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 65.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 50.9%	ICU Level of Service A
Analysis Period (min) 15	

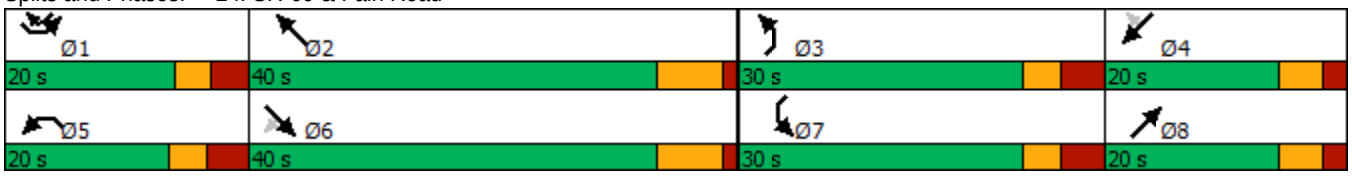
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	49	954	309	79	627	350	148	58	367	155	73
Future Volume (vph)	49	954	309	79	627	350	148	58	367	155	73
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.1	26.7	26.7	12.5	26.7		14.6	11.7	14.6	11.7	12.1
Total Split (s)	20.0	40.0	40.0	20.0	40.0		30.0	20.0	30.0	20.0	20.0
Total Split (%)	18.2%	36.4%	36.4%	18.2%	36.4%		27.3%	18.2%	27.3%	18.2%	18.2%
Yellow Time (s)	3.0	5.5	5.5	3.0	5.5		3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.1	1.2	1.2	3.5	1.2		3.6	2.1	3.6	2.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.7	6.5	6.7		6.6	5.7	6.6	5.7	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None	None	None	None
Act Effct Green (s)	7.4	34.1	34.1	8.8	35.9	90.6	13.0	9.9	15.0	11.8	25.1
Actuated g/C Ratio	0.08	0.38	0.38	0.10	0.40	1.00	0.14	0.11	0.17	0.13	0.28
v/c Ratio	0.37	0.78	0.42	0.50	0.49	0.24	0.63	0.66	0.70	0.69	0.15
Control Delay	50.9	32.7	4.8	52.5	24.2	0.4	50.2	41.6	44.1	55.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	32.7	4.8	52.5	24.2	0.4	50.2	41.6	44.1	55.2	4.1
LOS	D	C	A	D	C	A	D	D	D	E	A
Approach Delay		26.8			18.4			46.0		42.1	
Approach LOS		C			B			D		D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 90.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: SR-69 & Fain Road

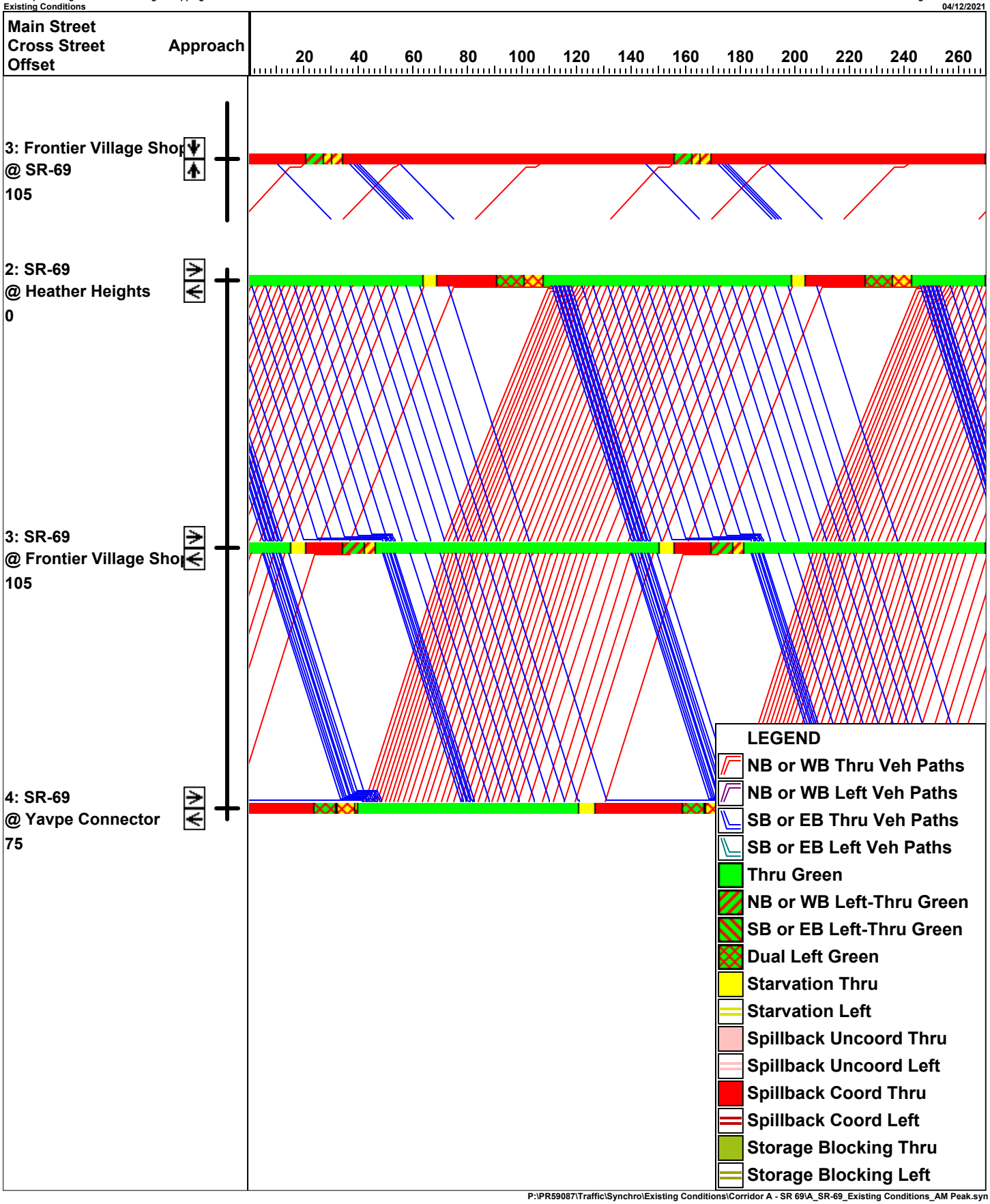


APPENDIX SS-4

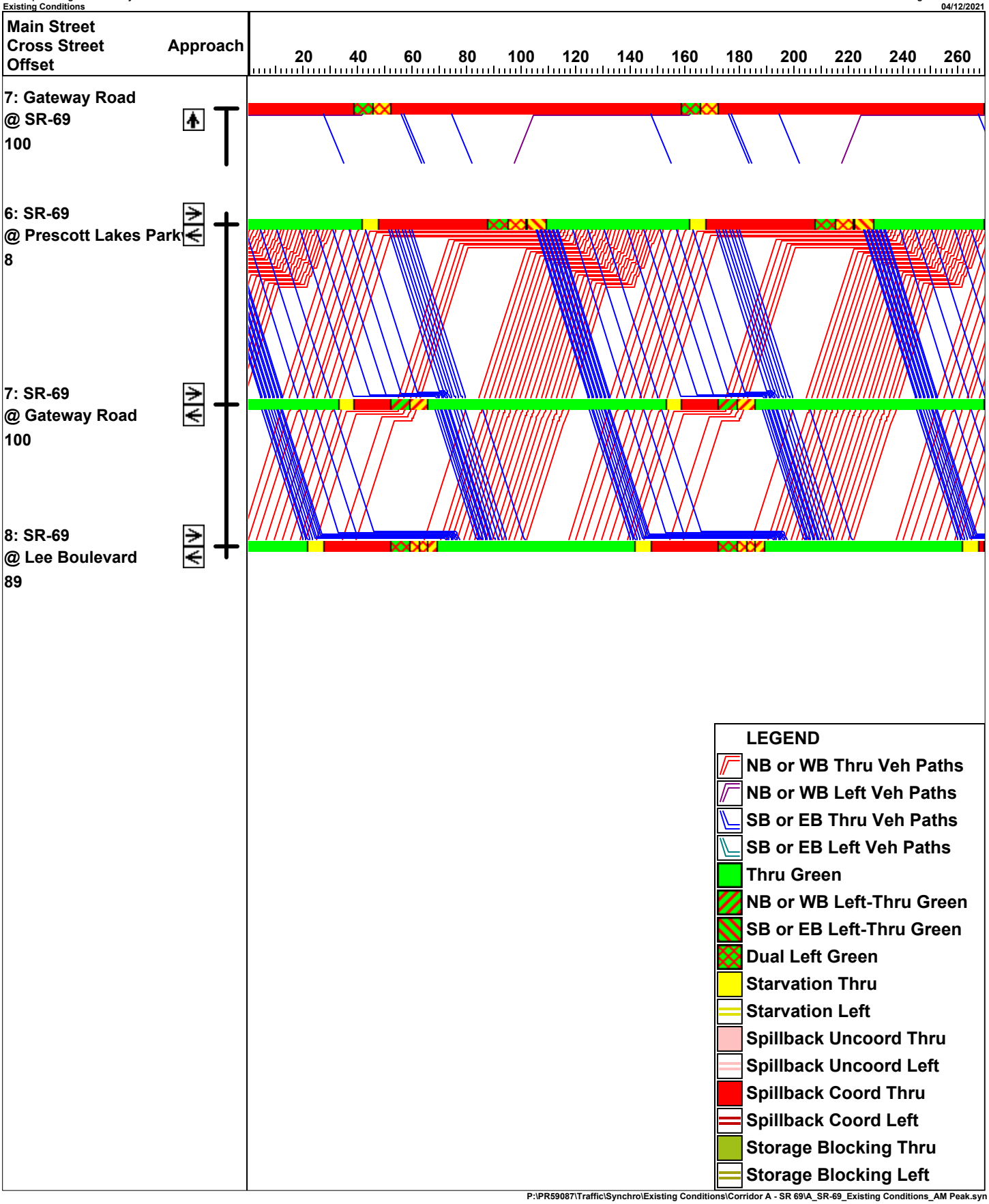
SR 69 Existing Time-Space Diagrams

Time-Space Diagram - Frontier Village Shopping Plaza DW & SR-69
Existing Conditions

Timing Plan: AM Peak
04/12/2021

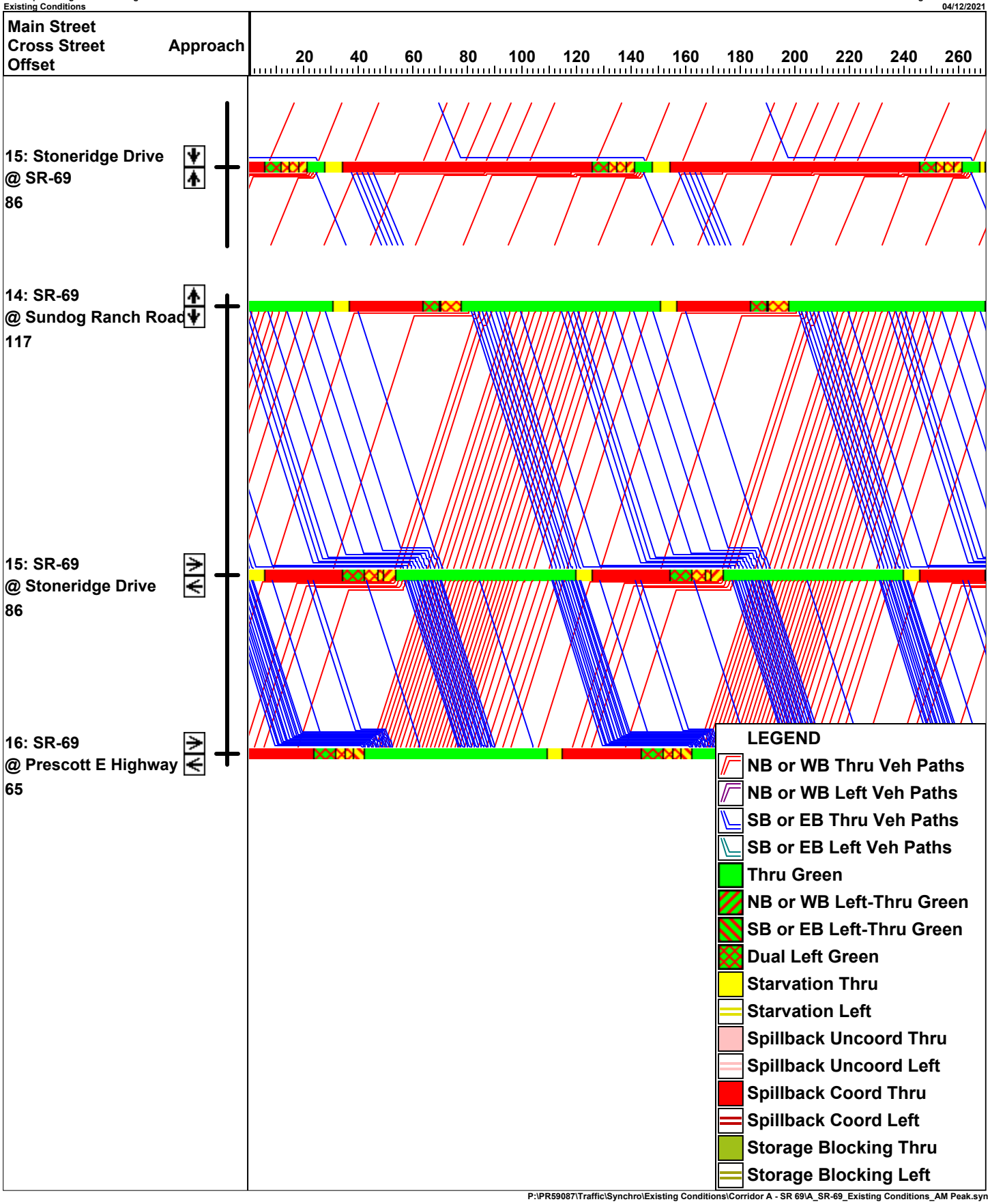


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Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
260
7: Gateway Road
@ SR-69
100
6: SR-69
@ Prescott Lakes Park
8
7: SR-69
@ Gateway Road
100
8: SR-69
@ Lee Boulevard
89
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Stoneridge Drive & SR-69
Existing Conditions

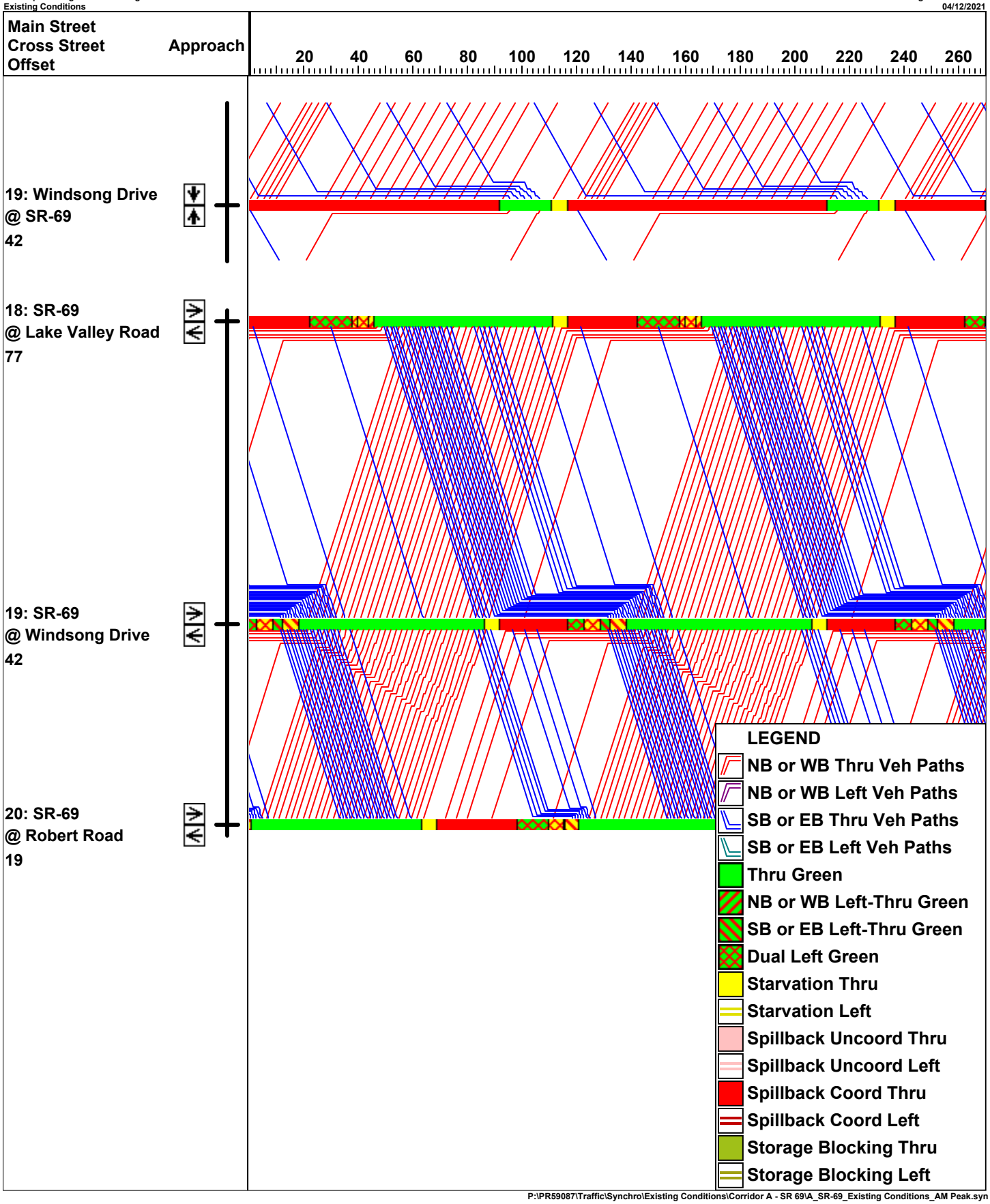
Timing Plan: AM Peak
04/12/2021



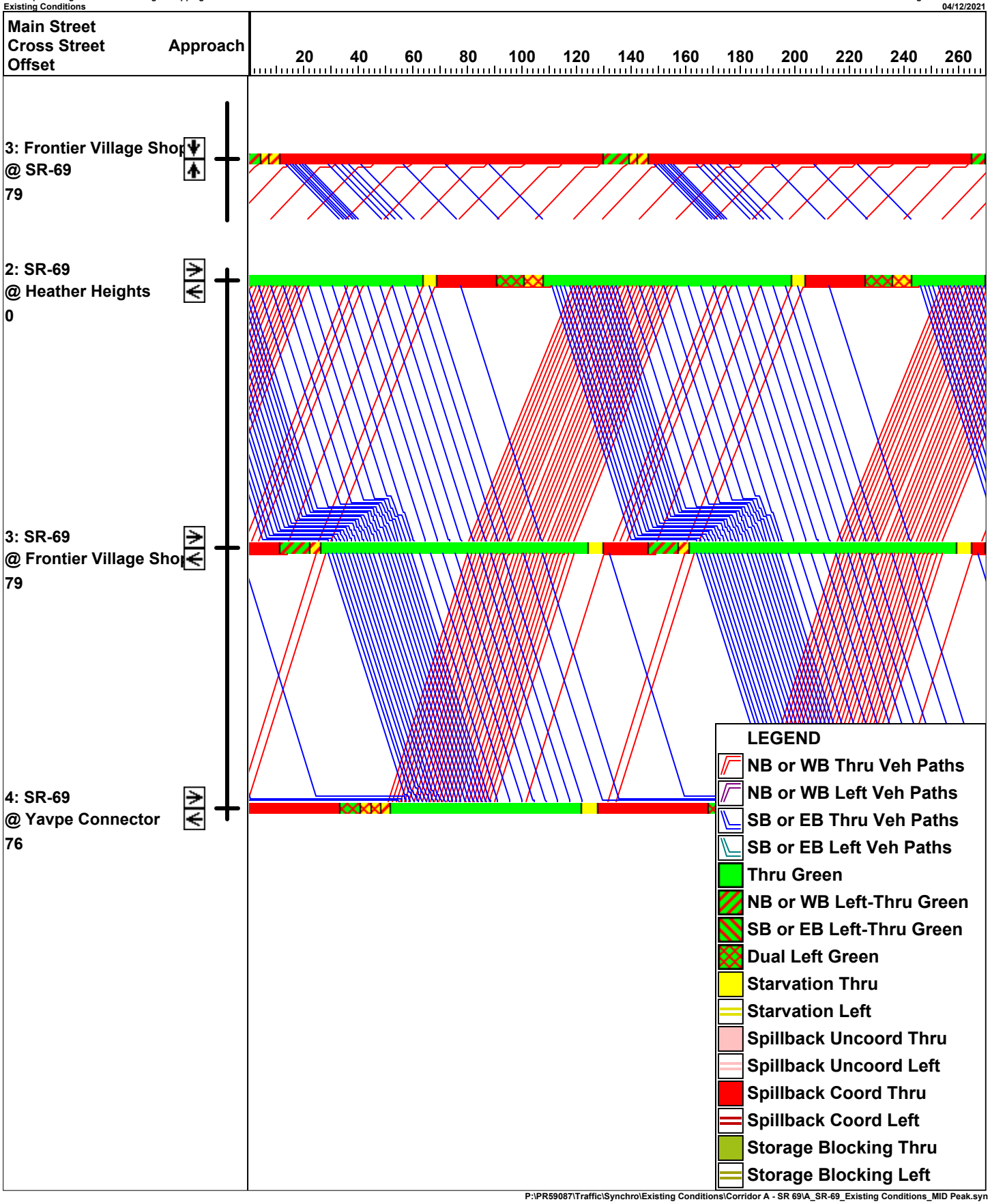
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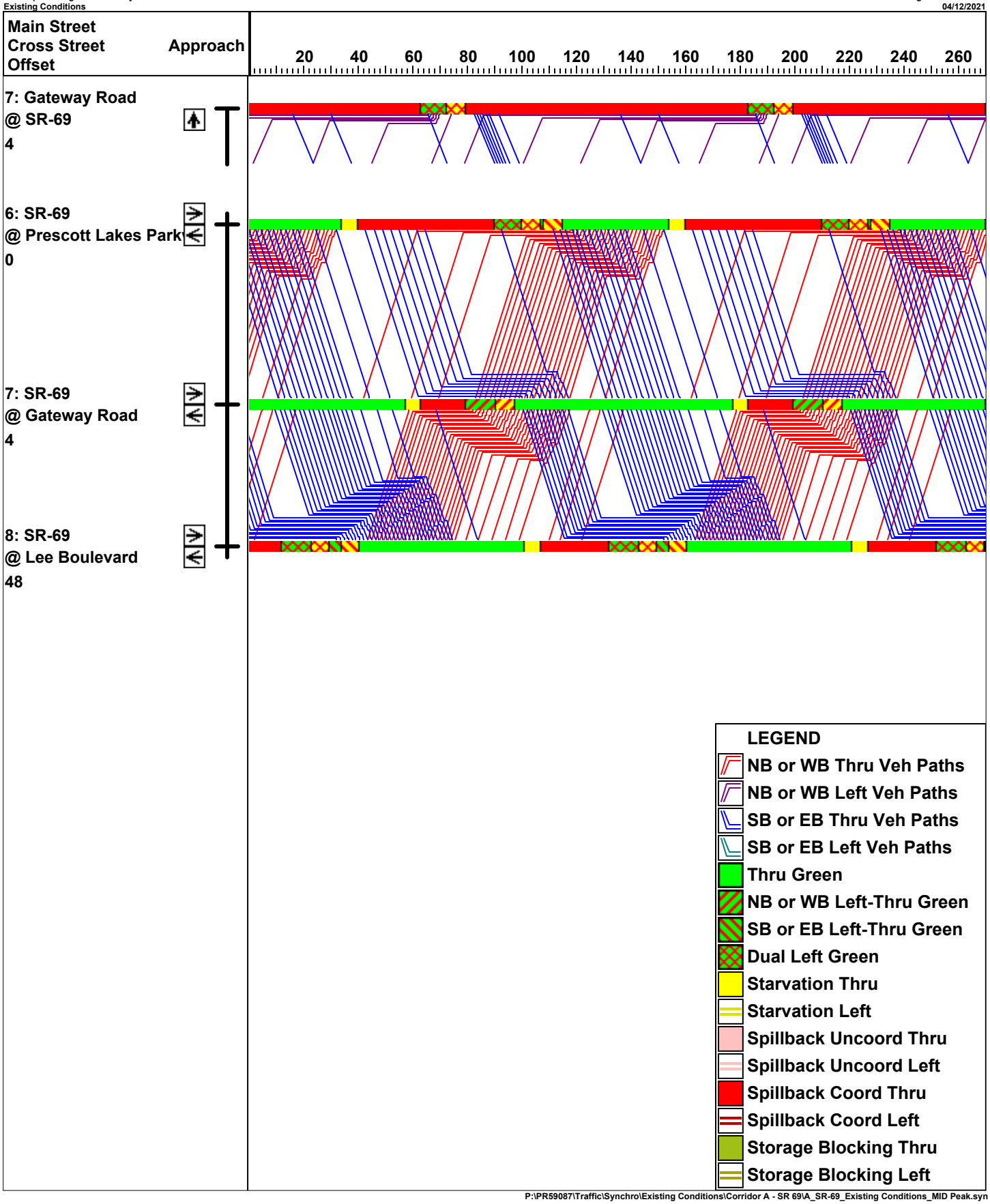
Time-Space Diagram - Windsong Drive & SR-69
Existing Conditions

Timing Plan: AM Peak
04/12/2021



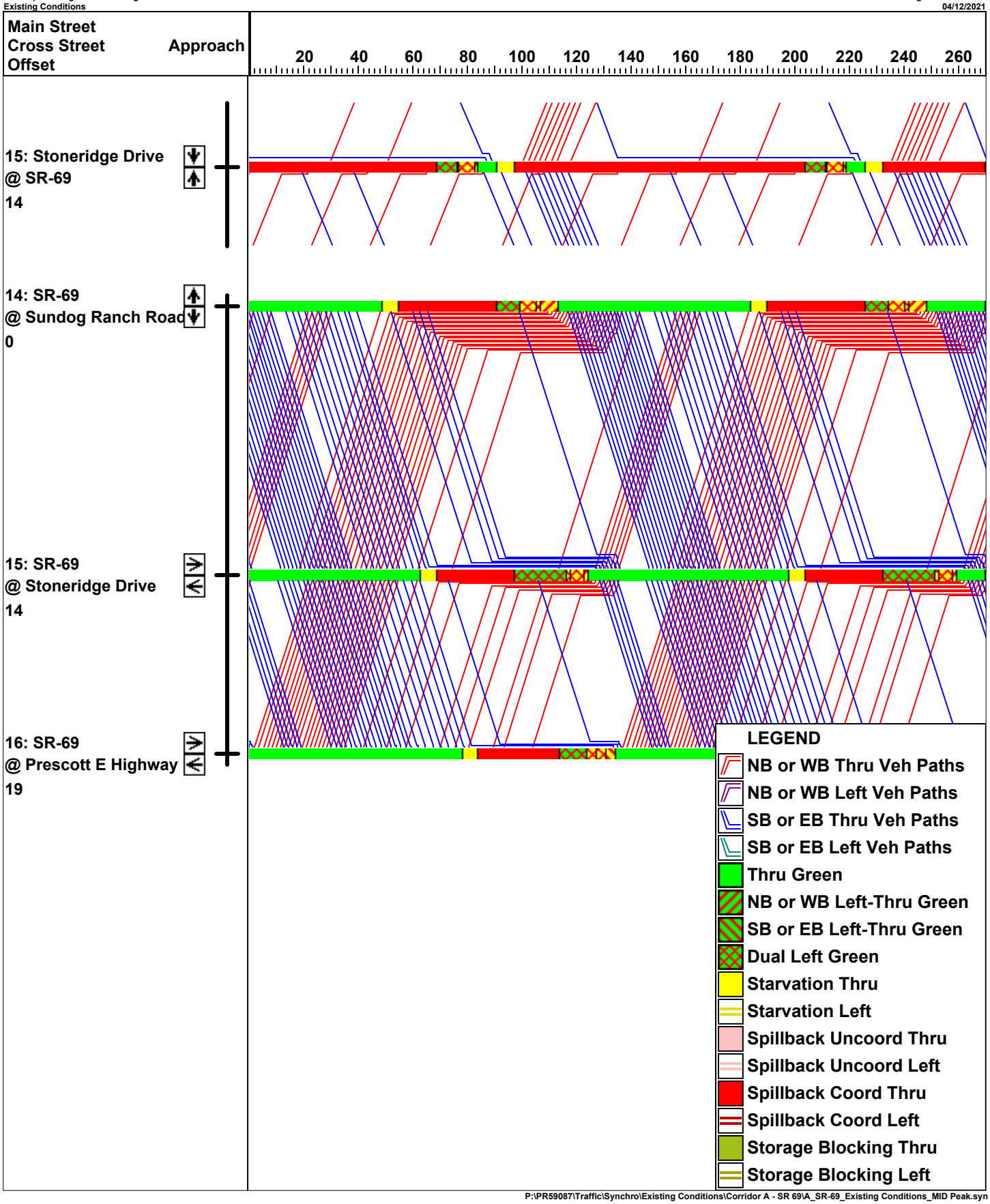
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Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
3: Frontier Village Shop
@ SR-69
79
2: SR-69
@ Heather Heights
0
3: SR-69
@ Frontier Village Shop
79
4: SR-69
@ Yavpe Connector
76
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
260
7: Gateway Road
@ SR-69
4
6: SR-69
@ Prescott Lakes Park
0
7: SR-69
@ Gateway Road
4
8: SR-69
@ Lee Boulevard
48
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Stoneridge Drive & SR-69
Existing Conditions

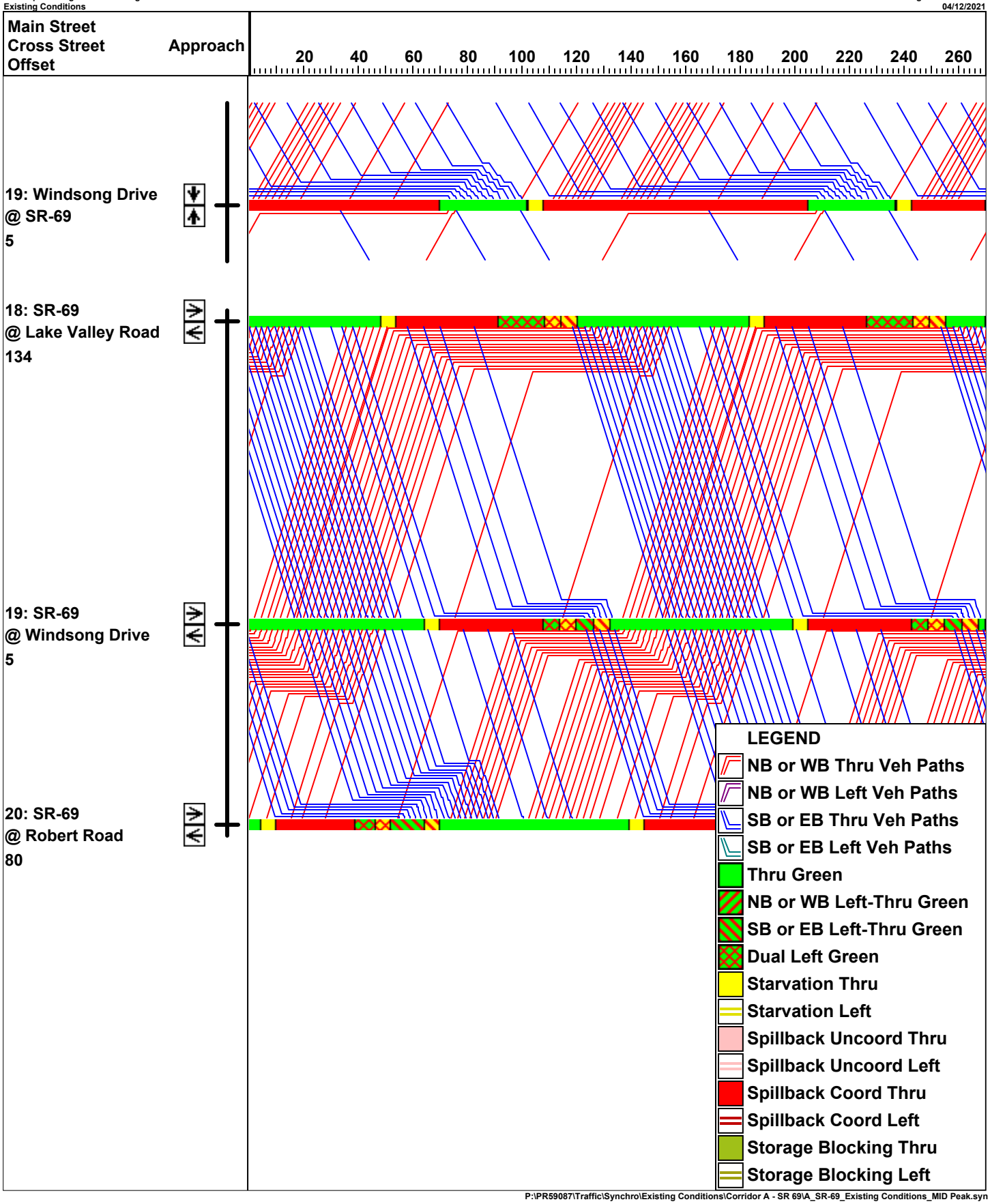
Timing Plan: Mid Peak
04/12/2021



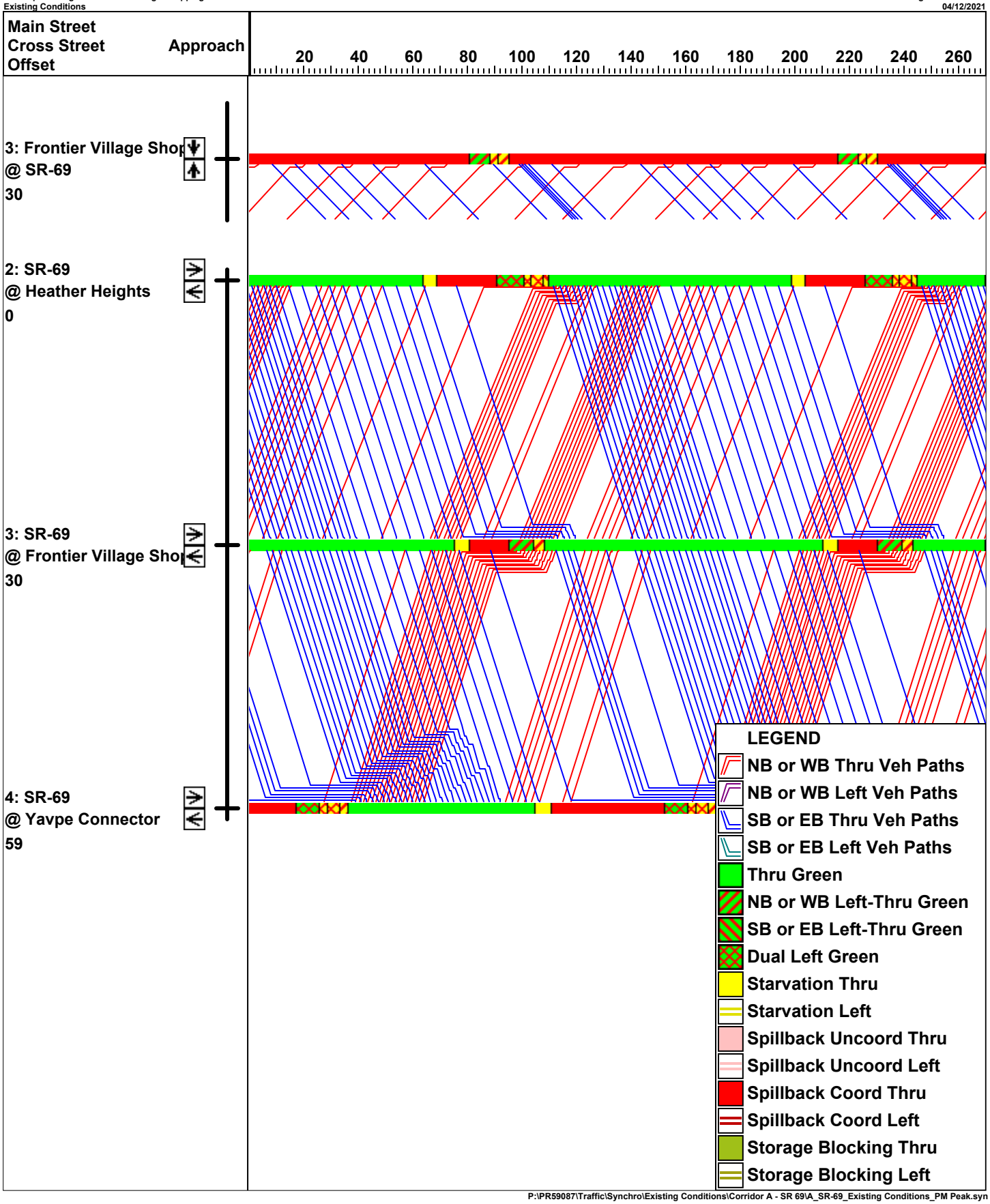
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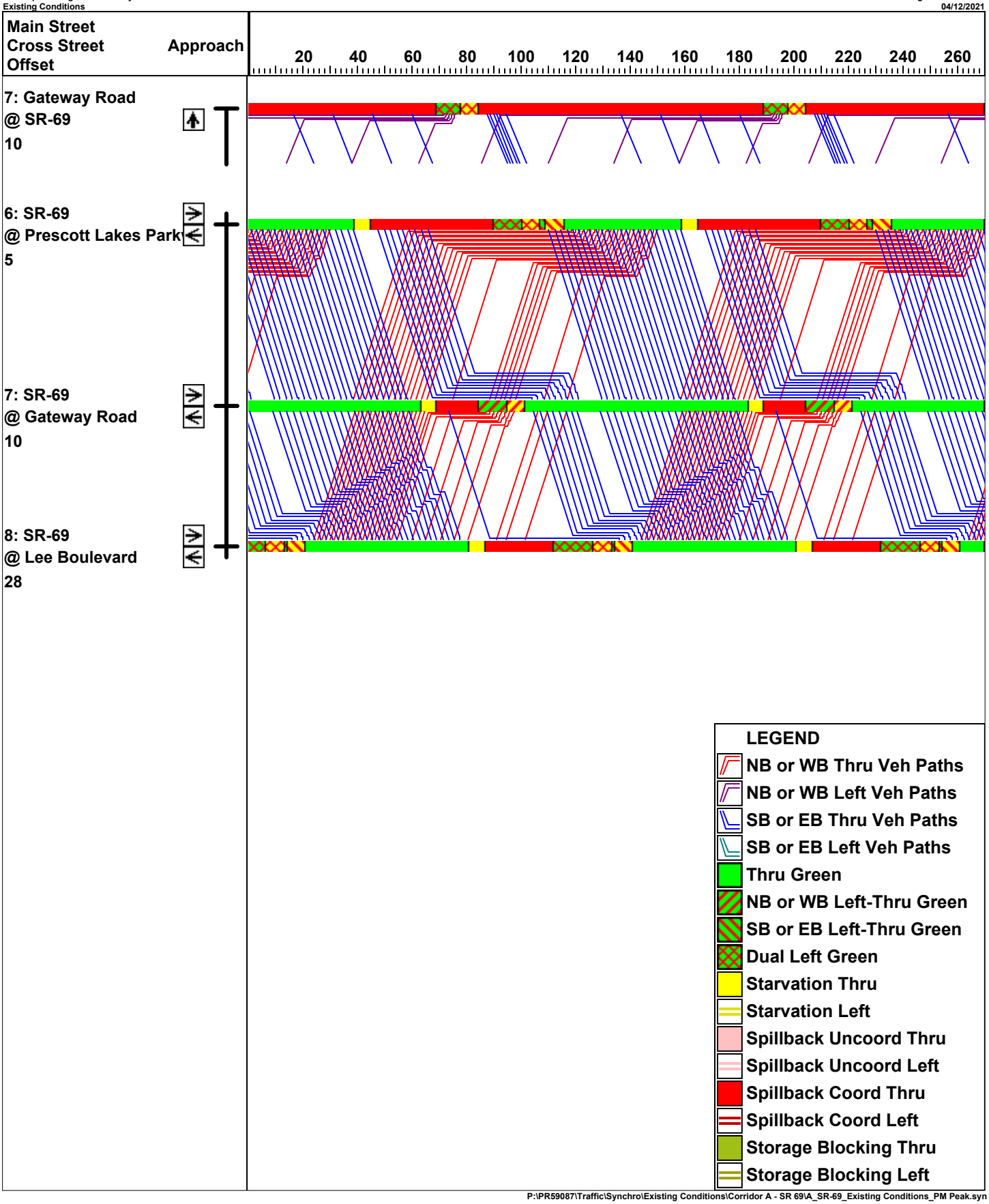
Time-Space Diagram - Windsong Drive & SR-69
Existing Conditions

Timing Plan: Mid Peak
04/12/2021



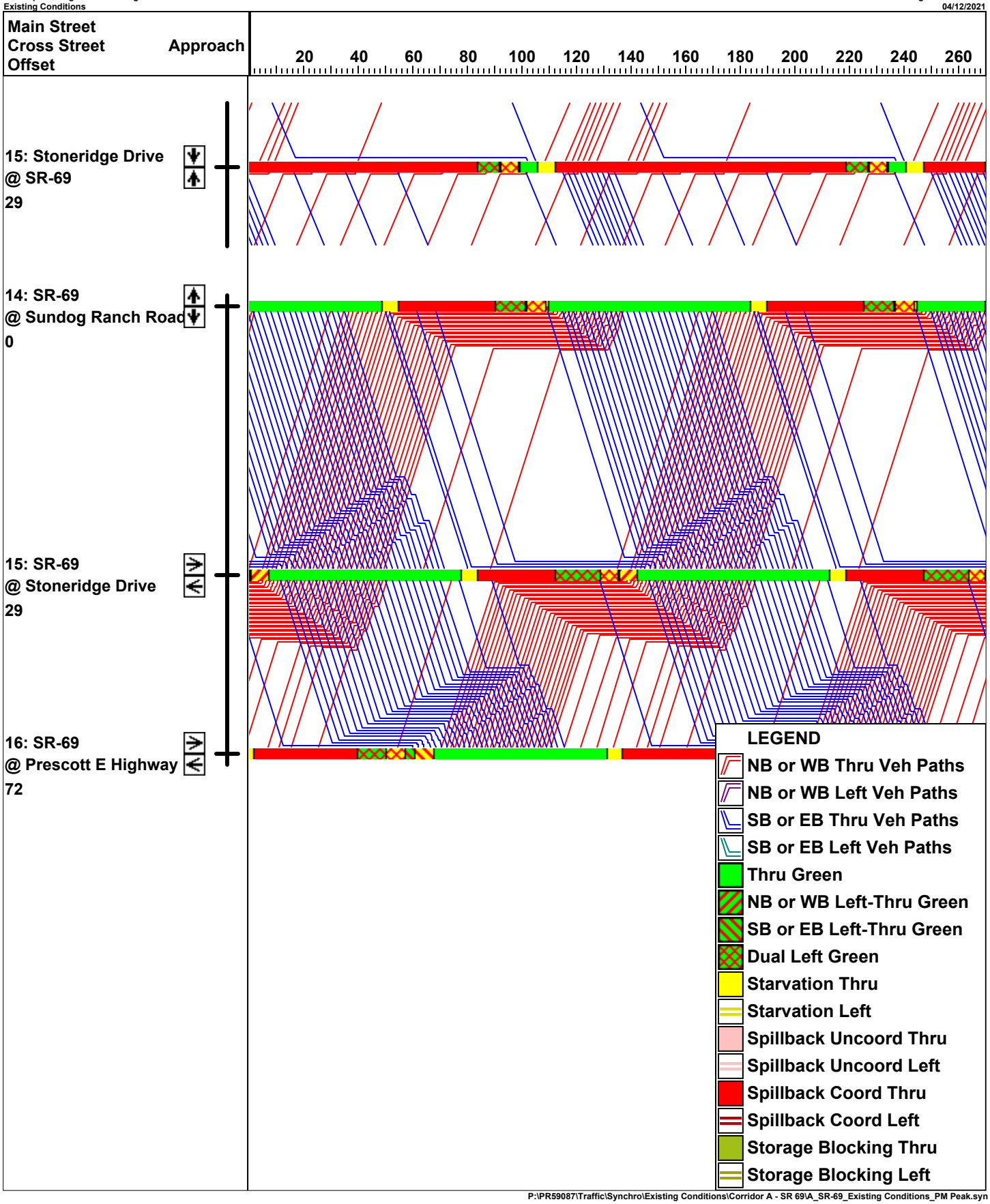
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Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
3: Frontier Village Shop
@ SR-69
30
2: SR-69
@ Heather Heights
0
3: SR-69
@ Frontier Village Shop
30
4: SR-69
@ Yavpe Connector
59
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
260
7: Gateway Road
@ SR-69
10
6: SR-69
@ Prescott Lakes Park
5
7: SR-69
@ Gateway Road
10
8: SR-69
@ Lee Boulevard
28
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Stoneridge Drive & SR-69
Existing Conditions

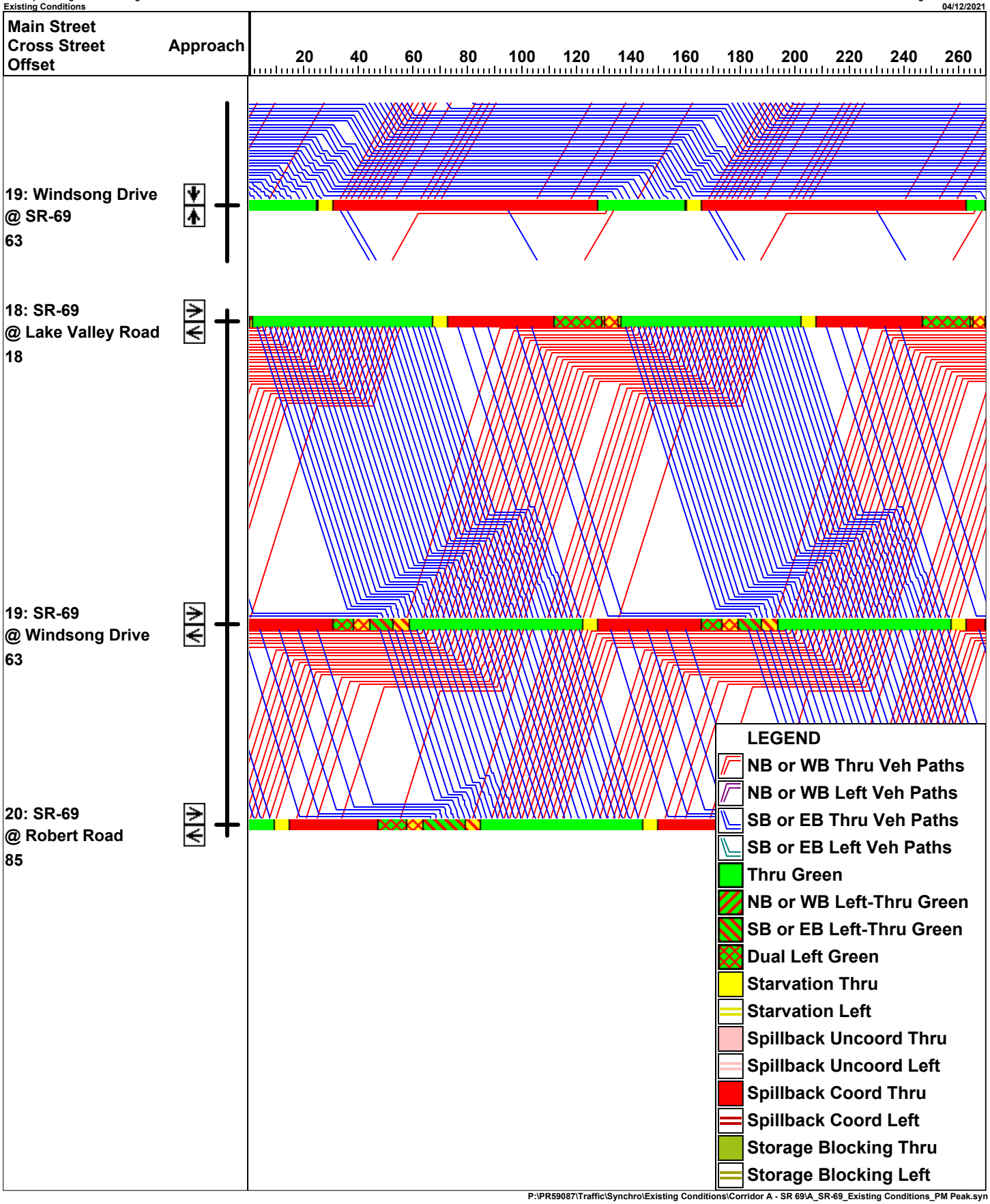
Timing Plan: PM Peak
04/12/2021



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Time-Space Diagram - Windsong Drive & SR-69
Existing Conditions

Timing Plan: PM Peak
04/12/2021



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APPENDIX SS-5

SR 69 Clearance and Pedestrian Interval Calculations

Street (NB/SB)	Street (WB/EB)	App-roach	Width (W)	Posted Approach Speed (v)	Assumed Speed for Comput-ations (v)	Change period (CP) [Y + R]	Calculated		Existing		Recommended	
							Yellow Interval (Y)	All-Red (R)	Yellow Interval (Y)	All-Red (R)	Yellow Interval (Y)	All-Red (R)
			ft	mph	mph	sec	sec	sec	sec	sec	sec	sec
Sheldon Street	Gurley Street	NB	70	-	35	5.4	3.6	1.8	3.0	2.0	3.6	1.8
		SB	70	35	35	5.4	3.6	1.8	3.6	4.0	3.6	4.0*
		EB	110	30	35	6.1	3.6	2.6	3.6	2.2	3.6	2.6
		WB	110	30	35	6.1	3.6	2.6	3.6	2.2	3.6	2.6
Heather Heights	SR 69	NB	105	20	35	6.1	3.6	2.5	3.0	4.2	3.6	2.5
		SB	105	20	35	6.1	3.6	2.5	3.0	4.2	3.6	2.5
		EB	55	35	35	5.1	3.6	1.5	3.6	1.5	3.6	1.5
		WB	55	35	35	5.1	3.6	1.5	3.6	1.5	3.6	1.5
Frontier Village entrance	SR 69	NB	115	15	35	6.2	3.6	2.7	3.2	3.8	3.6	2.7
		SB	115	-	35	6.2	3.6	2.7	3.2	3.8	3.6	2.7
		EB	80	45	45	5.9	4.4	1.6	3.6	1.9	4.4	1.6
		WB	80	45	45	5.9	4.4	1.6	3.6	1.9	4.4	1.6
Yavpe Connector	SR 69	NB	100	15	35	6.0	3.6	2.4	3.6	3.8	3.6	2.5
		SB	105	25	35	6.1	3.6	2.5	3.6	3.8	3.6	2.5
		EB	85	45	45	5.9	4.4	1.6	4.3	1.9	4.4	1.6
		WB	80	45	45	5.9	4.4	1.6	4.3	1.9	4.4	1.6
Holiday Drive	SR 69	NB	100	-	35	6.0	3.6	2.4	3.8	3.2	3.6	2.4
		SB	95	-	35	5.9	3.6	2.3	3.8	3.2	3.6	2.4
		EB	55	45	45	5.5	4.4	1.2	4.3	1.3	4.4	1.3
		WB	65	45	45	5.6	4.4	1.3	4.3	1.3	4.4	1.3
Prescott Lakes Parkway	SR 69	NB	115	35	35	6.2	3.6	2.7	3.0	3.8	3.6	2.7
		SB	115	40	40	6.3	4.0	2.3	3.0	3.8	4.0	2.3
		EB	80	45	45	5.9	4.4	1.6	4.5	1.6	4.4	1.6
		WB	80	45	45	5.9	4.4	1.6	4.5	1.6	4.4	1.6
Gateway Road	SR 69	NB	100	-	35	6.0	3.6	2.4	3.0	3.6	3.6	2.4
		SB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		EB	65	45	45	5.6	4.4	1.3	4.3	1.3	4.4	1.3
		WB	65	45	45	5.6	4.4	1.3	4.3	1.3	4.4	1.3
Lee Boulevard	SR 69	NB	100	35	35	6.0	3.6	2.4	3.6	3.6	3.6	2.4
		SB	100	25	35	6.0	3.6	2.4	3.6	3.6	3.6	2.4
		EB	70	45	45	5.7	4.4	1.4	4.7	1.4	4.4	1.4
		WB	70	45	45	5.7	4.4	1.4	4.7	1.4	4.4	1.4
Walker Road	SR 69	NB	80	30	35	5.6	3.6	2.0	3.2	2.1	3.6	2.0
		SB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		EB	65	45	45	5.6	4.4	1.3	5.5	1.0	4.4	1.3
		WB	65	45	45	5.6	4.4	1.3	5.5	1.0	4.4	1.3
Old Black Canyon Highway	SR 69	NB	105	25	35	6.1	3.6	2.5	4.9	1.1	3.6	2.5
		SB	105	25	35	6.1	3.6	2.5	4.3	1.1	3.6	2.5
		EB	70	45	45	5.7	4.4	1.4	3.0	2.9	4.4	1.4
		WB	70	45	45	5.7	4.4	1.4	3.0	2.9	4.4	1.4

Robin Drive	SR 69	NB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		SB	80	25	35	5.6	3.6	2.0	3.3	2.8	3.6	2.0
		EB	70	45	45	5.7	4.4	1.4	4.7	1.0	4.4	1.4
		WB	70	45	45	5.7	4.4	1.4	4.7	1.0	4.4	1.4
Ramada Drive	SR 69	NB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		SB	85	25	35	5.7	3.6	2.1	3.4	3.0	3.6	2.1
		EB	70	45	45	5.7	4.4	1.4	4.3	1.0	4.4	1.4
		WB	70	45	45	5.7	4.4	1.4	4.3	1.0	4.4	1.4
Diamond Drive	SR 69	NB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		SB	85	-	35	5.7	3.6	2.1	3.0	3.0	3.6	2.1
		EB	60	45	45	5.6	4.4	1.3	4.7	1.1	4.4	1.3
		WB	60	45	45	5.6	4.4	1.3	4.7	1.1	4.4	1.3
Sundog Ranch Road	SR 69	NB	125	-	35	6.4	3.6	2.9	3.0	3.8	3.6	2.9
		SB	125	25	35	6.4	3.6	2.9	3.3	3.8	3.6	2.9
		EB	95	45	45	6.1	4.4	1.8	4.3	1.7	4.4	1.8
		WB	95	45	45	6.1	4.4	1.8	4.3	1.7	4.4	1.8
Stoneridge Drive	SR 69	NB	105	35	35	6.1	3.6	2.5	3.6	2.9	3.6	2.5
		SB	105	-	35	6.1	3.6	2.5	3.6	2.9	3.6	2.5
		EB	85	45	45	5.9	4.4	1.6	4.3	1.5	4.4	1.6
		WB	85	45	45	5.9	4.4	1.6	4.3	1.5	4.4	1.6
Prescott E Highway	SR 69	NB	120	-	35	6.3	3.6	2.8	3.0	3.8	3.6	2.8
		SB	120	25	35	6.3	3.6	2.8	3.0	3.8	3.6	2.8
		EB	65	45	45	5.6	4.4	1.3	4.3	1.2	4.4	1.4
		WB	70	45	45	5.7	4.4	1.4	4.3	1.2	4.4	1.4
Glassford Hill Road	SR 69	NB	105	-	35	6.1	3.6	2.5	3.6	2.4	3.6	2.5
		SB	105	35	35	6.1	3.6	2.5	3.6	2.4	3.6	2.5
		EB	95	45	45	6.1	4.4	1.8	4.4	1.6	4.4	1.8
		WB	95	45	45	6.1	4.4	1.8	4.4	1.6	4.4	1.8
Lake Valley Road	SR 69	NB	85	-	35	5.7	3.6	2.1	3.0	2.6	3.6	2.1
		SB	80	25	35	5.6	3.6	2.0	3.0	2.6	3.6	2.1
		EB	65	45	45	5.6	4.4	1.3	4.3	1.4	4.4	1.5
		WB	75	45	45	5.8	4.4	1.5	4.3	1.4	4.4	1.5
Windsong Drive	SR 69	NB	80	-	35	5.6	3.6	2.0	3.0	2.7	3.6	2.0
		SB	80	25	35	5.6	3.6	2.0	3.0	2.8	3.6	2.0
		EB	45	45	45	5.3	4.4	1.0	4.3	1.0	4.4	1.1
		WB	50	45	45	5.4	4.4	1.1	4.3	1.2	4.4	1.1
Robert Road	SR 69	NB	75	-	35	5.5	3.6	1.9	3.0	2.6	3.6	1.9
		SB	75	25	35	5.5	3.6	1.9	3.0	2.6	3.6	1.9
		EB	45	45	45	5.3	4.4	1.0	4.3	1.3	4.4	1.3
		WB	60	45	45	5.6	4.4	1.3	4.3	1.3	4.4	1.3
Navajo Drive	SR 69	NB	75	-	35	5.5	3.6	1.9	3.0	2.6	3.6	1.9
		SB	45	25	35	4.9	3.6	1.3	3.0	2.3	3.6	1.9
		EB	75	45	45	5.8	4.4	1.5	4.3	1.4	4.4	1.5
		WB	75	45	45	5.8	4.4	1.5	4.3	1.4	4.4	1.5

Enterprise Parkway	SR 69	NB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		SB	65	Unknown	35	5.3	3.6	1.7	3.7	2.7	3.6	1.7
		EB	65	55	55	6.1	5.1	1.1	5.5	1.8	5.1	1.1
		WB	65	55	55	6.1	5.1	1.1	5.5	1.8	5.1	1.1
Fain Road	SR 69	NB	75	25	35	5.5	3.6	1.9	3.6	2.1	3.6	2.2
		SB	90	35	35	5.8	3.6	2.2	3.6	2.1	3.6	2.2
		EB	65	55	55	6.1	5.1	1.1	5.5	1.2	5.1	1.3
		WB	80	55	55	6.3	5.1	1.3	5.5	1.2	5.1	1.3

*Used to provide gaps in Gurley Street Eastbound traffic for businesses ingress/egress

Assumptions:

1. Equation used to compute all-red and yellow clearance intervals
<https://ops.fhwa.dot.gov/publications/fhwahop08024/chapter5.htm#5.3>.

2. Although values will vary by driver population and local conditions,
the following values are often cited for use in Equation 5-3:

t = 1.0 s

a = 10 ft/s^2

L_v = 20 ft

3. Intersection width is the distance between prolongations of the curb lines (to nearest 5 feet)

$$CP = \left[t + \frac{1.47v}{2(a + 32.2g)} \right] + \left[\frac{W + L_v}{1.47v} \right]$$

where:

CP = change period (yellow change plus red clearance intervals), s;
t = perception-reaction time to the onset of a yellow indication, s;
v = approach speed, mph;
a = deceleration rate in response to the onset of a yellow indication;
g = grade, with uphill positive and downhill negative (percent grade / 100), ft/ft;
W = width of intersection, ft; and
L_v = length of vehicle.

Street (NB/SB)	Street (WB/EB)	Leg	Crosswalk Width (W)	Walk	FDW	Recommended (excludes Yellow + All Red)
			ft	sec	sec	sec
Sheldon Street	Gurley Street	N	N/A	N/A	N/A	N/A
		S	55	7	16	13
		E	N/A	N/A	N/A	N/A
		W	75	7	22	16
Heather Heights	SR 69	N	70	7	20	14
		S	70	7	20	14
		E	120	7	35	30
		W	120	7	35	30
Frontier Village entrance	SR 69	N	85	7	25	19
		S	95	7	28	22
		E	120	7	35	29
		W	N/A	N/A	N/A	N/A
Yavpe Connector	SR 69	N	75	7	22	16
		S	95	7	28	22
		E	105	7	30	24
		W	115	7	33	27
Holiday Drive	SR 69	N	75	7	22	16
		S	60	7	18	12
		E	105	7	30	25
		W	N/A	N/A	N/A	N/A
Prescott Lakes Parkway	SR 69	N	100	7	29	23
		S	100	7	29	23
		E	130	7	38	32
		W	130	7	38	32
Gateway Road	SR 69	N	N/A	N/A	N/A	N/A
		S	85	7	25	25
		E	110	7	32	27
		W	N/A	N/A	N/A	N/A
Lee Boulevard	SR 69	N	90	7	26	20
		S	85	7	25	19
		E	120	7	35	30
		W	120	7	35	30
Walker Road	SR 69	N	N/A	N/A	N/A	N/A
		S	85	7	25	25
		E	90	7	26	21
		W	N/A	N/A	N/A	N/A
Old Black Canyon Highway	SR 69	N	80	7	23	17
		S	95	7	28	22
		E	105	7	30	25
		W	110	7	32	27

Robin Drive	SR 69	N	N/A	N/A	N/A	N/A
		S	N/A	N/A	N/A	N/A
		E	N/A	N/A	N/A	N/A
		W	N/A	N/A	N/A	N/A
Ramada Drive	SR 69	N	N/A	N/A	N/A	N/A
		S	N/A	N/A	N/A	N/A
		E	N/A	N/A	N/A	N/A
		W	N/A	N/A	N/A	N/A
Diamond Drive	SR 69	N	N/A	N/A	N/A	N/A
		S	N/A	N/A	N/A	N/A
		E	N/A	N/A	N/A	N/A
		W	N/A	N/A	N/A	N/A
Sundog Ranch Road	SR 69	N	95	7	28	22
		S	90	7	26	20
		E	125	7	36	30
		W	125	7	36	30
Stoneridge Drive	SR 69	N	95	7	28	22
		S	95	7	28	22
		E	120	7	35	30
		W	120	7	35	30
Prescott E Highway	SR 69	N	70	7	20	14
		S	60	7	18	12
		E	120	7	35	29
		W	120	7	35	29
Glassford Hill Road	SR 69	N	95	7	28	23
		S	90	7	26	21
		E	115		N/A	N/A
		W	115	7	33	28
Lake Valley Road	SR 69	N	90	7	26	21
		S	70	7	20	15
		E	95	7	28	23
		W	90	7	26	21
Windsong Drive	SR 69	N	70	7	20	15
		S	50	7	15	10
		E	100	7	29	24
		W	95	7	28	23
Robert Road	SR 69	N	60	7	18	13
		S	55	7	16	11
		E	90	7	26	21
		W	95	7	28	23
Navajo Drive	SR 69	N	85	7	25	25
		S	90	7	26	21
		E	85	7	25	19
		W	95	7	28	22

Enterprise Parkway	SR 69	N	N/A	N/A	N/A	N/A
		S	N/A	N/A	N/A	N/A
		E	N/A	N/A	N/A	N/A
		W	N/A	N/A	N/A	N/A
Fain Road	SR 69	N	85	7	25	25
		S	N/A	N/A	N/A	N/A
		E	80	7	23	23
		W	N/A	N/A	N/A	N/A

Assumptions:

Crosswalk length measured from center of curb ramp to center of curb ramp (to nearest 5 feet)

Assumed pedestrian speed:

v = 3.5 ft/s

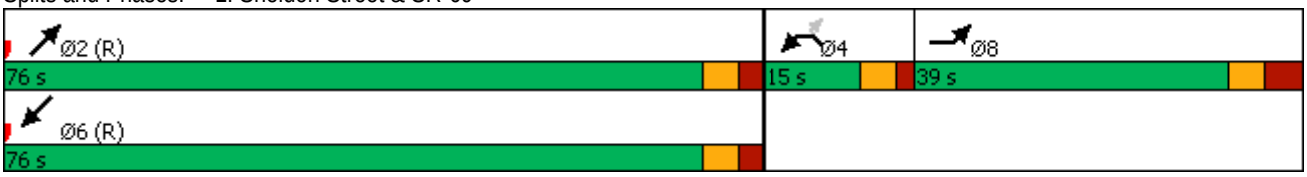
APPENDIX SS-6

SR 69 Optimized Plans Delay and Capacity Analysis Results

Lane Group	EBL	NWL2	NET	SWT	SWR
Lane Configurations					
Traffic Volume (vph)	279	20	323	514	934
Future Volume (vph)	279	20	323	514	934
Turn Type	Prot	Prot	NA	NA	Free
Protected Phases	8	4	2	6	
Permitted Phases					Free
Detector Phase	8	4	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.6	21.2	21.2	
Total Split (s)	39.0	15.0	76.0	76.0	
Total Split (%)	30.0%	11.5%	58.5%	58.5%	
Yellow Time (s)	3.6	3.6	3.6	3.6	
All-Red Time (s)	4.0	1.8	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.4	6.2	6.2	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	
Act Effct Green (s)	15.1	6.2	93.6	93.6	130.0
Actuated g/C Ratio	0.12	0.05	0.72	0.72	1.00
v/c Ratio	0.52	0.26	0.10	0.22	0.36
Control Delay	57.1	66.7	6.3	7.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	66.7	6.3	7.0	0.6
LOS	E	E	A	A	A
Approach Delay	57.1		6.3	2.9	
Approach LOS	E		A	A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 40.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	18	531	7	22	1470	8	13	0	10	10
Future Volume (vph)	18	531	7	22	1470	8	13	0	10	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	15.1	25.1	25.1	15.1	25.1	25.1	21.1	21.1	21.1	21.1
Total Split (s)	19.0	88.0	88.0	20.0	89.0	89.0	22.0	22.0	22.0	22.0
Total Split (%)	14.6%	67.7%	67.7%	15.4%	68.5%	68.5%	16.9%	16.9%	16.9%	16.9%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.1	5.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.0	105.2	105.2	10.0	108.2	108.2	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.08	0.81	0.81	0.08	0.83	0.83	0.12	0.12	0.12	0.12
v/c Ratio	0.15	0.14	0.01	0.18	0.38	0.01	0.09	0.01	0.07	0.13
Control Delay	53.9	2.7	0.0	69.1	1.4	0.0	53.0	0.0	52.6	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	2.7	0.0	69.1	1.4	0.0	53.0	0.0	52.6	30.8
LOS	D	A	A	E	A	A	D	A	D	C
Approach Delay		4.3			2.4			33.7		37.0
Approach LOS		A			A			C		D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 7 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 3.8	Intersection LOS: A
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

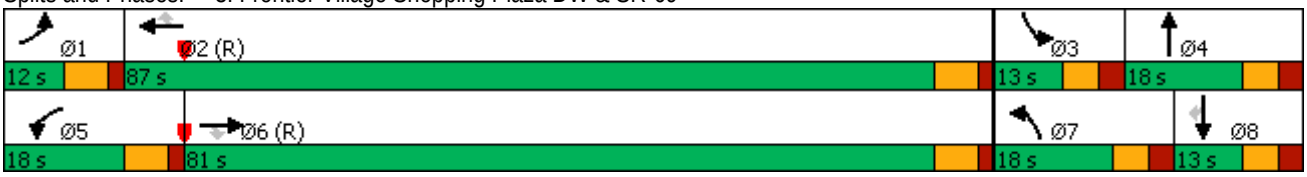
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	513	27	62	1434	66	0			
Future Volume (vph)	513	27	62	1434	66	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.0	51.0	12.0	51.0	12.3	12.3	12.0	12.3	12.3
Total Split (s)	81.0	81.0	18.0	87.0	18.0	18.0	12.0	13.0	13.0
Total Split (%)	62.3%	62.3%	13.8%	66.9%	13.8%	13.8%	9%	10%	10%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6	4.4	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	2.7	2.7	1.6	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.3	6.3			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	103.9	103.9	6.6	114.0	7.3	7.3			
Actuated g/C Ratio	0.80	0.80	0.05	0.88	0.06	0.06			
v/c Ratio	0.14	0.02	0.39	0.35	0.37	0.07			
Control Delay	2.9	0.8	76.9	0.3	64.3	0.3			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	2.9	0.8	76.9	0.3	64.3	0.3			
LOS	A	A	E	A	E	A			
Approach Delay	2.8			3.5		43.3			
Approach LOS	A			A		D			

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 116 (89%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 52.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Frontier Village Shopping Plaza DW & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	473	26	38	1478	51	29	23	16	18	39	30
Future Volume (vph)	49	473	26	38	1478	51	29	23	16	18	39	30
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	16.0	84.0	84.0	14.0	82.0		16.0	16.0	16.0	16.0	16.0	16.0
Total Split (%)	12.3%	64.6%	64.6%	10.8%	63.1%		12.3%	12.3%	12.3%	12.3%	12.3%	12.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4		3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6		2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	6.8	96.6	96.6	6.5	96.3	130.0	6.3	7.6	7.6	6.1	7.4	7.4
Actuated g/C Ratio	0.05	0.74	0.74	0.05	0.74	1.00	0.05	0.06	0.06	0.05	0.06	0.06
v/c Ratio	0.30	0.14	0.02	0.24	0.43	0.03	0.19	0.23	0.08	0.12	0.40	0.16
Control Delay	63.2	2.2	0.4	74.1	1.7	0.0	62.1	62.7	0.8	61.2	69.9	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	2.2	0.4	74.1	1.7	0.0	62.1	62.7	0.8	61.2	69.9	1.6
LOS	E	A	A	E	A	A	E	E	A	E	E	A
Approach Delay		7.6			3.4			48.2			44.4	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 73 (56%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	16	466	8	29	1555	46	28	10	14	10	53
Future Volume (vph)	16	466	8	29	1555	46	28	10	14	10	53
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.7	25.7	25.7	11.7	25.7	25.7	12.0	12.0	12.0	12.0	12.0
Total Split (s)	12.0	93.0	93.0	13.0	94.0	94.0	12.0	12.0	12.0	12.0	12.0
Total Split (%)	9.2%	71.5%	71.5%	10.0%	72.3%	72.3%	9.2%	9.2%	9.2%	9.2%	9.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	6.1	101.0	101.0	6.6	103.9	103.9	6.0	8.4	6.0	6.0	6.0
Actuated g/C Ratio	0.05	0.78	0.78	0.05	0.80	0.80	0.05	0.06	0.05	0.05	0.05
v/c Ratio	0.21	0.18	0.01	0.36	0.60	0.04	0.37	0.13	0.09	0.13	0.31
Control Delay	86.2	2.7	0.0	81.0	6.5	0.0	73.3	49.6	60.9	63.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.2	2.7	0.0	81.0	6.5	0.0	73.3	49.6	60.9	63.0	4.2
LOS	F	A	A	F	A	A	E	D	E	E	A
Approach Delay		5.3			7.7			65.4		22.0	
Approach LOS		A			A			E		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 26 (20%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	434	17	12	1542	467	16	38	8	190	15	96
Future Volume (vph)	33	434	17	12	1542	467	16	38	8	190	15	96
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	20.0	26.0	26.0	12.0	26.0	12.3	12.3	12.3	12.3	12.3	12.3	20.0
Total Split (s)	20.0	76.0	76.0	12.0	68.0	28.0	18.0	14.0	14.0	28.0	24.0	20.0
Total Split (%)	15.4%	58.5%	58.5%	9.2%	52.3%	21.5%	13.8%	10.8%	10.8%	21.5%	18.5%	15.4%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.0	3.6	3.6	3.6	4.0	4.0	4.4
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	2.3	2.7	2.7	2.7	2.3	2.3	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.3	6.3	6.3	6.3	6.3	6.3	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	88.1	88.1	6.4	73.4	92.3	6.1	7.6	7.6	12.9	19.3	39.6
Actuated g/C Ratio	0.11	0.68	0.68	0.05	0.56	0.71	0.05	0.06	0.06	0.10	0.15	0.30
v/c Ratio	0.10	0.14	0.02	0.15	0.58	0.40	0.11	0.38	0.03	0.61	0.06	0.19
Control Delay	39.0	5.1	0.2	68.5	12.7	1.3	60.8	68.3	0.1	63.6	47.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.1	0.2	68.5	12.7	1.3	60.8	68.3	0.1	63.6	47.1	6.8
LOS	D	A	A	E	B	A	E	E	A	E	D	A
Approach Delay		7.3			10.4			57.2			44.7	
Approach LOS		A			B			E			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 115 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	617	15	38	2079	9	2
Future Volume (vph)	617	15	38	2079	9	2
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.7	25.7	12.7	25.7	13.0	12.7
Total Split (s)	98.0	98.0	17.0	115.0	15.0	17.0
Total Split (%)	75.4%	75.4%	13.1%	88.5%	11.5%	13.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	4.4
All-Red Time (s)	1.3	1.3	1.3	1.3	2.4	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	6.0	5.7
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	112.7	112.7	7.0	126.3	7.0	9.6
Actuated g/C Ratio	0.87	0.87	0.05	0.97	0.05	0.07
v/c Ratio	0.15	0.01	0.22	0.46	0.05	0.02
Control Delay	0.5	0.1	56.4	0.6	59.1	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	0.1	56.4	0.6	59.1	35.5
LOS	A	A	E	A	E	D
Approach Delay	0.4			1.6	55.2	
Approach LOS	A			A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 66 (51%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 1.6	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	570	16	50	1773	44	67	2	8	25	10	277
Future Volume (vph)	20	570	16	50	1773	44	67	2	8	25	10	277
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	11.8	25.8	25.8	11.8	25.8	25.8	14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	13.0	75.0	75.0	17.0	79.0	79.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	10.0%	57.7%	57.7%	13.1%	60.8%	60.8%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.4	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.3	85.8	85.8	7.9	89.8	89.8	21.1	21.1	21.1	21.1	21.1	21.1
Actuated g/C Ratio	0.05	0.66	0.66	0.06	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.26	0.18	0.02	0.51	0.55	0.04	0.32	0.01	0.03	0.12	0.04	0.86
Control Delay	74.2	3.8	1.2	74.5	9.9	0.8	49.4	40.0	0.1	43.8	41.4	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	3.8	1.2	74.5	9.9	0.8	49.4	40.0	0.1	43.8	41.4	55.1
LOS	E	A	A	E	A	A	D	D	A	D	D	E
Approach Delay		6.0			11.4			43.9			53.7	
Approach LOS		A			B			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 92 (71%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 72.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	543	60	59	1754	113	16
Future Volume (vph)	543	60	59	1754	113	16
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	10.7	25.7	15.6	15.6
Total Split (s)	93.0	93.0	19.0	112.0	18.0	18.0
Total Split (%)	71.5%	71.5%	14.6%	86.2%	13.8%	13.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.6	5.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	95.1	95.1	9.6	108.1	10.6	10.6
Actuated g/C Ratio	0.73	0.73	0.07	0.83	0.08	0.08
v/c Ratio	0.16	0.06	0.49	0.65	0.44	0.12
Control Delay	1.5	0.1	69.9	5.3	61.9	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	0.1	69.9	5.3	61.9	23.8
LOS	A	A	E	A	E	C
Approach Delay	1.3			7.4	57.3	
Approach LOS	A			A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 104 (80%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

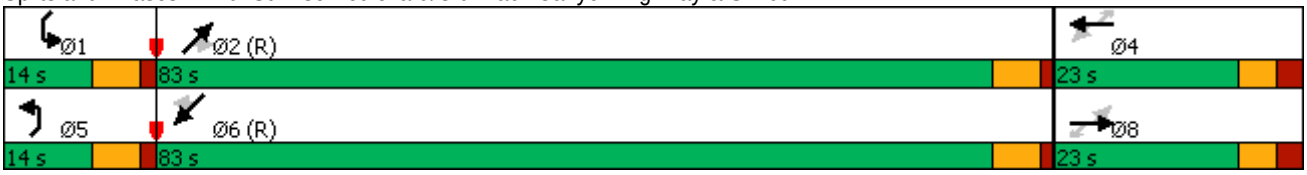
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	33	4	22	108	8	32	8	578	6	8	1811	50
Future Volume (vph)	33	4	22	108	8	32	8	578	6	8	1811	50
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	14.1	14.1	14.1	14.1	14.1	14.1	13.8	35.8	35.8	13.8	35.8	35.8
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	14.0	83.0	83.0	14.0	83.0	83.0
Total Split (%)	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	11.7%	69.2%	69.2%	11.7%	69.2%	69.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.1	6.1		6.1	6.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		14.2	14.2		14.2	14.2	8.0	91.2	91.2	8.0	91.2	91.2
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.07	0.76	0.76	0.07	0.76	0.76
v/c Ratio		0.32	0.09		0.81	0.14	0.08	0.23	0.01	0.08	0.73	0.04
Control Delay		54.2	0.7		85.8	1.1	54.1	5.3	0.0	70.2	2.3	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.2	0.7		85.8	1.1	54.1	5.3	0.0	70.2	2.3	0.0
LOS		D	A		F	A	D	A	A	E	A	A
Approach Delay		34.1			67.4			5.9			2.6	
Approach LOS		C			E			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	7	83	17	626	1786	16	
Future Volume (vph)	7	83	17	626	1786	16	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.6	13.6	13.8	25.8	25.8	25.8	13.8
Total Split (s)	16.0	16.0	14.0	90.0	90.0	90.0	14.0
Total Split (%)	13.3%	13.3%	11.7%	75.0%	75.0%	75.0%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.3	8.3	8.0	100.3	94.7	94.7	
Actuated g/C Ratio	0.07	0.07	0.07	0.84	0.79	0.79	
v/c Ratio	0.07	0.47	0.15	0.23	0.69	0.01	
Control Delay	53.0	19.0	51.9	2.1	2.8	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.0	19.0	51.9	2.1	2.8	0.2	
LOS	D	B	D	A	A	A	
Approach Delay	21.7			3.4	2.7		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 3.6	Intersection LOS: A
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	25	93	24	652	1731	8	
Future Volume (vph)	25	93	24	652	1731	8	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.7	13.7	13.8	25.8	25.8	25.8	13.8
Total Split (s)	16.0	16.0	14.0	90.0	90.0	90.0	14.0
Total Split (%)	13.3%	13.3%	11.7%	75.0%	75.0%	75.0%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.4	8.4	8.1	100.1	91.7	91.7	
Actuated g/C Ratio	0.07	0.07	0.07	0.83	0.76	0.76	
v/c Ratio	0.22	0.50	0.22	0.24	0.70	0.01	
Control Delay	56.8	18.8	52.7	2.7	4.0	0.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.8	18.8	52.7	2.7	4.0	0.6	
LOS	E	B	D	A	A	A	
Approach Delay	26.8			4.5	3.9		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 32 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	105	15	708	1634	37
Future Volume (vph)	41	105	15	708	1634	37
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	13.7	13.7	13.7	25.7	25.7	25.7
Total Split (s)	17.0	17.0	14.0	103.0	89.0	89.0
Total Split (%)	14.2%	14.2%	11.7%	85.8%	74.2%	74.2%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.7	8.7	8.0	99.9	94.5	94.5
Actuated g/C Ratio	0.07	0.07	0.07	0.83	0.79	0.79
v/c Ratio	0.35	0.52	0.14	0.26	0.64	0.03
Control Delay	60.6	18.3	63.7	2.4	4.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	18.3	63.7	2.4	4.0	0.1
LOS	E	B	E	A	A	A
Approach Delay	30.3			3.7	3.9	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 25 (21%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	23	3	27	15	838	27	20	1662	37	26	3	12
Future Volume (vph)	23	3	27	15	838	27	20	1662	37	26	3	12
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	11.5	11.5	11.2	11.2	11.2	11.2	11.2	11.2	11.5	11.5	11.5
Total Split (s)	14.0	14.0	14.0	13.0	78.0	78.0	14.0	79.0	79.0	14.0	14.0	14.0
Total Split (%)	11.7%	11.7%	11.7%	10.8%	65.0%	65.0%	11.7%	65.8%	65.8%	11.7%	11.7%	11.7%
Yellow Time (s)	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.9	2.9	2.9	1.8	1.8	1.8	1.8	1.8	1.8	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.2	6.2	6.2	6.2	6.2	6.2	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	7.8	5.1	5.1	5.3	94.6	94.6	5.4	97.0	97.0	5.6	5.2	5.2
Actuated g/C Ratio	0.06	0.04	0.04	0.04	0.79	0.79	0.04	0.81	0.81	0.05	0.04	0.04
v/c Ratio	0.11	0.04	0.14	0.11	0.23	0.02	0.14	0.44	0.03	0.17	0.04	0.06
Control Delay	53.9	56.3	1.4	51.1	5.9	0.4	73.8	1.6	0.0	57.2	56.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	56.3	1.4	51.1	5.9	0.4	73.8	1.6	0.0	57.2	56.0	0.6
LOS	D	E	A	D	A	A	E	A	A	E	E	A
Approach Delay	27.3				6.4			2.4			40.4	
Approach LOS	C				A			A			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 92 (77%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 4.8	Intersection LOS: A
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	853	11	67	1606	118	71	19	19	12	70
Future Volume (vph)	24	853	11	67	1606	118	71	19	19	12	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0	26.0	10.1	12.1	10.1	12.1	12.1
Total Split (s)	14.0	71.0	71.0	18.0	75.0	75.0	16.0	19.0	12.0	15.0	15.0
Total Split (%)	11.7%	59.2%	59.2%	15.0%	62.5%	62.5%	13.3%	15.8%	10.0%	12.5%	12.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	6.6	78.5	78.5	9.1	83.5	83.5	6.6	12.1	4.8	6.1	6.1
Actuated g/C Ratio	0.06	0.65	0.65	0.08	0.70	0.70	0.06	0.10	0.04	0.05	0.05
v/c Ratio	0.27	0.28	0.01	0.55	0.49	0.11	0.41	0.33	0.15	0.14	0.36
Control Delay	53.6	9.8	0.0	78.8	4.2	0.5	60.8	15.7	57.8	57.8	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	9.8	0.0	78.8	4.2	0.5	60.8	15.7	57.8	57.8	4.8
LOS	D	A	A	E	A	A	E	B	E	E	A
Approach Delay		10.9			6.7			32.2		21.2	
Approach LOS		B			A			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 71 (59%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Stoneridge Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	792	54	22	1448	186	56	7	5	114	38	287
Future Volume (vph)	130	792	54	22	1448	186	56	7	5	114	38	287
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	25.8	25.8	11.8	25.8	25.8	12.4	12.4	12.4	12.4	12.4	12.4
Total Split (s)	17.0	66.0	66.0	13.0	62.0	62.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	14.2%	55.0%	55.0%	10.8%	51.7%	51.7%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	8.8	81.2	81.2	6.5	74.2	74.2	19.0	19.0	19.0	19.0	19.0	19.0
Actuated g/C Ratio	0.07	0.68	0.68	0.05	0.62	0.62	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.56	0.25	0.05	0.25	0.50	0.19	0.28	0.03	0.02	0.56	0.14	0.86
Control Delay	52.3	6.0	2.9	65.6	4.7	0.4	44.7	37.3	0.0	54.4	40.6	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	6.0	2.9	65.6	4.7	0.4	44.7	37.3	0.0	54.4	40.6	49.4
LOS	D	A	A	E	A	A	D	D	A	D	D	D
Approach Delay		12.0			5.0			40.9			49.9	
Approach LOS		B			A			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 45 (38%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Future Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	34.0	70.0	70.0	15.0	51.0	17.0	15.0	18.0	17.0	20.0	34.0
Total Split (%)	28.3%	58.3%	58.3%	12.5%	42.5%	14.2%	12.5%	15.0%	14.2%	16.7%	28.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	17.4	73.6	73.6	8.3	61.6	77.6	8.0	9.5	9.8	16.9	40.4
Actuated g/C Ratio	0.14	0.61	0.61	0.07	0.51	0.65	0.07	0.08	0.08	0.14	0.34
v/c Ratio	0.63	0.33	0.02	0.34	0.54	0.15	0.17	0.29	0.59	0.47	0.71
Control Delay	40.2	10.5	0.0	79.5	10.1	2.4	56.4	38.1	62.2	53.9	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	10.5	0.0	79.5	10.1	2.4	56.4	38.1	62.2	53.9	29.7
LOS	D	B	A	E	B	A	E	D	E	D	C
Approach Delay		19.2			11.1			41.6		41.2	
Approach LOS		B			B			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	671	48	121	1398	87	17	18	33	31	8	69
Future Volume (vph)	99	671	48	121	1398	87	17	18	33	31	8	69
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	11.7	10.7	10.7	11.7	10.7	10.7
Total Split (s)	21.0	72.0	72.0	23.0	74.0	74.0	12.0	13.0	13.0	12.0	13.0	13.0
Total Split (%)	17.5%	60.0%	60.0%	19.2%	61.7%	61.7%	10.0%	10.8%	10.8%	10.0%	10.8%	10.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	10.6	79.5	79.5	12.2	81.1	81.1	9.8	5.7	5.7	11.1	8.1	8.1
Actuated g/C Ratio	0.09	0.66	0.66	0.10	0.68	0.68	0.08	0.05	0.05	0.09	0.07	0.07
v/c Ratio	0.69	0.31	0.05	0.73	0.64	0.09	0.14	0.23	0.18	0.25	0.07	0.33
Control Delay	61.8	11.4	3.7	77.7	5.3	0.3	46.8	60.8	2.0	49.8	53.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	11.4	3.7	77.7	5.3	0.3	46.8	60.8	2.0	49.8	53.6	4.3
LOS	E	B	A	E	A	A	D	E	A	D	D	A
Approach Delay		17.0			10.5			28.8			21.2	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 52 (43%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	615	3	5	1555	271	7	7	85	3	91
Future Volume (vph)	89	615	3	5	1555	271	7	7	85	3	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	25.5	25.5	11.5	25.5	25.5	10.6	10.6	10.6	10.6	10.6
Total Split (s)	19.0	86.0	86.0	12.0	79.0	79.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	15.8%	71.7%	71.7%	10.0%	65.8%	65.8%	18.3%	18.3%	18.3%	18.3%	18.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.1	1.1	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.6		5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	10.5	94.3	94.3	6.0	80.5	80.5		12.3		12.3	12.3
Actuated g/C Ratio	0.09	0.79	0.79	0.05	0.67	0.67		0.10		0.10	0.10
v/c Ratio	0.63	0.24	0.00	0.06	0.71	0.26		0.11		0.69	0.36
Control Delay	53.1	7.5	0.0	65.8	8.5	0.5		44.5		76.2	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	53.1	7.5	0.0	65.8	8.5	0.5		44.5		76.2	8.5
LOS	D	A	A	E	A	A		D		E	A
Approach Delay		13.2			7.5			44.5		41.6	
Approach LOS		B			A			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 27 (23%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Windsong Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	104	573	13	53	1441	137	51	15	117	34	346
Future Volume (vph)	104	573	13	53	1441	137	51	15	117	34	346
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.7	25.7	10.7	25.7	25.7	11.5	11.5	11.5	11.5	11.5
Total Split (s)	18.0	72.0	72.0	15.0	69.0	69.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	15.0%	60.0%	60.0%	12.5%	57.5%	57.5%	27.5%	27.5%	27.5%	27.5%	27.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	10.5	75.7	75.7	7.6	70.6	70.6	22.0	22.0	22.0	22.0	22.0
Actuated g/C Ratio	0.09	0.63	0.63	0.06	0.59	0.59	0.18	0.18	0.18	0.18	0.18
v/c Ratio	0.73	0.28	0.01	0.52	0.75	0.15	0.22	0.09	0.50	0.11	0.90
Control Delay	75.5	8.1	0.7	71.7	11.8	2.9	41.4	25.0	49.8	38.7	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	8.1	0.7	71.7	11.8	2.9	41.4	25.0	49.8	38.7	52.3
LOS	E	A	A	E	B	A	D	C	D	D	D
Approach Delay		18.1			13.0			35.7		50.8	
Approach LOS		B			B			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 80.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	604	16	14	1227	86	25	3	14	48	53	379
Future Volume (vph)	82	604	16	14	1227	86	25	3	14	48	53	379
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	13.5	13.5	13.5	13.5	13.5	13.5
Total Split (s)	17.0	67.0	67.0	12.0	62.0	62.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	14.2%	55.8%	55.8%	10.0%	51.7%	51.7%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	9.7	76.7	76.7	5.3	65.8	65.8	27.2	27.2	27.2	27.2	27.2	27.2
Actuated g/C Ratio	0.08	0.64	0.64	0.04	0.55	0.55	0.23	0.23	0.23	0.23	0.23	0.23
v/c Ratio	0.63	0.29	0.02	0.19	0.69	0.10	0.09	0.01	0.04	0.16	0.14	0.90
Control Delay	73.0	9.0	1.1	61.1	23.8	5.6	33.7	31.0	0.1	35.3	34.8	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	9.0	1.1	61.1	23.8	5.6	33.7	31.0	0.1	35.3	34.8	53.8
LOS	E	A	A	E	C	A	C	C	A	D	C	D
Approach Delay		16.3			23.0			22.3			49.8	
Approach LOS		B			C			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 116 (97%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	631	1336	30	13	20
Future Volume (vph)	20	631	1336	30	13	20
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	26.2	13.3	13.3
Total Split (s)	17.0	105.0	88.0	88.0	15.0	15.0
Total Split (%)	14.2%	87.5%	73.3%	73.3%	12.5%	12.5%
Yellow Time (s)	5.1	5.1	5.1	5.1	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.3	5.3
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	8.0	108.3	102.6	102.6	8.0	8.0
Actuated g/C Ratio	0.07	0.90	0.86	0.86	0.07	0.07
v/c Ratio	0.19	0.21	0.48	0.02	0.06	0.17
Control Delay	56.9	1.5	2.9	0.9	53.2	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	1.5	2.9	0.9	53.2	23.2
LOS	E	A	A	A	D	C
Approach Delay		3.2	2.9		34.9	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 78 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 3.5	Intersection LOS: A
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

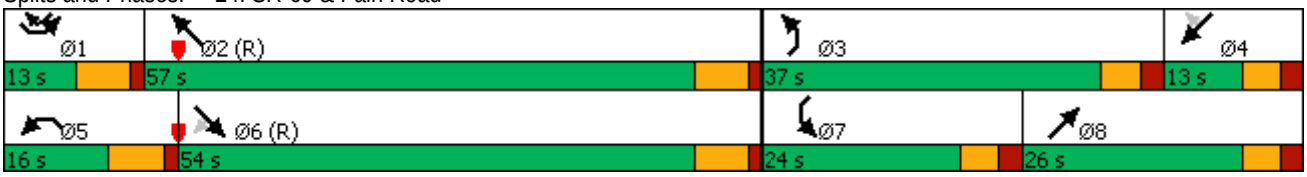
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	37	512	63	60	1026	348	285	82	282	46	49
Future Volume (vph)	37	512	63	60	1026	348	285	82	282	46	49
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.4	26.4	26.4	12.4	26.4		13.8	11.8	13.8	11.8	12.4
Total Split (s)	13.0	54.0	54.0	16.0	57.0		37.0	26.0	24.0	13.0	13.0
Total Split (%)	10.8%	45.0%	45.0%	13.3%	47.5%		30.8%	21.7%	20.0%	10.8%	10.8%
Yellow Time (s)	5.1	5.1	5.1	5.1	5.1		3.6	3.6	3.6	3.6	5.1
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2	2.2	2.2	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4		5.8	5.8	5.8	5.8	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None
Act Effct Green (s)	6.6	59.3	59.3	8.1	60.8	120.0	26.1	15.9	14.8	6.9	17.0
Actuated g/C Ratio	0.06	0.49	0.49	0.07	0.51	1.00	0.22	0.13	0.12	0.06	0.14
v/c Ratio	0.41	0.32	0.08	0.55	0.62	0.24	0.81	0.61	0.73	0.47	0.16
Control Delay	67.5	20.6	0.2	70.9	25.7	0.4	60.7	50.0	60.7	68.8	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	20.6	0.2	70.9	25.7	0.4	60.7	50.0	60.7	68.8	1.0
LOS	E	C	A	E	C	A	E	D	E	E	A
Approach Delay		21.3			21.5			57.1		54.0	
Approach LOS		C			C			E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 11 (9%), Referenced to phase 2:NWT and 6:SET, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 74.5%	ICU Level of Service D
Analysis Period (min) 15	

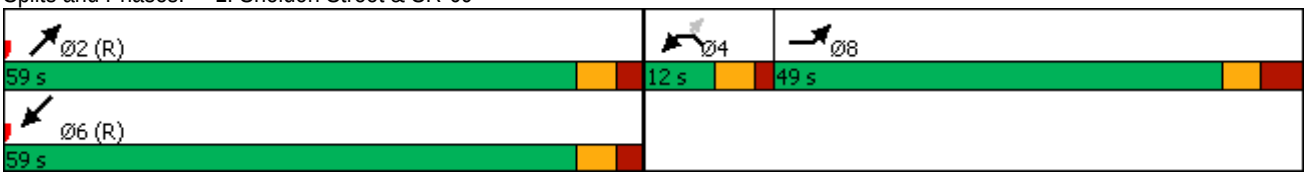
Splits and Phases: 24: SR-69 & Fain Road



Lane Group	EBL	NWL2	NWR	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	799	14	13	686	657	655
Future Volume (vph)	799	14	13	686	657	655
Turn Type	Prot	Prot	Perm	NA	NA	Free
Protected Phases	8	4		2	6	
Permitted Phases			4			Free
Detector Phase	8	4	4	2	6	
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.6	9.6	21.2	21.2	
Total Split (s)	49.0	12.0	12.0	59.0	59.0	
Total Split (%)	40.8%	10.0%	10.0%	49.2%	49.2%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	
All-Red Time (s)	4.0	1.8	1.8	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.4	5.4	6.2	6.2	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	31.0	5.6	5.6	68.2	68.2	120.0
Actuated g/C Ratio	0.26	0.05	0.05	0.57	0.57	1.00
v/c Ratio	0.67	0.18	0.08	0.27	0.36	0.26
Control Delay	42.4	59.3	1.0	14.8	7.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	59.3	1.0	14.8	7.4	0.2
LOS	D	E	A	B	A	A
Approach Delay	42.4			14.8	3.8	
Approach LOS	D			B	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 2 (2%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 51.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	21	1418	7	18	1283	21	25	7	46	10
Future Volume (vph)	21	1418	7	18	1283	21	25	7	46	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	15.1	25.1	25.1	15.1	25.1	25.1	21.1	21.1	21.1	21.1
Total Split (s)	16.0	82.0	82.0	16.0	82.0	82.0	22.0	22.0	22.0	22.0
Total Split (%)	13.3%	68.3%	68.3%	13.3%	68.3%	68.3%	18.3%	18.3%	18.3%	18.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.1	5.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.0	93.0	93.0	10.0	90.0	90.0	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.08	0.78	0.78	0.08	0.75	0.75	0.12	0.12	0.12	0.12
v/c Ratio	0.16	0.39	0.01	0.14	0.37	0.02	0.16	0.15	0.29	0.09
Control Delay	48.3	9.7	0.0	84.7	2.9	0.2	49.4	23.2	52.8	33.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	9.7	0.0	84.7	2.9	0.2	49.4	23.2	52.8	33.2
LOS	D	A	A	F	A	A	D	C	D	C
Approach Delay		10.3			4.0			34.8		47.2
Approach LOS		B			A			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 24 (20%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

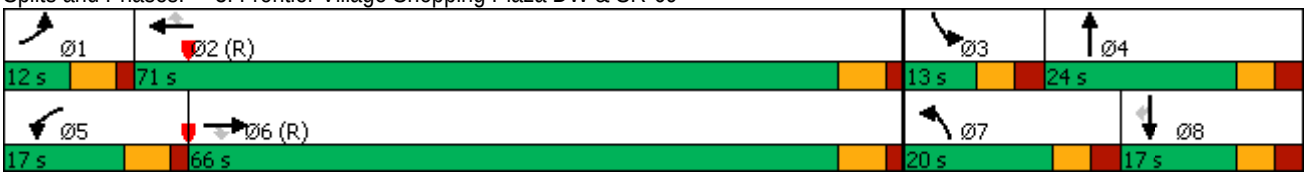
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	1317	158	114	1205	117	0			
Future Volume (vph)	1317	158	114	1205	117	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.0	51.0	12.0	51.0	12.3	12.3	12.0	12.3	12.3
Total Split (s)	66.0	66.0	17.0	71.0	20.0	24.0	12.0	13.0	17.0
Total Split (%)	55.0%	55.0%	14.2%	59.2%	16.7%	20.0%	10%	11%	14%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6	4.4	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	2.7	2.7	1.6	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.3	6.3			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	84.9	84.9	8.0	98.9	8.8	8.8			
Actuated g/C Ratio	0.71	0.71	0.07	0.82	0.07	0.07			
v/c Ratio	0.40	0.15	0.55	0.31	0.51	0.56			
Control Delay	10.0	2.3	56.9	1.4	60.2	10.6			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	10.0	2.3	56.9	1.4	60.2	10.6			
LOS	A	A	E	A	E	B			
Approach Delay	9.2			6.2		31.6			
Approach LOS	A			A		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 72 (60%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Frontier Village Shopping Plaza DW & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	1329	88	108	1194	38	64	41	71	46	93	70
Future Volume (vph)	39	1329	88	108	1194	38	64	41	71	46	93	70
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	14.0	68.0	68.0	17.0	71.0		15.0	20.0	20.0	15.0	20.0	20.0
Total Split (%)	11.7%	56.7%	56.7%	14.2%	59.2%		12.5%	16.7%	16.7%	12.5%	16.7%	16.7%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4		3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6		2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	6.4	72.4	72.4	8.5	76.9	120.0	7.1	10.7	10.7	6.6	10.2	10.2
Actuated g/C Ratio	0.05	0.60	0.60	0.07	0.64	1.00	0.06	0.09	0.09	0.06	0.08	0.08
v/c Ratio	0.23	0.47	0.10	0.48	0.40	0.03	0.34	0.27	0.29	0.27	0.64	0.29
Control Delay	74.9	4.3	0.2	70.5	11.1	0.0	58.6	53.6	3.0	57.7	70.7	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.9	4.3	0.2	70.5	11.1	0.0	58.6	53.6	3.0	57.7	70.7	2.8
LOS	E	A	A	E	B	A	E	D	A	E	E	A
Approach Delay		5.9			15.5			35.1			45.1	
Approach LOS		A			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 74 (62%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 54.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	58	1376	22	21	1307	36	21	0	38	4	74
Future Volume (vph)	58	1376	22	21	1307	36	21	0	38	4	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.7	25.7	25.7	11.7	25.7	25.7	12.0	12.0	12.0	12.0	12.0
Total Split (s)	17.0	82.0	82.0	13.0	78.0	78.0	12.0	13.0	12.0	13.0	13.0
Total Split (%)	14.2%	68.3%	68.3%	10.8%	65.0%	65.0%	10.0%	10.8%	10.0%	10.8%	10.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	8.5	91.2	91.2	6.4	86.8	86.8	6.0	6.0	6.0	6.0	6.0
Actuated g/C Ratio	0.07	0.76	0.76	0.05	0.72	0.72	0.05	0.05	0.05	0.05	0.05
v/c Ratio	0.50	0.56	0.02	0.24	0.56	0.03	0.26	0.11	0.24	0.04	0.39
Control Delay	91.2	5.6	0.0	61.5	6.2	0.1	62.5	1.0	58.4	55.5	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.2	5.6	0.0	61.5	6.2	0.1	62.5	1.0	58.4	55.5	7.3
LOS	F	A	A	E	A	A	E	A	E	E	A
Approach Delay		8.9			6.9			30.5		25.6	
Approach LOS		A			A			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 115 (96%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

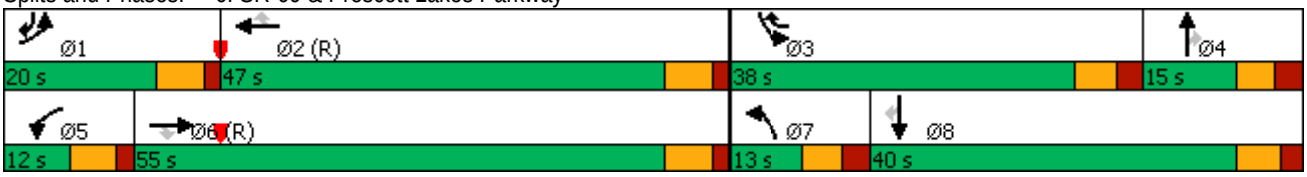
Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	1128	101	33	1141	252	44	50	43	588	108	231
Future Volume (vph)	208	1128	101	33	1141	252	44	50	43	588	108	231
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	20.0	26.0	26.0	12.0	26.0	12.3	12.3	12.3	12.3	12.3	12.3	20.0
Total Split (s)	20.0	55.0	55.0	12.0	47.0	38.0	13.0	15.0	15.0	38.0	40.0	20.0
Total Split (%)	16.7%	45.8%	45.8%	10.0%	39.2%	31.7%	10.8%	12.5%	12.5%	31.7%	33.3%	16.7%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.0	3.6	3.6	3.6	4.0	4.0	4.4
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	2.3	2.7	2.7	2.7	2.3	2.3	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.3	6.3	6.3	6.3	6.3	6.3	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	14.2	61.5	61.5	6.5	48.9	82.0	6.4	7.7	7.7	27.1	28.3	48.8
Actuated g/C Ratio	0.12	0.51	0.51	0.05	0.41	0.68	0.05	0.06	0.06	0.23	0.24	0.41
v/c Ratio	0.56	0.47	0.12	0.38	0.60	0.24	0.26	0.46	0.14	0.83	0.27	0.36
Control Delay	68.9	7.4	0.6	70.3	23.9	0.5	58.2	66.3	0.9	53.6	37.6	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.9	7.4	0.6	70.3	23.9	0.5	58.2	66.3	0.9	53.6	37.6	16.6
LOS	E	A	A	E	C	A	E	E	A	D	D	B
Approach Delay		15.8			20.8			43.0			42.6	
Approach LOS		B			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 75 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1690	69	122	1401	89	78
Future Volume (vph)	1690	69	122	1401	89	78
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.7	25.7	12.7	25.7	13.0	12.7
Total Split (s)	83.0	83.0	20.0	103.0	17.0	20.0
Total Split (%)	69.2%	69.2%	16.7%	85.8%	14.2%	16.7%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	4.4
All-Red Time (s)	1.3	1.3	1.3	1.3	2.4	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	6.0	5.7
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	85.9	85.9	8.8	100.4	7.9	22.7
Actuated g/C Ratio	0.72	0.72	0.07	0.84	0.07	0.19
v/c Ratio	0.50	0.06	0.53	0.36	0.43	0.27
Control Delay	3.8	0.3	68.5	2.0	59.8	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	0.3	68.5	2.0	59.8	31.8
LOS	A	A	E	A	E	C
Approach Delay	3.7			7.4	46.7	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 90 (75%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	1515	81	54	1364	72	67	9	50	81	22	92
Future Volume (vph)	169	1515	81	54	1364	72	67	9	50	81	22	92
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	13.6	26.1	26.1	13.7	26.1	26.1	15.2	15.2	15.2	15.2	15.2	15.2
Total Split (s)	32.0	77.0	77.0	18.0	63.0	63.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	26.7%	64.2%	64.2%	15.0%	52.5%	52.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.4	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	84.6	84.6	7.9	74.2	74.2	12.2	12.2	12.2	12.2	12.2	12.2
Actuated g/C Ratio	0.13	0.70	0.70	0.07	0.62	0.62	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.78	0.46	0.08	0.51	0.47	0.08	0.52	0.05	0.19	0.62	0.13	0.36
Control Delay	67.0	8.7	2.2	68.4	11.9	1.1	63.2	46.7	1.5	69.4	48.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	8.7	2.2	68.4	11.9	1.1	63.2	46.7	1.5	69.4	48.5	7.1
LOS	E	A	A	E	B	A	E	D	A	E	D	A
Approach Delay		14.0			13.4			37.7			37.6	
Approach LOS		B			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 65 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1449	197	81	1294	196	49
Future Volume (vph)	1449	197	81	1294	196	49
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	10.7	25.7	15.6	15.6
Total Split (s)	72.0	72.0	24.0	96.0	24.0	24.0
Total Split (%)	60.0%	60.0%	20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.6	5.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	79.7	79.7	10.8	96.2	12.5	12.5
Actuated g/C Ratio	0.66	0.66	0.09	0.80	0.10	0.10
v/c Ratio	0.47	0.19	0.55	0.50	0.59	0.25
Control Delay	6.5	0.6	69.1	1.9	58.2	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	0.6	69.1	1.9	58.2	15.6
LOS	A	A	E	A	E	B
Approach Delay	5.8			5.9	49.7	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 75 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

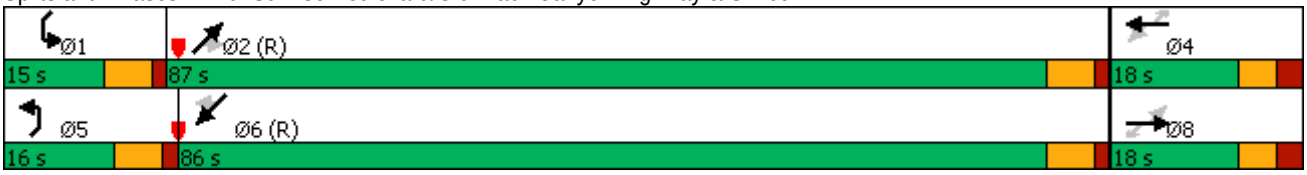
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	33	0	34	43	1	24	28	1381	61	11	1340	30
Future Volume (vph)	33	0	34	43	1	24	28	1381	61	11	1340	30
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	14.1	14.1	14.1	14.1	14.1	14.1	13.8	35.8	35.8	13.8	35.8	35.8
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	16.0	87.0	87.0	15.0	86.0	86.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	13.3%	72.5%	72.5%	12.5%	71.7%	71.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.1	6.1		6.1	6.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		9.3	9.3		9.3	9.3	8.1	100.1	100.1	8.0	94.4	94.4
Actuated g/C Ratio		0.08	0.08		0.08	0.08	0.07	0.83	0.83	0.07	0.79	0.79
v/c Ratio		0.35	0.19		0.48	0.13	0.25	0.51	0.05	0.10	0.52	0.03
Control Delay		61.2	2.7		68.3	1.4	58.7	6.2	0.6	52.9	3.9	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		61.2	2.7		68.3	1.4	58.7	6.2	0.6	52.9	3.9	0.0
LOS		E	A		E	A	E	A	A	D	A	A
Approach Delay		31.5			44.8			7.0			4.2	
Approach LOS		C			D			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 95 (79%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	5	23	19	1419	1358	10	
Future Volume (vph)	5	23	19	1419	1358	10	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.6	13.6	13.8	25.8	25.8	25.8	13.8
Total Split (s)	16.0	16.0	16.0	90.0	88.0	88.0	14.0
Total Split (%)	13.3%	13.3%	13.3%	75.0%	73.3%	73.3%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	8.0	108.4	102.8	102.8	
Actuated g/C Ratio	0.07	0.07	0.07	0.90	0.86	0.86	
v/c Ratio	0.04	0.20	0.18	0.48	0.49	0.01	
Control Delay	53.4	22.7	64.3	1.0	2.7	0.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.4	22.7	64.3	1.0	2.7	0.9	
LOS	D	C	E	A	A	A	
Approach Delay	27.8			1.8	2.7		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 81 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 2.5	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	25	18	1417	1331	8	
Future Volume (vph)	15	25	18	1417	1331	8	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.7	13.7	13.8	25.8	25.8	25.8	13.8
Total Split (s)	16.0	16.0	16.0	90.0	88.0	88.0	14.0
Total Split (%)	13.3%	13.3%	13.3%	75.0%	73.3%	73.3%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	8.0	108.3	102.8	102.8	
Actuated g/C Ratio	0.07	0.07	0.07	0.90	0.86	0.86	
v/c Ratio	0.14	0.21	0.17	0.48	0.48	0.01	
Control Delay	55.6	22.4	60.6	2.2	0.7	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	22.4	60.6	2.2	0.7	0.0	
LOS	E	C	E	A	A	A	
Approach Delay	34.8			3.0	0.7		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 54 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 2.4	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	26	28	1435	1313	38
Future Volume (vph)	34	26	28	1435	1313	38
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	13.7	13.7	13.7	25.7	25.7	25.7
Total Split (s)	17.0	17.0	17.0	103.0	86.0	86.0
Total Split (%)	14.2%	14.2%	14.2%	85.8%	71.7%	71.7%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.4	8.4	8.2	104.1	95.7	95.7
Actuated g/C Ratio	0.07	0.07	0.07	0.87	0.80	0.80
v/c Ratio	0.30	0.21	0.25	0.51	0.51	0.03
Control Delay	59.4	21.6	70.5	0.9	4.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	21.6	70.5	0.9	4.0	0.1
LOS	E	C	E	A	A	A
Approach Delay	43.1			2.2	3.9	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 27 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 3.9	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	145	16	28	47	1353	116	158	1130	151	89	14	84
Future Volume (vph)	145	16	28	47	1353	116	158	1130	151	89	14	84
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	11.5	11.5	11.2	11.2	11.2	11.2	11.2	11.2	11.5	11.5	11.5
Total Split (s)	20.0	21.0	21.0	13.0	63.0	63.0	20.0	70.0	70.0	16.0	17.0	17.0
Total Split (%)	16.7%	17.5%	17.5%	10.8%	52.5%	52.5%	16.7%	58.3%	58.3%	13.3%	14.2%	14.2%
Yellow Time (s)	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.9	2.9	2.9	1.8	1.8	1.8	1.8	1.8	1.8	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.2	6.2	6.2	6.2	6.2	6.2	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	9.9	7.4	7.4	6.3	68.5	68.5	10.4	74.8	74.8	12.9	5.8	5.8
Actuated g/C Ratio	0.08	0.06	0.06	0.05	0.57	0.57	0.09	0.62	0.62	0.11	0.05	0.05
v/c Ratio	0.56	0.18	0.11	0.28	0.51	0.13	0.58	0.39	0.16	0.26	0.18	0.34
Control Delay	60.3	56.2	0.8	53.9	16.2	2.1	51.3	10.3	3.3	53.1	59.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	56.2	0.8	53.9	16.2	2.1	51.3	10.3	3.3	53.1	59.0	3.4
LOS	E	E	A	D	B	A	D	B	A	D	E	A
Approach Delay	51.2				16.3			14.0			31.3	
Approach LOS	D				B			B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 98 (82%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	116	1451	47	133	1269	35	49	4	40	15	66
Future Volume (vph)	116	1451	47	133	1269	35	49	4	40	15	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0	26.0	10.1	12.1	10.1	12.1	12.1
Total Split (s)	22.0	65.0	65.0	26.0	69.0	69.0	13.0	17.0	12.0	16.0	16.0
Total Split (%)	18.3%	54.2%	54.2%	21.7%	57.5%	57.5%	10.8%	14.2%	10.0%	13.3%	13.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	12.4	72.3	72.3	13.7	73.6	73.6	5.7	6.6	5.2	6.2	6.2
Actuated g/C Ratio	0.10	0.60	0.60	0.11	0.61	0.61	0.05	0.06	0.04	0.05	0.05
v/c Ratio	0.69	0.52	0.05	0.72	0.44	0.04	0.33	0.25	0.29	0.17	0.34
Control Delay	74.4	8.5	0.1	55.5	17.1	1.0	60.4	1.5	60.4	58.5	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	8.5	0.1	55.5	17.1	1.0	60.4	1.5	60.4	58.5	4.4
LOS	E	A	A	E	B	A	E	A	E	E	A
Approach Delay		13.0			20.3			21.9		29.4	
Approach LOS		B			C			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 110 (92%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Stoneridge Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1337	94	35	1180	100	64	19	33	114	34	193
Future Volume (vph)	148	1337	94	35	1180	100	64	19	33	114	34	193
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	25.8	25.8	11.8	25.8	25.8	12.4	12.4	12.4	12.4	12.4	12.4
Total Split (s)	21.0	70.0	70.0	15.0	64.0	64.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	17.5%	58.3%	58.3%	12.5%	53.3%	53.3%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	9.5	84.7	84.7	7.1	77.6	77.6	14.9	14.9	14.9	14.9	14.9	14.9
Actuated g/C Ratio	0.08	0.71	0.71	0.06	0.65	0.65	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.59	0.40	0.09	0.37	0.39	0.10	0.41	0.09	0.12	0.73	0.16	0.60
Control Delay	82.9	1.4	0.3	63.1	7.3	0.8	54.2	44.4	0.8	72.7	45.9	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.9	1.4	0.3	63.1	7.3	0.8	54.2	44.4	0.8	72.7	45.9	17.6
LOS	F	A	A	E	A	A	D	D	A	E	D	B
Approach Delay		9.0			8.3			37.4			38.8	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 24 (20%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Future Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	35.0	63.0	63.0	17.0	45.0	20.0	15.0	20.0	20.0	25.0	35.0
Total Split (%)	29.2%	52.5%	52.5%	14.2%	37.5%	16.7%	12.5%	16.7%	16.7%	20.8%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	22.1	66.6	66.6	9.0	50.8	68.4	8.2	11.1	11.5	20.0	48.2
Actuated g/C Ratio	0.18	0.56	0.56	0.08	0.42	0.57	0.07	0.09	0.10	0.17	0.40
v/c Ratio	0.80	0.57	0.02	0.44	0.42	0.12	0.29	0.66	0.65	0.34	0.52
Control Delay	42.1	20.7	0.0	87.3	10.8	2.8	59.6	52.6	61.6	48.7	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	20.7	0.0	87.3	10.8	2.8	59.6	52.6	61.6	48.7	19.7
LOS	D	C	A	F	B	A	E	D	E	D	B
Approach Delay		27.1			14.1			53.6		37.0	
Approach LOS		C			B			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	972	76	100	900	82	17	33	96	132	28	103
Future Volume (vph)	157	972	76	100	900	82	17	33	96	132	28	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	11.7	10.7	10.7	11.7	10.7	10.7
Total Split (s)	26.0	64.0	64.0	22.0	60.0	60.0	12.0	14.0	14.0	20.0	22.0	22.0
Total Split (%)	21.7%	53.3%	53.3%	18.3%	50.0%	50.0%	10.0%	11.7%	11.7%	16.7%	18.3%	18.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	14.8	67.3	67.3	10.8	63.3	63.3	12.5	6.4	6.4	24.4	19.7	19.7
Actuated g/C Ratio	0.12	0.56	0.56	0.09	0.53	0.53	0.10	0.05	0.05	0.20	0.16	0.16
v/c Ratio	0.79	0.53	0.09	0.69	0.52	0.10	0.11	0.36	0.40	0.53	0.10	0.30
Control Delay	63.0	19.3	2.3	73.1	14.6	1.1	38.8	64.7	4.6	48.2	44.9	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	19.3	2.3	73.1	14.6	1.1	38.8	64.7	4.6	48.2	44.9	7.4
LOS	E	B	A	E	B	A	D	E	A	D	D	A
Approach Delay		23.9			19.0			22.2			31.8	
Approach LOS		C			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 56 (47%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	982	19	3	1016	193	10	5	179	14	122
Future Volume (vph)	106	982	19	3	1016	193	10	5	179	14	122
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	25.5	25.5	11.5	25.5	25.5	10.6	10.6	10.6	10.6	10.6
Total Split (s)	22.0	71.0	71.0	12.0	61.0	61.0	37.0	37.0	37.0	37.0	37.0
Total Split (%)	18.3%	59.2%	59.2%	10.0%	50.8%	50.8%	30.8%	30.8%	30.8%	30.8%	30.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.1	1.1	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.6		5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	12.0	83.7	83.7	6.0	68.5	68.5		22.9		22.9	22.9
Actuated g/C Ratio	0.10	0.70	0.70	0.05	0.57	0.57		0.19		0.19	0.19
v/c Ratio	0.65	0.43	0.02	0.03	0.55	0.21		0.07		0.81	0.32
Control Delay	61.6	12.2	2.1	68.0	9.3	0.9		30.3		69.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	61.6	12.2	2.1	68.0	9.3	0.9		30.3		69.5	8.2
LOS	E	B	A	E	A	A		C		E	A
Approach Delay		16.7			8.1			30.3		45.7	
Approach LOS		B			A			C		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 47 (39%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 65.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Windsong Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	177	891	53	17	931	82	53	25	103	49	252
Future Volume (vph)	177	891	53	17	931	82	53	25	103	49	252
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.7	25.7	10.7	25.7	25.7	11.5	11.5	11.5	11.5	11.5
Total Split (s)	31.0	79.0	79.0	12.0	60.0	60.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	25.8%	65.8%	65.8%	10.0%	50.0%	50.0%	24.2%	24.2%	24.2%	24.2%	24.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	16.9	89.2	89.2	5.7	71.5	71.5	14.7	14.7	14.7	14.7	14.7
Actuated g/C Ratio	0.14	0.74	0.74	0.05	0.60	0.60	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.77	0.37	0.05	0.22	0.48	0.09	0.35	0.22	0.68	0.23	0.63
Control Delay	62.9	7.4	2.7	61.0	9.6	0.4	52.2	29.1	69.8	47.7	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	7.4	2.7	61.0	9.6	0.4	52.2	29.1	69.8	47.7	12.2
LOS	E	A	A	E	A	A	D	C	E	D	B
Approach Delay		15.9			9.7			41.3		31.2	
Approach LOS		B			A			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 39 (33%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	818	50	17	817	65	43	26	11	64	22	170
Future Volume (vph)	149	818	50	17	817	65	43	26	11	64	22	170
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	13.5	13.5	13.5	13.5	13.5	13.5
Total Split (s)	32.0	82.0	82.0	13.0	63.0	63.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	26.7%	68.3%	68.3%	10.8%	52.5%	52.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	15.4	92.8	92.8	5.4	76.3	76.3	11.0	11.0	11.0	11.0	11.0	11.0
Actuated g/C Ratio	0.13	0.77	0.77	0.04	0.64	0.64	0.09	0.09	0.09	0.09	0.09	0.09
v/c Ratio	0.72	0.32	0.04	0.23	0.39	0.07	0.37	0.16	0.05	0.56	0.14	0.59
Control Delay	75.5	2.9	1.2	61.8	12.2	0.1	58.6	50.9	0.4	68.1	50.3	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	2.9	1.2	61.8	12.2	0.1	58.6	50.9	0.4	68.1	50.3	15.1
LOS	E	A	A	E	B	A	E	D	A	E	D	B
Approach Delay		13.5			12.3			48.1			31.5	
Approach LOS		B			B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	756	830	8	22	6
Future Volume (vph)	10	756	830	8	22	6
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	26.2	13.3	13.3
Total Split (s)	18.0	102.0	84.0	84.0	18.0	18.0
Total Split (%)	15.0%	85.0%	70.0%	70.0%	15.0%	15.0%
Yellow Time (s)	5.1	5.1	5.1	5.1	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.3	5.3
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	8.0	108.3	105.5	105.5	8.0	8.0
Actuated g/C Ratio	0.07	0.90	0.88	0.88	0.07	0.07
v/c Ratio	0.09	0.26	0.29	0.01	0.11	0.06
Control Delay	54.6	1.6	2.3	1.6	53.8	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	1.6	2.3	1.6	53.8	30.8
LOS	D	A	A	A	D	C
Approach Delay		2.3	2.2		48.6	
Approach LOS		A	A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48 (40%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 39.2%	ICU Level of Service A
Analysis Period (min) 15	

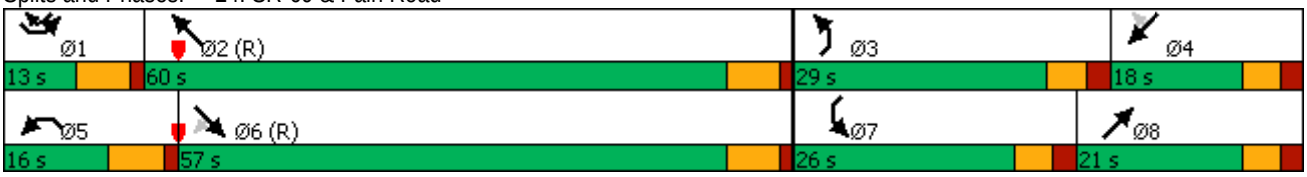
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	16	614	178	53	595	220	136	55	251	69	20
Future Volume (vph)	16	614	178	53	595	220	136	55	251	69	20
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.4	26.4	26.4	12.4	26.4		13.8	11.8	13.8	11.8	12.4
Total Split (s)	13.0	57.0	57.0	16.0	60.0		29.0	21.0	26.0	18.0	13.0
Total Split (%)	10.8%	47.5%	47.5%	13.3%	50.0%		24.2%	17.5%	21.7%	15.0%	10.8%
Yellow Time (s)	5.1	5.1	5.1	5.1	5.1		3.6	3.6	3.6	3.6	5.1
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2	2.2	2.2	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4		5.8	5.8	5.8	5.8	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None
Act Effct Green (s)	6.2	64.8	64.8	8.2	69.2	120.0	17.0	11.3	13.9	10.5	20.2
Actuated g/C Ratio	0.05	0.54	0.54	0.07	0.58	1.00	0.14	0.09	0.12	0.09	0.17
v/c Ratio	0.19	0.35	0.20	0.48	0.32	0.15	0.59	0.73	0.69	0.46	0.07
Control Delay	65.6	17.3	2.5	66.5	15.9	0.2	58.8	53.7	59.9	60.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	17.3	2.5	66.5	15.9	0.2	58.8	53.7	59.9	60.1	0.4
LOS	E	B	A	E	B	A	E	D	E	E	A
Approach Delay		15.0			15.0			56.2		56.4	
Approach LOS		B			B			E		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 91 (76%), Referenced to phase 2:NWT and 6:SET, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

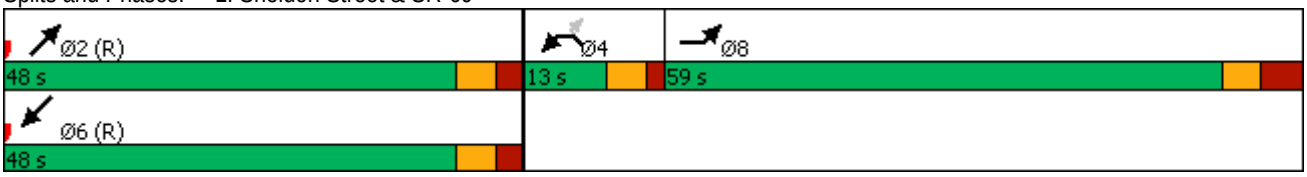
Splits and Phases: 24: SR-69 & Fain Road



Lane Group	EBL	NWL2	NWR	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1068	17	13	734	523	635
Future Volume (vph)	1068	17	13	734	523	635
Turn Type	Prot	Prot	Perm	NA	NA	Free
Protected Phases	8	4		2	6	
Permitted Phases			4			Free
Detector Phase	8	4	4	2	6	
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	15.0	15.0	
Minimum Split (s)	17.6	9.4	9.4	21.2	21.2	
Total Split (s)	59.0	13.0	13.0	48.0	48.0	
Total Split (%)	49.2%	10.8%	10.8%	40.0%	40.0%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	
All-Red Time (s)	4.0	1.8	1.8	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	5.4	5.4	6.2	6.2	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	40.8	5.9	5.9	58.2	58.2	120.0
Actuated g/C Ratio	0.34	0.05	0.05	0.48	0.48	1.00
v/c Ratio	0.68	0.21	0.08	0.33	0.33	0.25
Control Delay	35.9	59.9	0.9	21.2	17.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	59.9	0.9	21.2	17.2	0.2
LOS	D	E	A	C	B	A
Approach Delay	35.9			21.2	7.9	
Approach LOS	D			C	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 31 (26%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 53.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Sheldon Street & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	53	1804	12	21	1166	39	26	6	46	7
Future Volume (vph)	53	1804	12	21	1166	39	26	6	46	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		5	2			8		4
Permitted Phases			6			2	8		4	
Detector Phase	1	6	6	5	2	2	8	8	4	4
Switch Phase										
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0	20.0	15.0	15.0	15.0	15.0
Minimum Split (s)	15.1	25.1	25.1	15.1	25.1	25.1	21.1	21.1	21.1	21.1
Total Split (s)	18.0	81.0	81.0	17.0	80.0	80.0	22.0	22.0	22.0	22.0
Total Split (%)	15.0%	67.5%	67.5%	14.2%	66.7%	66.7%	18.3%	18.3%	18.3%	18.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.1	5.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	10.3	90.0	90.0	10.0	86.7	86.7	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.09	0.75	0.75	0.08	0.72	0.72	0.12	0.12	0.12	0.12
v/c Ratio	0.38	0.51	0.01	0.16	0.35	0.04	0.16	0.14	0.29	0.18
Control Delay	65.1	9.5	0.0	79.5	2.1	0.1	49.7	23.2	52.8	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	9.5	0.0	79.5	2.1	0.1	49.7	23.2	52.8	21.3
LOS	E	A	A	E	A	A	D	C	D	C
Approach Delay		11.1			3.4			35.7		38.4
Approach LOS		B			A			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 41 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

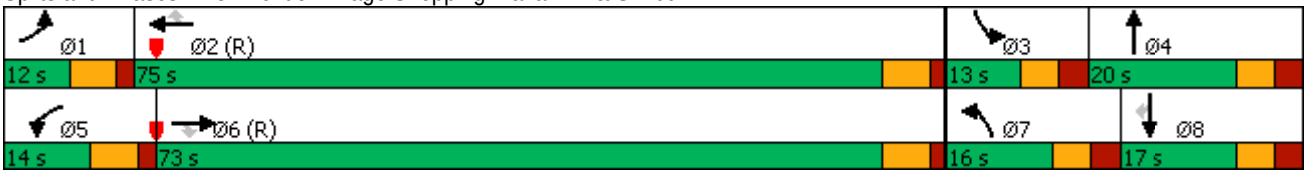
Splits and Phases: 2: SR-69 & Heather Heights



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1	Ø3	Ø8
Lane Configurations									
Traffic Volume (vph)	1793	125	74	1140	86	0			
Future Volume (vph)	1793	125	74	1140	86	0			
Turn Type	NA	Perm	Prot	NA	Prot	NA			
Protected Phases	6		5	2	7	4	1	3	8
Permitted Phases		6							
Detector Phase	6	6	5	2	7	4			
Switch Phase									
Minimum Initial (s)	45.0	45.0	6.0	45.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.0	51.0	12.0	51.0	12.3	12.3	12.0	12.3	12.3
Total Split (s)	73.0	73.0	14.0	75.0	16.0	20.0	12.0	13.0	17.0
Total Split (%)	60.8%	60.8%	11.7%	62.5%	13.3%	16.7%	10%	11%	14%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6	4.4	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	2.7	2.7	1.6	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.3	6.3			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	89.6	89.6	6.7	100.0	7.7	7.7			
Actuated g/C Ratio	0.75	0.75	0.06	0.83	0.06	0.06			
v/c Ratio	0.51	0.11	0.42	0.29	0.42	0.49			
Control Delay	4.2	0.3	58.8	0.5	59.5	8.7			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	4.2	0.3	58.8	0.5	59.5	8.7			
LOS	A	A	E	A	E	A			
Approach Delay	4.0			4.0		29.7			
Approach LOS	A			A		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 86 (72%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Frontier Village Shopping Plaza DW & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1818	67	109	1074	30	81	54	92	46	94	79
Future Volume (vph)	55	1818	67	109	1074	30	81	54	92	46	94	79
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			Free			4			8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	12.0	71.0	71.0	14.0	73.0		14.0	22.0	22.0	13.0	21.0	21.0
Total Split (%)	10.0%	59.2%	59.2%	11.7%	60.8%		11.7%	18.3%	18.3%	10.8%	17.5%	17.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4		3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6		2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	6.4	70.3	70.3	7.9	74.2	120.0	7.2	13.6	13.6	6.4	10.5	10.5
Actuated g/C Ratio	0.05	0.59	0.59	0.07	0.62	1.00	0.06	0.11	0.11	0.05	0.09	0.09
v/c Ratio	0.33	0.66	0.07	0.52	0.37	0.02	0.43	0.28	0.33	0.27	0.63	0.33
Control Delay	78.6	7.1	0.1	64.6	13.2	0.0	60.9	52.6	6.0	58.3	69.3	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	7.1	0.1	64.6	13.2	0.0	60.9	52.6	6.0	58.3	69.3	4.8
LOS	E	A	A	E	B	A	E	D	A	E	E	A
Approach Delay		8.9			17.5			36.7			43.7	
Approach LOS		A			B			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 96 (80%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: SR-69 & Yavpe Connector



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	36	1947	11	39	1171	31	20	0	45	8	67
Future Volume (vph)	36	1947	11	39	1171	31	20	0	45	8	67
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.7	25.7	25.7	11.7	25.7	25.7	12.0	12.0	12.0	12.0	12.0
Total Split (s)	13.0	84.0	84.0	12.0	83.0	83.0	12.0	12.0	12.0	12.0	12.0
Total Split (%)	10.8%	70.0%	70.0%	10.0%	69.2%	69.2%	10.0%	10.0%	10.0%	10.0%	10.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	6.6	86.7	86.7	6.2	88.6	88.6	6.0	6.0	6.0	8.4	8.4
Actuated g/C Ratio	0.06	0.72	0.72	0.05	0.74	0.74	0.05	0.05	0.05	0.07	0.07
v/c Ratio	0.40	0.83	0.01	0.47	0.49	0.03	0.25	0.20	0.29	0.07	0.31
Control Delay	78.9	13.6	0.0	66.9	6.8	0.0	62.0	2.2	59.5	55.9	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.9	13.6	0.0	66.9	6.8	0.0	62.0	2.2	59.5	55.9	3.8
LOS	E	B	A	E	A	A	E	A	E	E	A
Approach Delay		14.7			8.5			23.1		28.2	
Approach LOS		B			A			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 119 (99%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 13.1	Intersection LOS: B
Intersection Capacity Utilization 71.5%	ICU Level of Service C
Analysis Period (min) 15	

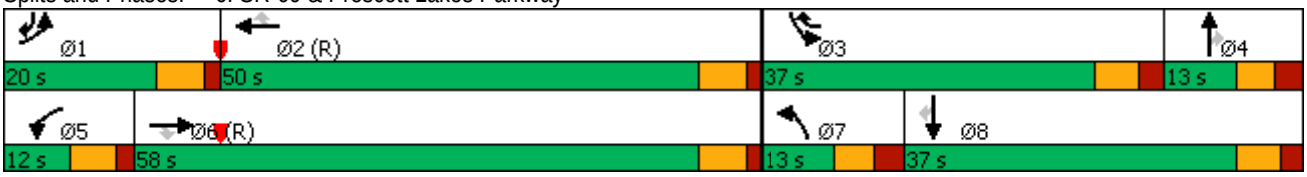
Splits and Phases: 5: SR-69 & Holiday Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1711	94	35	1032	262	51	50	45	658	114	214
Future Volume (vph)	225	1711	94	35	1032	262	51	50	45	658	114	214
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	1	6		5	2	3	7	4		3	8	1
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	3	7	4	4	3	8	1
Switch Phase												
Minimum Initial (s)	14.0	20.0	20.0	6.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0	14.0
Minimum Split (s)	20.0	26.0	26.0	12.0	26.0	12.3	12.3	12.3	12.3	12.3	12.3	20.0
Total Split (s)	20.0	58.0	58.0	12.0	50.0	37.0	13.0	13.0	13.0	37.0	37.0	20.0
Total Split (%)	16.7%	48.3%	48.3%	10.0%	41.7%	30.8%	10.8%	10.8%	10.8%	30.8%	30.8%	16.7%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.0	3.6	3.6	3.6	4.0	4.0	4.4
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	2.3	2.7	2.7	2.7	2.3	2.3	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.3	6.3	6.3	6.3	6.3	6.3	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	61.6	61.6	6.1	48.8	83.3	6.4	6.6	6.6	28.5	28.7	49.0
Actuated g/C Ratio	0.12	0.51	0.51	0.05	0.41	0.69	0.05	0.06	0.06	0.24	0.24	0.41
v/c Ratio	0.61	0.71	0.11	0.43	0.54	0.25	0.30	0.53	0.15	0.88	0.28	0.33
Control Delay	64.5	10.5	0.4	54.5	28.5	12.2	58.9	74.0	1.0	56.7	38.4	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	10.5	0.4	54.5	28.5	12.2	58.9	74.0	1.0	56.7	38.4	16.0
LOS	E	B	A	D	C	B	E	E	A	E	D	B
Approach Delay		16.0			25.9			46.1			45.8	
Approach LOS		B			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 94 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 78.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: SR-69 & Prescott Lakes Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2324	90	99	1351	77	86
Future Volume (vph)	2324	90	99	1351	77	86
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	4	5
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	5
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	25.7	25.7	12.7	25.7	13.0	12.7
Total Split (s)	90.0	90.0	16.0	106.0	14.0	16.0
Total Split (%)	75.0%	75.0%	13.3%	88.3%	11.7%	13.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	4.4
All-Red Time (s)	1.3	1.3	1.3	1.3	2.4	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	6.0	5.7
Lead/Lag	Lag	Lag	Lead			Lead
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	89.7	89.7	8.1	104.7	7.4	18.9
Actuated g/C Ratio	0.75	0.75	0.07	0.87	0.06	0.16
v/c Ratio	0.66	0.08	0.47	0.33	0.40	0.36
Control Delay	2.6	0.2	50.8	1.0	59.9	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	0.2	50.8	1.0	59.9	43.5
LOS	A	A	D	A	E	D
Approach Delay	2.5			4.4	51.3	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 106 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Gateway Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	2142	65	88	1263	78	84	33	77	43	2	103
Future Volume (vph)	174	2142	65	88	1263	78	84	33	77	43	2	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	11.8	25.8	25.8	11.8	25.8	25.8	14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	80.0	80.0	20.0	71.0	71.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	24.2%	66.7%	66.7%	16.7%	59.2%	59.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.4	2.4	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	16.2	80.8	80.8	10.0	74.6	74.6	11.6	11.6	11.6	11.6	11.6	11.6
Actuated g/C Ratio	0.14	0.67	0.67	0.08	0.62	0.62	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.79	0.68	0.07	0.65	0.43	0.08	0.67	0.20	0.31	0.36	0.01	0.41
Control Delay	80.9	6.4	0.4	78.9	10.6	1.5	75.4	51.5	4.9	57.6	47.5	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.9	6.4	0.4	78.9	10.6	1.5	75.4	51.5	4.9	57.6	47.5	10.3
LOS	F	A	A	E	B	A	E	D	A	E	D	B
Approach Delay		11.6			14.3			43.3			24.6	
Approach LOS		B			B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 20 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: SR-69 & Lee Boulevard



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2001	261	47	1234	195	69
Future Volume (vph)	2001	261	47	1234	195	69
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	10.7	25.7	15.6	15.6
Total Split (s)	82.0	82.0	17.0	99.0	21.0	21.0
Total Split (%)	68.3%	68.3%	14.2%	82.5%	17.5%	17.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.6	5.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	84.5	84.5	8.2	96.3	12.4	12.4
Actuated g/C Ratio	0.70	0.70	0.07	0.80	0.10	0.10
v/c Ratio	0.61	0.24	0.42	0.47	0.60	0.32
Control Delay	1.6	0.3	53.8	5.0	58.4	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.6	0.3	53.8	5.0	58.4	14.6
LOS	A	A	D	A	E	B
Approach Delay	1.4			6.8	46.9	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 27 (23%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

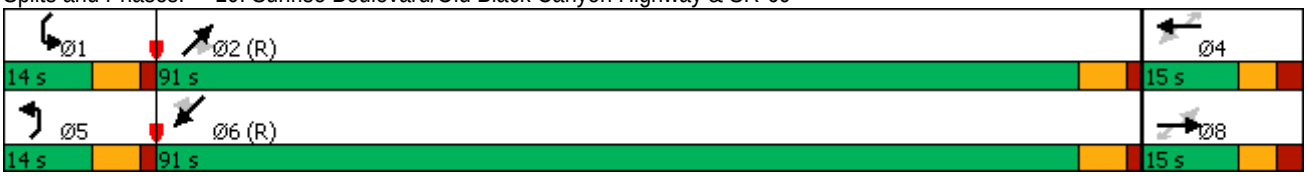
Splits and Phases: 9: Walker Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	0	20	37	3	26	33	1913	71	32	1275	35
Future Volume (vph)	37	0	20	37	3	26	33	1913	71	32	1275	35
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4			2			6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	30.0	30.0	8.0	30.0	30.0
Minimum Split (s)	14.1	14.1	14.1	14.1	14.1	14.1	13.8	35.8	35.8	13.8	35.8	35.8
Total Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	14.0	91.0	91.0	14.0	91.0	91.0
Total Split (%)	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	11.7%	75.8%	75.8%	11.7%	75.8%	75.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.1	6.1		6.1	6.1	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		8.4	8.4		8.4	8.4	8.0	95.3	95.3	8.0	95.3	95.3
Actuated g/C Ratio		0.07	0.07		0.07	0.07	0.07	0.79	0.79	0.07	0.79	0.79
v/c Ratio		0.42	0.12		0.46	0.15	0.31	0.74	0.06	0.30	0.49	0.03
Control Delay		67.2	1.4		70.0	1.8	73.2	5.2	0.1	44.3	13.7	3.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		67.2	1.4		70.0	1.8	73.2	5.2	0.1	44.3	13.7	3.1
LOS		E	A		E	A	E	A	A	D	B	A
Approach Delay		43.8			43.1			6.1			14.1	
Approach LOS		D			D			A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 97 (81%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 81.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Sunrise Boulevard/Old Black Canyon Highway & SR-69



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	26	51	1925	1316	3	
Future Volume (vph)	15	26	51	1925	1316	3	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.6	13.6	13.8	25.8	25.8	25.8	13.8
Total Split (s)	14.0	14.0	15.0	92.0	91.0	91.0	14.0
Total Split (%)	11.7%	11.7%	12.5%	76.7%	75.8%	75.8%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	8.6	108.4	95.5	95.5	
Actuated g/C Ratio	0.07	0.07	0.07	0.90	0.80	0.80	
v/c Ratio	0.14	0.21	0.43	0.65	0.51	0.00	
Control Delay	55.6	22.3	54.5	2.7	1.3	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	22.3	54.5	2.7	1.3	0.3	
LOS	E	C	D	A	A	A	
Approach Delay	34.4			4.0	1.3		
Approach LOS	C			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 116 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: SR-69 & Robin Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1
Lane Configurations							
Traffic Volume (vph)	15	12	64	1940	1292	6	
Future Volume (vph)	15	12	64	1940	1292	6	
Turn Type	Prot	Perm	Prot	NA	NA	Perm	
Protected Phases	4		5	2	6		1
Permitted Phases		4				6	
Detector Phase	4	4	5	2	6	6	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0	8.0
Minimum Split (s)	13.7	13.7	13.8	25.8	25.8	25.8	13.8
Total Split (s)	14.0	14.0	16.0	92.0	90.0	90.0	14.0
Total Split (%)	11.7%	11.7%	13.3%	76.7%	75.0%	75.0%	12%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7	5.8	5.8	5.8	5.8	
Lead/Lag			Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	8.0	8.0	9.2	108.3	94.9	94.9	
Actuated g/C Ratio	0.07	0.07	0.08	0.90	0.79	0.79	
v/c Ratio	0.14	0.11	0.51	0.66	0.50	0.01	
Control Delay	55.6	26.0	76.7	1.6	1.8	0.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	26.0	76.7	1.6	1.8	0.5	
LOS	E	C	E	A	A	A	
Approach Delay	42.3			4.0	1.8		
Approach LOS	D			A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 76 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 3.5	Intersection LOS: A
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SR-69 & Ramada Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	18	52	1921	1280	54
Future Volume (vph)	47	18	52	1921	1280	54
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	20.0	20.0	20.0
Minimum Split (s)	13.7	13.7	13.7	25.7	25.7	25.7
Total Split (s)	16.0	16.0	17.0	104.0	87.0	87.0
Total Split (%)	13.3%	13.3%	14.2%	86.7%	72.5%	72.5%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.7	8.7	9.1	103.8	91.7	91.7
Actuated g/C Ratio	0.07	0.07	0.08	0.86	0.76	0.76
v/c Ratio	0.40	0.15	0.43	0.68	0.51	0.05
Control Delay	62.2	22.7	61.0	3.2	3.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	22.7	61.0	3.2	3.3	0.1
LOS	E	C	E	A	A	A
Approach Delay	51.1			4.7	3.1	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 60 (50%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: SR-69 & Diamond Drive



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations												
Traffic Volume (vph)	121	14	27	93	1810	119	108	1234	150	57	15	109
Future Volume (vph)	121	14	27	93	1810	119	108	1234	150	57	15	109
Turn Type	Prot	Prot	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	Perm
Protected Phases	7	4		1	6		5	2		3	8	
Permitted Phases			4			6			2			8
Detector Phase	7	4	4	1	6	6	5	2	2	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	11.5	11.5	11.2	11.2	11.2	11.2	11.2	11.2	11.5	11.5	11.5
Total Split (s)	16.0	21.0	21.0	14.0	71.0	71.0	15.0	72.0	72.0	13.0	18.0	18.0
Total Split (%)	13.3%	17.5%	17.5%	11.7%	59.2%	59.2%	12.5%	60.0%	60.0%	10.8%	15.0%	15.0%
Yellow Time (s)	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.9	2.9	2.9	1.8	1.8	1.8	1.8	1.8	1.8	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.2	6.2	6.2	6.2	6.2	6.2	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	8.4	10.3	10.3	7.9	71.6	71.6	8.5	72.2	72.2	8.8	6.1	6.1
Actuated g/C Ratio	0.07	0.09	0.09	0.07	0.60	0.60	0.07	0.60	0.60	0.07	0.05	0.05
v/c Ratio	0.55	0.11	0.11	0.45	0.65	0.13	0.48	0.44	0.16	0.25	0.18	0.54
Control Delay	62.6	53.1	0.8	55.4	10.7	1.9	45.8	16.0	4.5	55.9	58.5	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	53.1	0.8	55.4	10.7	1.9	45.8	16.0	4.5	55.9	58.5	14.3
LOS	E	D	A	E	B	A	D	B	A	E	E	B
Approach Delay	51.6				12.2			17.0			31.1	
Approach LOS	D				B			B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 12 (10%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Sundog Ranch Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	96	1944	62	160	1448	87	51	4	60	14	68
Future Volume (vph)	96	1944	62	160	1448	87	51	4	60	14	68
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8	7	4	
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	2	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	4.0	6.0	4.0	6.0	6.0
Minimum Split (s)	12.0	26.0	26.0	12.0	26.0	26.0	10.1	12.1	10.1	12.1	12.1
Total Split (s)	19.0	69.0	69.0	26.0	76.0	76.0	12.0	13.0	12.0	13.0	13.0
Total Split (%)	15.8%	57.5%	57.5%	21.7%	63.3%	63.3%	10.0%	10.8%	10.0%	10.8%	10.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.6	1.6	1.6	1.6	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	10.4	70.9	70.9	15.3	75.8	75.8	5.4	6.1	5.5	6.2	6.2
Actuated g/C Ratio	0.09	0.59	0.59	0.13	0.63	0.63	0.04	0.05	0.05	0.05	0.05
v/c Ratio	0.68	0.70	0.07	0.77	0.49	0.09	0.36	0.42	0.42	0.16	0.28
Control Delay	76.8	9.3	0.1	60.4	16.5	4.7	62.0	6.0	63.8	58.2	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	9.3	0.1	60.4	16.5	4.7	62.0	6.0	63.8	58.2	2.6
LOS	E	A	A	E	B	A	E	A	E	E	A
Approach Delay		12.1			20.1			21.3		33.9	
Approach LOS		B			C			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 32 (27%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Stoneridge Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	1715	129	40	1355	144	99	56	44	207	91	241
Future Volume (vph)	291	1715	129	40	1355	144	99	56	44	207	91	241
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.8	25.8	25.8	11.8	25.8	25.8	12.4	12.4	12.4	12.4	12.4	12.4
Total Split (s)	24.0	66.0	66.0	13.0	55.0	55.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	20.0%	55.0%	55.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	34.2%	34.2%	34.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	14.7	72.9	72.9	6.8	62.7	62.7	24.6	24.6	24.6	24.6	24.6	24.6
Actuated g/C Ratio	0.12	0.61	0.61	0.06	0.52	0.52	0.20	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.75	0.60	0.14	0.43	0.55	0.17	0.41	0.16	0.11	0.82	0.26	0.52
Control Delay	79.8	6.0	0.4	70.4	9.4	0.4	44.1	37.2	0.5	68.0	39.5	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	6.0	0.4	70.4	9.4	0.4	44.1	37.2	0.5	68.0	39.5	11.1
LOS	E	A	A	E	A	A	D	D	A	E	D	B
Approach Delay		15.7			10.1			32.5			37.7	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: SR-69 & Prescott E Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Future Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	35.0	67.0	67.0	15.0	47.0	19.0	15.0	19.0	19.0	23.0	35.0
Total Split (%)	29.2%	55.8%	55.8%	12.5%	39.2%	15.8%	12.5%	15.8%	15.8%	19.2%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	26.7	65.1	65.1	8.5	44.1	62.7	8.4	12.3	12.4	19.1	51.9
Actuated g/C Ratio	0.22	0.54	0.54	0.07	0.37	0.52	0.07	0.10	0.10	0.16	0.43
v/c Ratio	0.88	0.77	0.02	0.63	0.65	0.18	0.38	0.82	0.80	0.48	0.67
Control Delay	71.2	12.2	0.1	83.3	26.5	6.4	62.5	63.5	69.8	53.2	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.2	12.2	0.1	83.3	26.5	6.4	62.5	63.5	69.8	53.2	27.3
LOS	E	B	A	F	C	A	E	E	E	D	C
Approach Delay		30.3			27.4			63.4		44.4	
Approach LOS		C			C			E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 34.5	Intersection LOS: C
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 17: Glassford Hill Road & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1428	75	105	1073	89	17	30	132	133	15	129
Future Volume (vph)	116	1428	75	105	1073	89	17	30	132	133	15	129
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	5.0	5.0	6.0	5.0	5.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	11.7	10.7	10.7	11.7	10.7	10.7
Total Split (s)	22.0	71.0	71.0	19.0	68.0	68.0	12.0	15.0	15.0	15.0	18.0	18.0
Total Split (%)	18.3%	59.2%	59.2%	15.8%	56.7%	56.7%	10.0%	12.5%	12.5%	12.5%	15.0%	15.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	11.7	70.8	70.8	10.5	69.6	69.6	12.6	6.5	6.5	20.2	16.5	16.5
Actuated g/C Ratio	0.10	0.59	0.59	0.09	0.58	0.58	0.10	0.05	0.05	0.17	0.14	0.14
v/c Ratio	0.73	0.74	0.08	0.74	0.57	0.10	0.11	0.33	0.65	0.68	0.06	0.41
Control Delay	83.3	11.1	0.5	73.4	11.7	2.1	41.8	62.7	22.7	60.9	48.5	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.3	11.1	0.5	73.4	11.7	2.1	41.8	62.7	22.7	60.9	48.5	12.3
LOS	F	B	A	E	B	A	D	E	C	E	D	B
Approach Delay		15.8			16.1			31.3			37.6	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: SR-69 & Lake Valley Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	136	1551	12	16	1133	170	3	8	252	3	121
Future Volume (vph)	136	1551	12	16	1133	170	3	8	252	3	121
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	25.5	25.5	11.5	25.5	25.5	10.6	10.6	10.6	10.6	10.6
Total Split (s)	20.0	71.0	71.0	12.0	63.0	63.0	37.0	37.0	37.0	37.0	37.0
Total Split (%)	16.7%	59.2%	59.2%	10.0%	52.5%	52.5%	30.8%	30.8%	30.8%	30.8%	30.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.1	1.1	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.6		5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	13.0	76.4	76.4	6.1	62.6	62.6		27.8		27.8	27.8
Actuated g/C Ratio	0.11	0.64	0.64	0.05	0.52	0.52		0.23		0.23	0.23
v/c Ratio	0.77	0.75	0.01	0.19	0.67	0.21		0.05		0.90	0.29
Control Delay	63.4	23.1	0.0	74.4	12.2	1.2		23.6		75.9	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	63.4	23.1	0.0	74.4	12.2	1.2		23.6		75.9	8.7
LOS	E	C	A	E	B	A		C		E	A
Approach Delay		26.2			11.5			23.6		54.2	
Approach LOS		C			B			C		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 32 (27%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 82.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Windsong Drive & SR-69



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	317	1364	63	40	948	114	52	39	127	28	267
Future Volume (vph)	317	1364	63	40	948	114	52	39	127	28	267
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			8		4	
Permitted Phases			6			2	8		4		4
Detector Phase	1	6	6	5	2	2	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.7	25.7	25.7	10.7	25.7	25.7	11.5	11.5	11.5	11.5	11.5
Total Split (s)	40.0	80.0	80.0	13.0	53.0	53.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	33.3%	66.7%	66.7%	10.8%	44.2%	44.2%	22.5%	22.5%	22.5%	22.5%	22.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	27.1	82.2	82.2	6.6	59.6	59.6	16.4	16.4	16.4	16.4	16.4
Actuated g/C Ratio	0.23	0.68	0.68	0.06	0.50	0.50	0.14	0.14	0.14	0.14	0.14
v/c Ratio	0.87	0.61	0.06	0.45	0.59	0.15	0.30	0.26	0.76	0.12	0.62
Control Delay	55.9	14.5	5.5	73.9	12.4	0.8	49.1	33.1	74.7	44.0	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	14.5	5.5	73.9	12.4	0.8	49.1	33.1	74.7	44.0	11.2
LOS	E	B	A	E	B	A	D	C	E	D	B
Approach Delay		21.7			13.4			40.4		32.5	
Approach LOS		C			B			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 18 (15%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

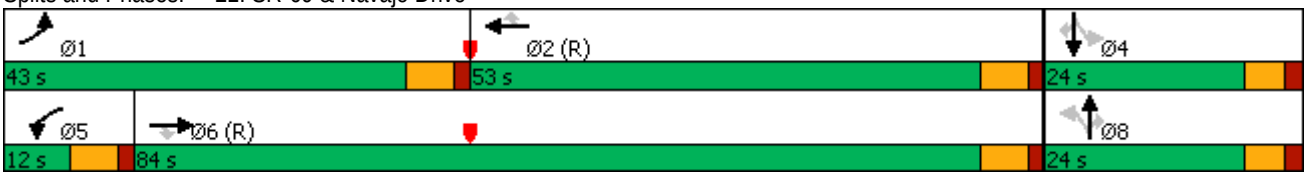
Splits and Phases: 20: SR-69 & Robert Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	1175	24	7	825	85	47	36	23	79	15	230
Future Volume (vph)	316	1175	24	7	825	85	47	36	23	79	15	230
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.9	25.9	25.9	10.9	25.9	25.9	13.5	13.5	13.5	13.5	13.5	13.5
Total Split (s)	43.0	84.0	84.0	12.0	53.0	53.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	35.8%	70.0%	70.0%	10.0%	44.2%	44.2%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	27.7	93.9	93.9	5.1	62.5	62.5	12.4	12.4	12.4	12.4	12.4	12.4
Actuated g/C Ratio	0.23	0.78	0.78	0.04	0.52	0.52	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.84	0.46	0.02	0.11	0.49	0.10	0.35	0.20	0.09	0.61	0.08	0.64
Control Delay	59.1	5.2	0.2	58.6	21.4	1.6	55.4	49.8	0.6	68.7	47.1	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.1	5.2	0.2	58.6	21.4	1.6	55.4	49.8	0.6	68.7	47.1	13.9
LOS	E	A	A	E	C	A	E	D	A	E	D	B
Approach Delay		16.3			19.9			41.6			28.8	
Approach LOS		B			B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 65.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: SR-69 & Navajo Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	1186	758	14	34	3
Future Volume (vph)	6	1186	758	14	34	3
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases				2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	8.0	20.0	20.0	20.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	26.2	13.3	13.3
Total Split (s)	18.0	102.0	84.0	84.0	18.0	18.0
Total Split (%)	15.0%	85.0%	70.0%	70.0%	15.0%	15.0%
Yellow Time (s)	5.1	5.1	5.1	5.1	3.6	3.6
All-Red Time (s)	1.1	1.1	1.1	1.1	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.3	5.3
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	8.0	108.3	105.5	105.5	8.0	8.0
Actuated g/C Ratio	0.07	0.90	0.88	0.88	0.07	0.07
v/c Ratio	0.06	0.40	0.26	0.01	0.16	0.03
Control Delay	53.8	2.1	1.9	1.3	54.6	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	2.1	1.9	1.3	54.6	35.0
LOS	D	A	A	A	D	C
Approach Delay		2.4	1.9		53.2	
Approach LOS		A	A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

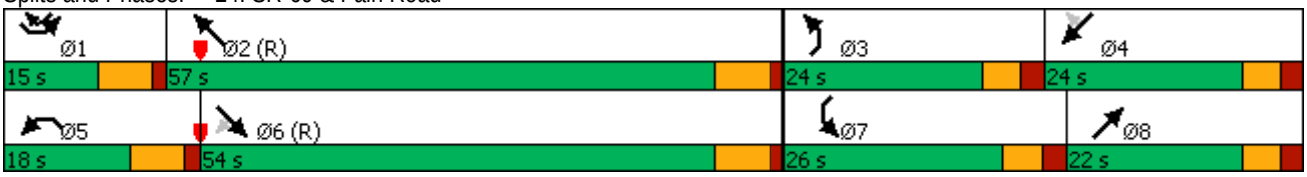
Splits and Phases: 23: SR-69 & Enterprise Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	49	954	309	79	627	350	148	58	367	155	73
Future Volume (vph)	49	954	309	79	627	350	148	58	367	155	73
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	7	4	1
Permitted Phases			6			Free					4
Detector Phase	1	6	6	5	2		3	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	20.0	20.0	6.0	20.0		8.0	6.0	8.0	6.0	6.0
Minimum Split (s)	12.4	26.4	26.4	12.4	26.4		13.8	11.8	13.8	11.8	12.4
Total Split (s)	15.0	54.0	54.0	18.0	57.0		24.0	22.0	26.0	24.0	15.0
Total Split (%)	12.5%	45.0%	45.0%	15.0%	47.5%		20.0%	18.3%	21.7%	20.0%	12.5%
Yellow Time (s)	5.1	5.1	5.1	5.1	5.1		3.6	3.6	3.6	3.6	5.1
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2	2.2	2.2	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4		5.8	5.8	5.8	5.8	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None
Act Effct Green (s)	7.4	59.6	59.6	9.3	61.6	120.0	14.6	11.5	17.6	14.5	27.7
Actuated g/C Ratio	0.06	0.50	0.50	0.08	0.51	1.00	0.12	0.10	0.15	0.12	0.23
v/c Ratio	0.49	0.59	0.35	0.63	0.38	0.24	0.75	0.74	0.79	0.75	0.18
Control Delay	68.0	23.8	3.2	72.9	20.5	0.4	71.4	56.1	61.2	71.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	23.8	3.2	72.9	20.5	0.4	71.4	56.1	61.2	71.0	7.5
LOS	E	C	A	E	C	A	E	E	E	E	A
Approach Delay		20.6			17.7			63.9		57.2	
Approach LOS		C			B			E		E	

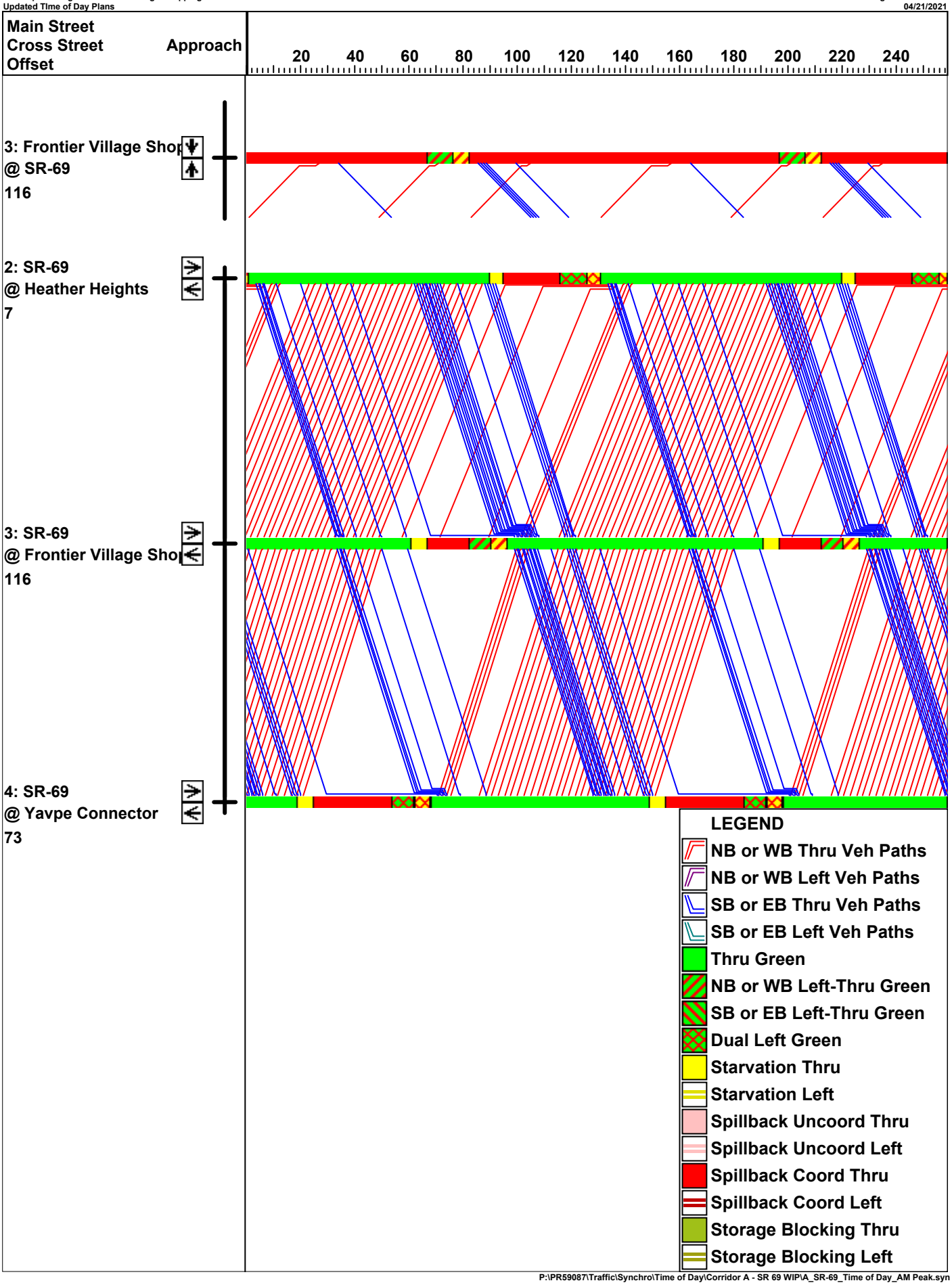
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 13 (11%), Referenced to phase 2:NWT and 6:SET, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

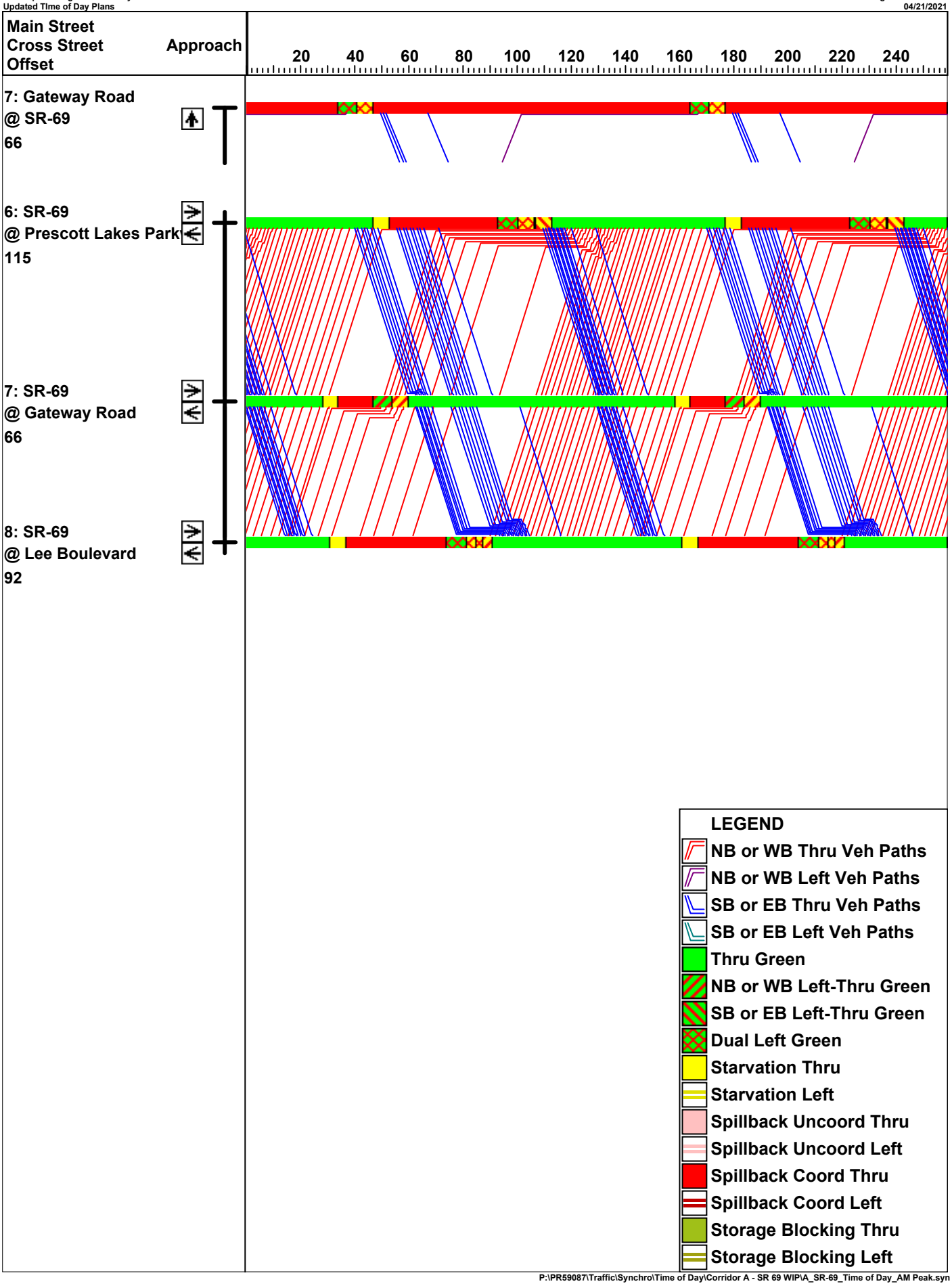
Splits and Phases: 24: SR-69 & Fain Road



APPENDIX SS-7

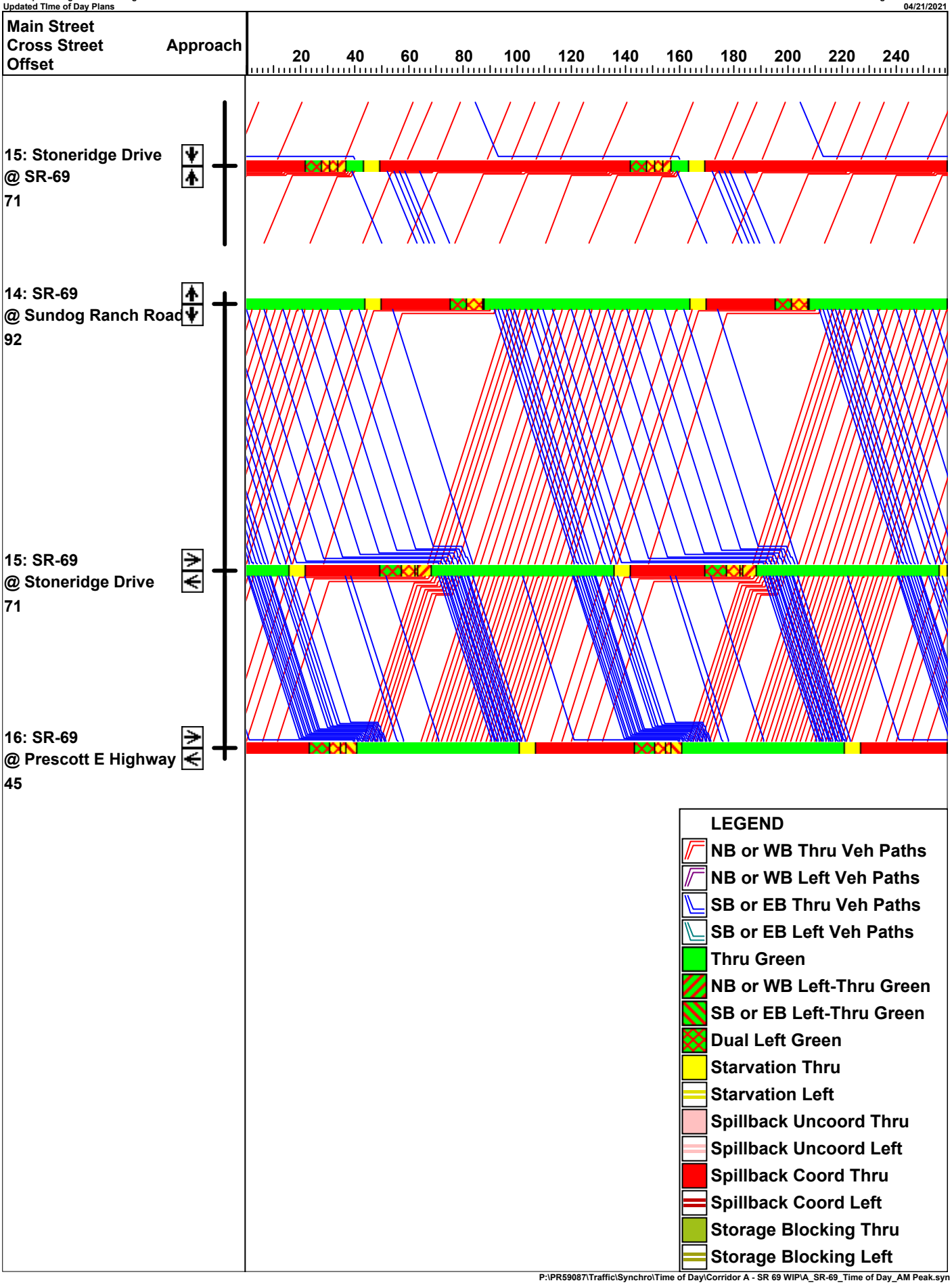
SR 69 Optimized Plans Time-Space Diagrams


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
3: Frontier Village Shop
@ SR-69
116
2: SR-69
@ Heather Heights
7
3: SR-69
@ Frontier Village Shop
116
4: SR-69
@ Yavpe Connector
73
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

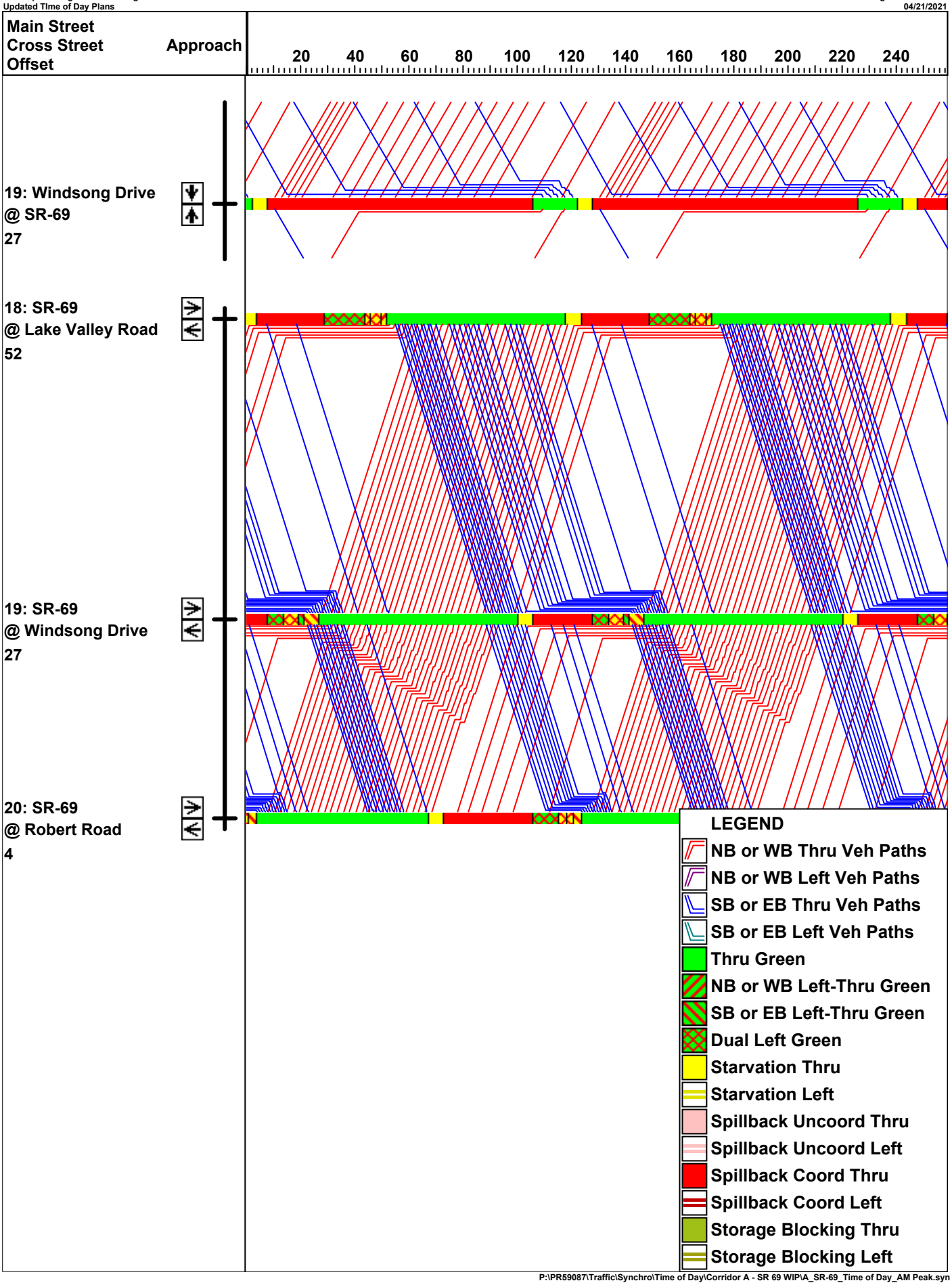

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
7: Gateway Road
@ SR-69
66
6: SR-69
@ Prescott Lakes Park
115
7: SR-69
@ Gateway Road
66
8: SR-69
@ Lee Boulevard
92
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Stoneridge Drive & SR-69
Updated Time of Day Plans

Timing Plan: AM Peak
04/21/2021

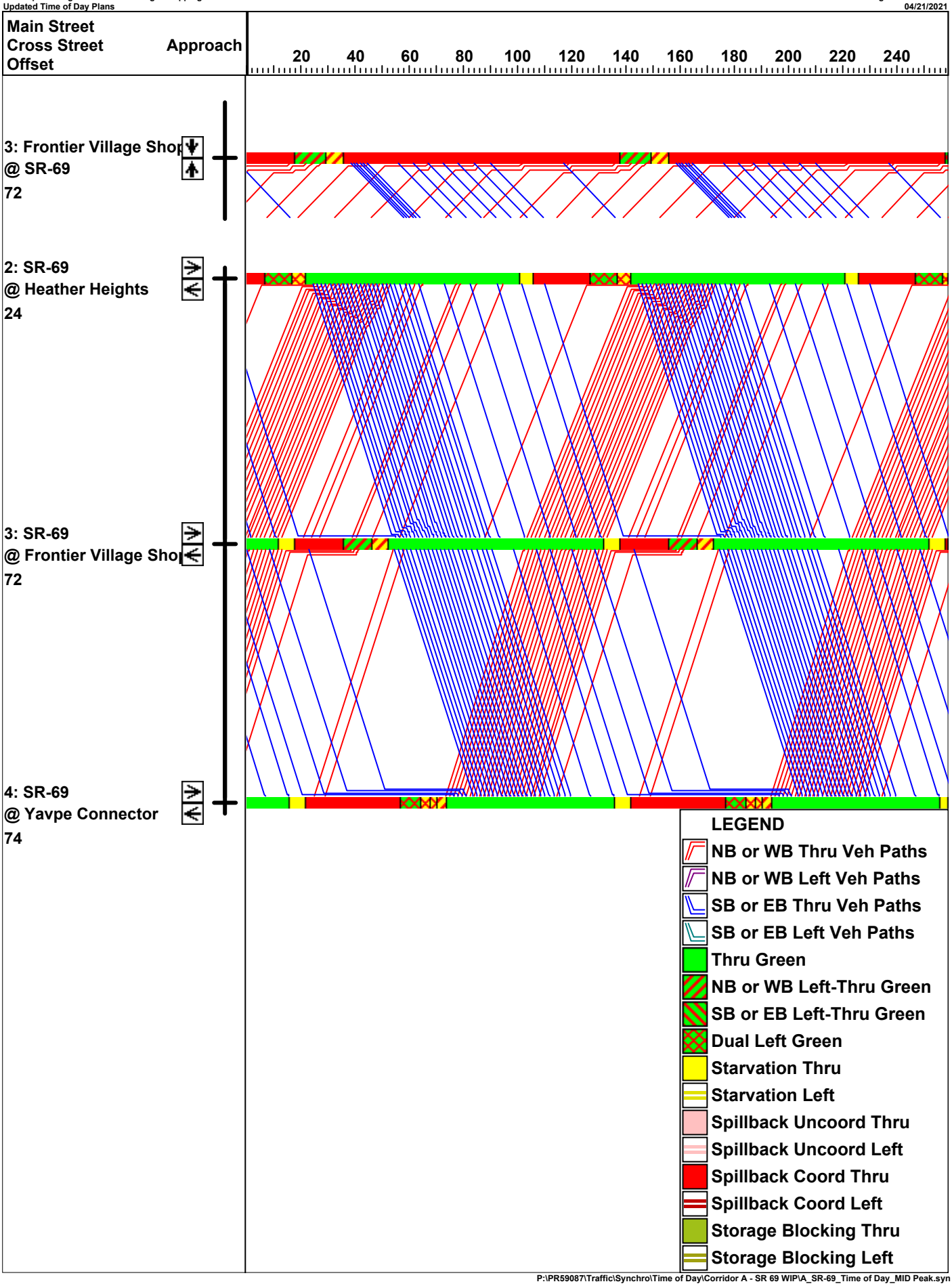


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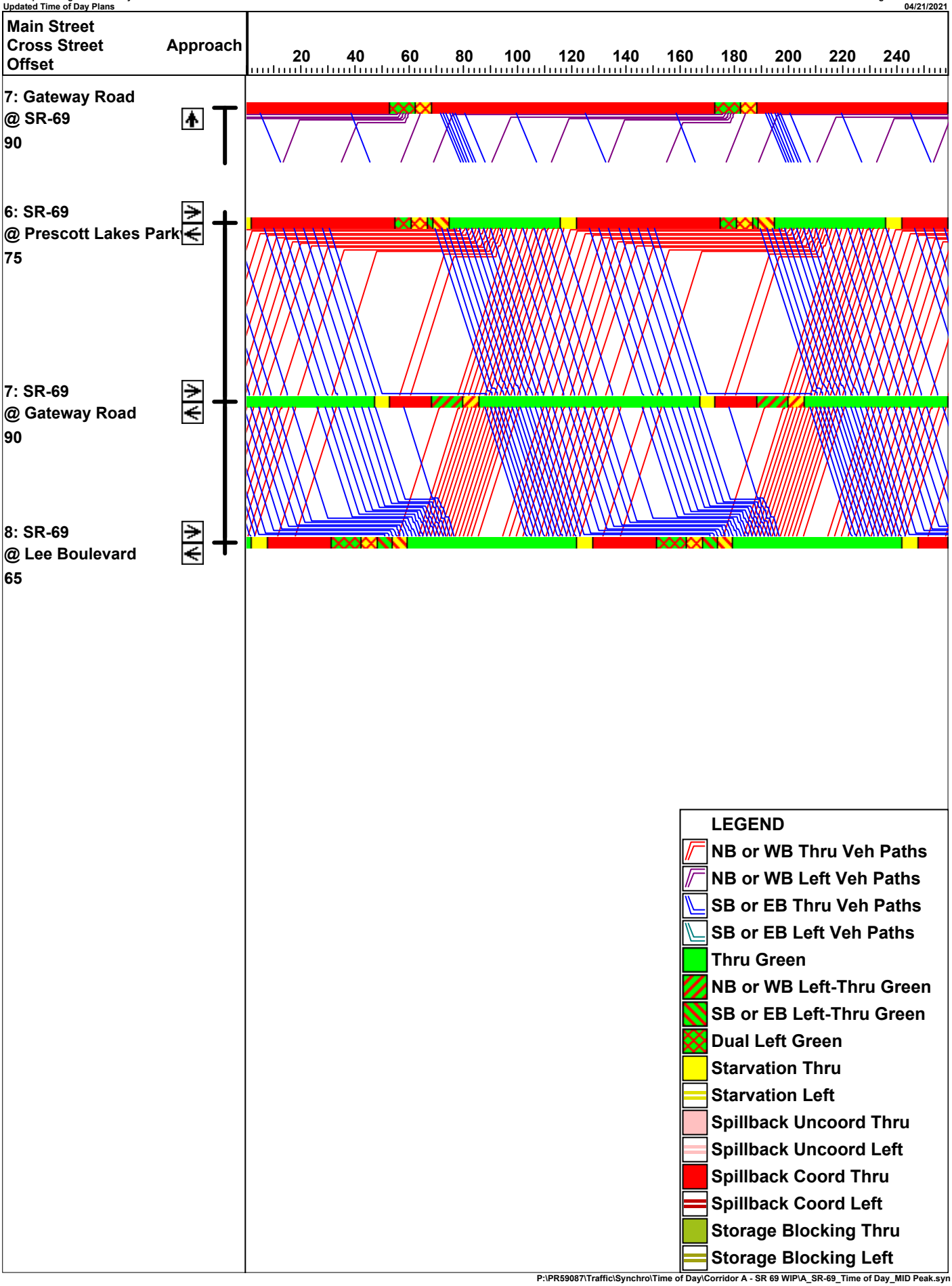

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
19: Windsong Drive
@ SR-69
27
18: SR-69
@ Lake Valley Road
52
19: SR-69
@ Windsong Drive
27
20: SR-69
@ Robert Road
4
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

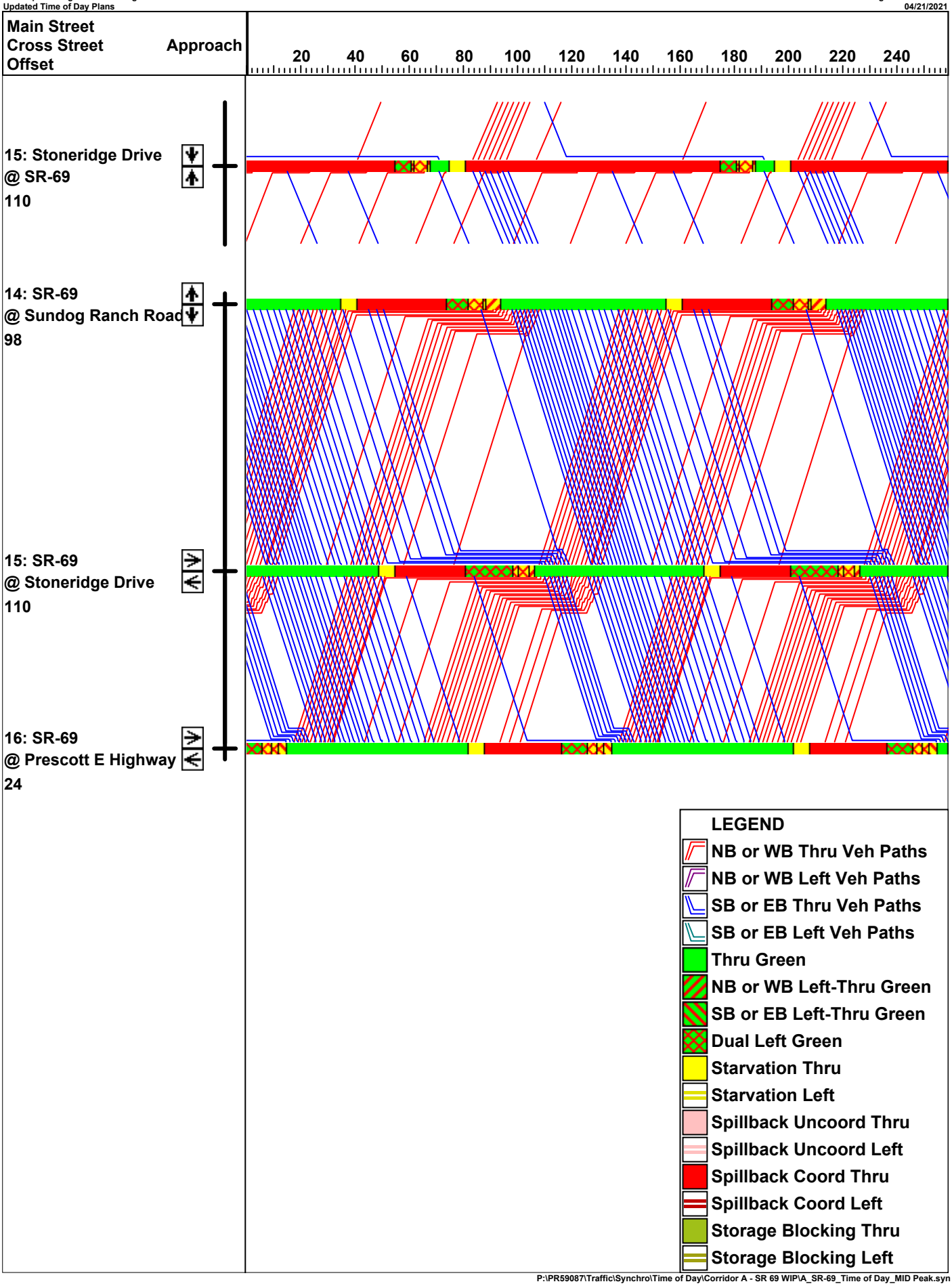
Time-Space Diagram - Frontier Village Shopping Plaza DW & SR-69
Updated Time of Day Plans

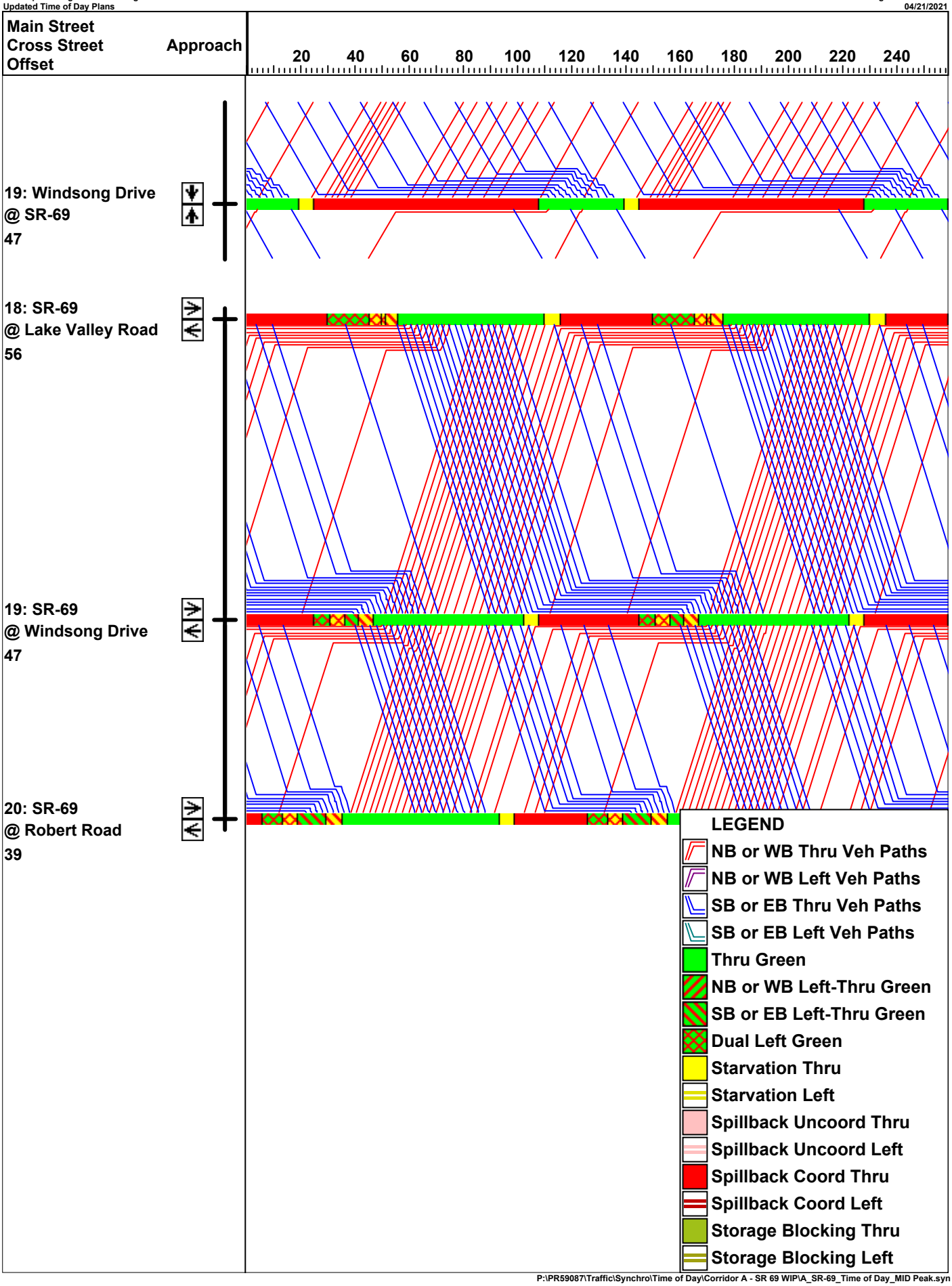
Timing Plan: Mid Peak
04/21/2021

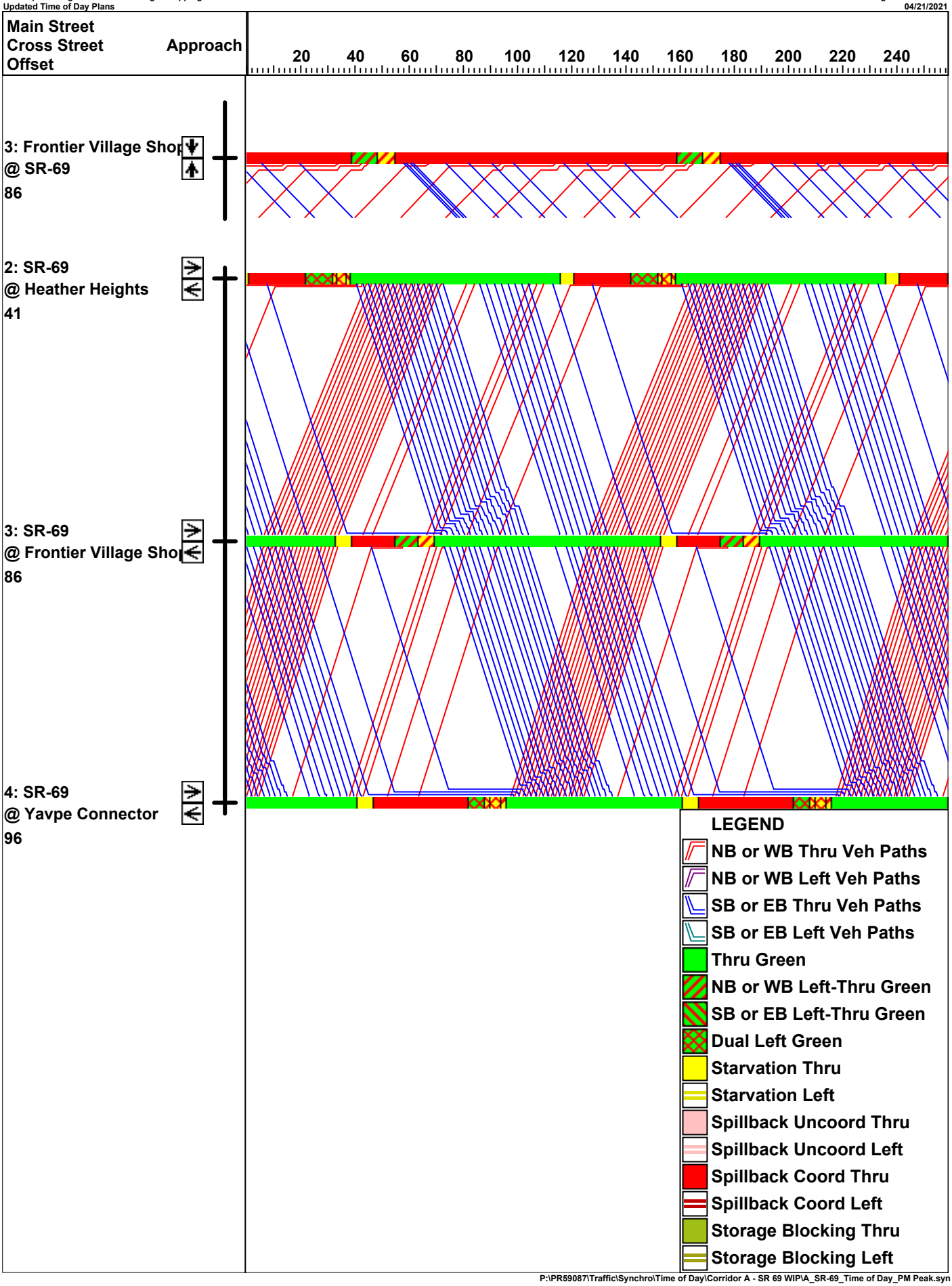


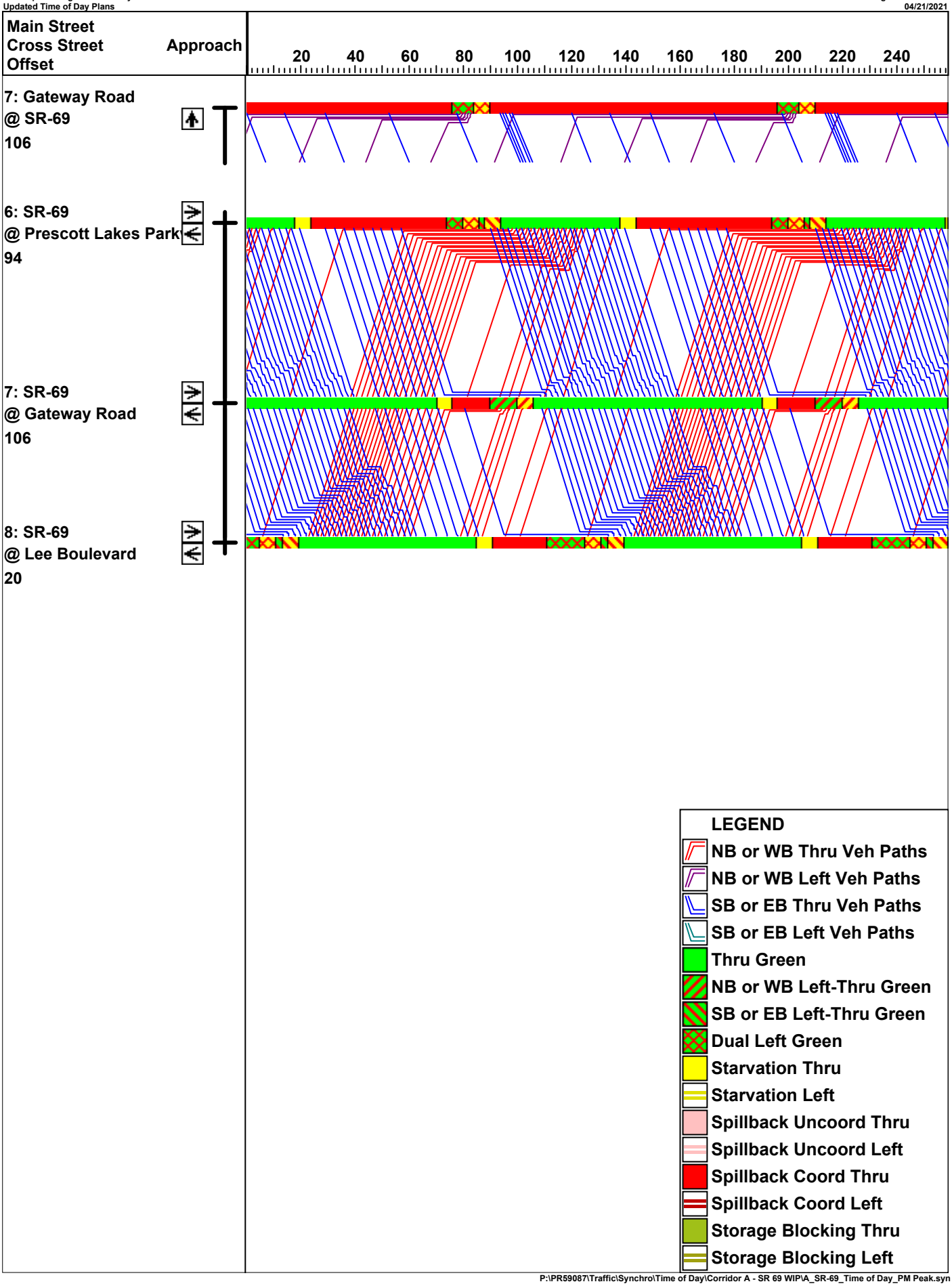
P:\PR59087\Traffic\Synchro\Time of Day\Corridor A - SR 69 WIP\A_SR-69_Time of Day_MID Peak.syn


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
7: Gateway Road
@ SR-69
90
6: SR-69
@ Prescott Lakes Park
75
7: SR-69
@ Gateway Road
90
8: SR-69
@ Lee Boulevard
65
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
15: Stoneridge Drive
@ SR-69
110
14: SR-69
@ Sundog Ranch Road
98
15: SR-69
@ Stoneridge Drive
110
16: SR-69
@ Prescott E Highway
24
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

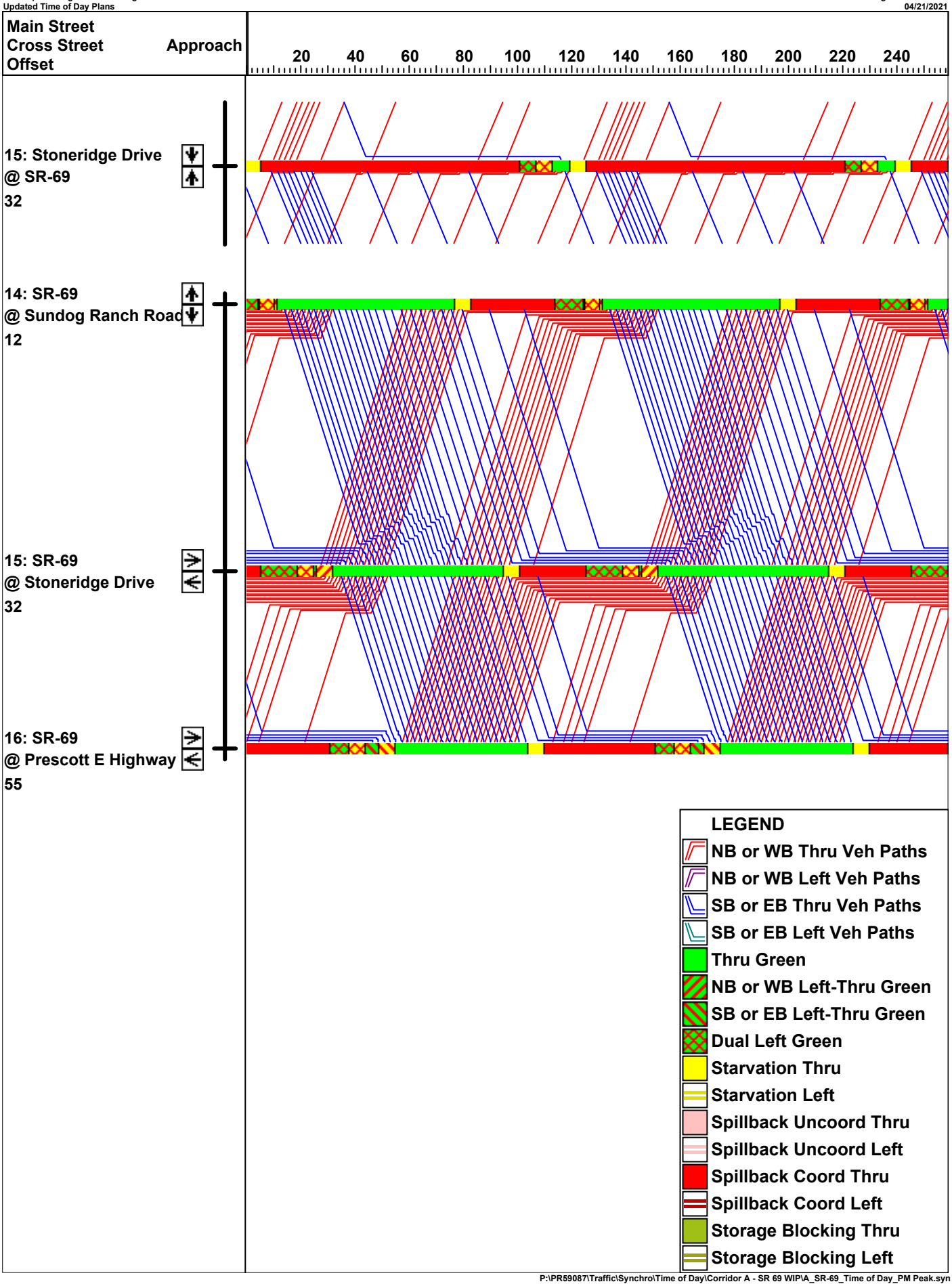

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
19: Windsong Drive
@ SR-69
47
18: SR-69
@ Lake Valley Road
56
19: SR-69
@ Windsong Drive
47
20: SR-69
@ Robert Road
39
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
3: Frontier Village Shop
@ SR-69
86
2: SR-69
@ Heather Heights
41
3: SR-69
@ Frontier Village Shop
86
4: SR-69
@ Yavpe Connector
96
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

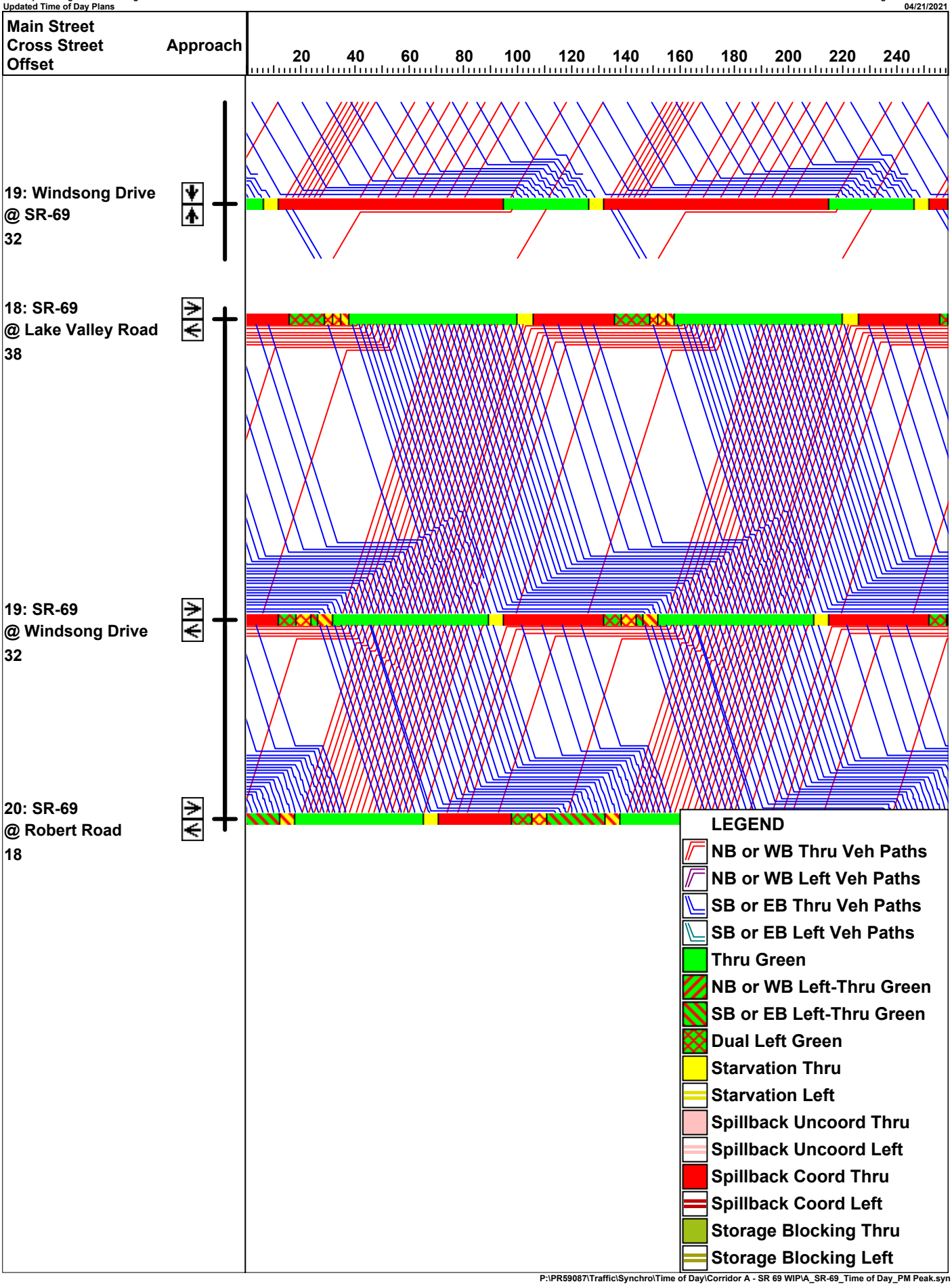

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
7: Gateway Road
@ SR-69
106
6: SR-69
@ Prescott Lakes Park
94
7: SR-69
@ Gateway Road
106
8: SR-69
@ Lee Boulevard
20
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Stoneridge Drive & SR-69
Updated Time of Day Plans

Timing Plan: PM Peak
04/21/2021



P:\PR59087\Traffic\Synchro\Time of Day\Corridor A - SR 69 WIP\A_SR-69_Time of Day_PM Peak.syn


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
19: Windsong Drive
@ SR-69
32
18: SR-69
@ Lake Valley Road
38
19: SR-69
@ Windsong Drive
32
20: SR-69
@ Robert Road
18
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

APPENDIX SS-8

Glassford Hill Road Agency Information Request Responses

General Questions

1. Are your signals connected to a central system? (Yes/No)
   NO

2. Brand and Type of Centrals System (Ex. KITS, MaxView, etc.)
   N/A

3. Type of Communications Infrastructure? (Ex. Fiber)
   N/A

4. Is there any sort of existing regional communications linkage between the participating agencies? (Ex. RCN)
   No

5. Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?
   3 Employees on an as needed basis. 2 Level II Field Tech and 1 level I Field Tech.

6. Is staff aware of ATSPM? Does staff have any experience in ATSPM? Would staff be open to the benefits of ATSPM, or is the existing situation limited by available staff time/knowledge?
   Staff has very little awareness and no experience with ATSPM.

7. Are your guidelines for ITS and signal installations published? If not, which standards do you use?
   They don't exist.

8. List relevant studies/projects (planning, implementation, construction) along this corridor
   a. CYMPO 2045 Regional Transportation Plan - April 2020
   b. Glassford Hill Road Intersection Safety Study - Feb. 2018
   c. Prescott Valley Traffic Counts - 2017 by Traffic Research & Analysis

General Information:

- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field

- Additional data (GIS preferred)
  - Existing ITS inventory (including fiber)
  - Right-of-way
  - Utilities
  - Land use, existing and future
  - Development information

Dana Biscan to clarify

Adaptive Systems Inventory

Intersection Level:

Intersection name: SR 89A and Glassford Hill Road
Owning Agency: ADOT

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	~~Cobalt~~ Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	Cobalt
Firmware Version (2.54, 200CA, etc.)	32.66.10
NTCIP Capable (Yes/No)	Yes
Ethernet capable (Yes/No)	Yes
Connected to Central System (Yes/No)	NO
Communications Media (Fiber, Radio, etc.)	NONE
If Radio, Make/Model (Firetide, etc.)	—
Make/model of existing switch (iMPath 4000, etc.)	—
Available Ports in Existing Switch (None, 1, 2, etc.)	—
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Type IV TS-1
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	Yes
If No, what is lacking (Comm board, terminals, etc.)	—
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Glassford Hill Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  NONE
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Wavetronix Radar
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Wavetronix Radar
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
  Mounted on TS poles & arms
- Approximate age of devices?
  1 yr.
- Approximate percentage of currently failed devices?
  0

Side Street: State Route 89A

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  ~~WAVETRONIX RADAR~~ NONE
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  WAVETRONIX RADAR
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  WAVETRONIX RADAR
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
  MOUNTED ON TS POLES & ARMS
- Approximate age of devices?
  1 YR.
- Approximate percentage of currently failed devices?
  0

1. Is there room in cabinet for expansion of detection (Yes/No)
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   Yes

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FIY/A, Split, P Lead/Lag)
   Approach 1: Protected
   Approach 2: Protected
   Approach 3:
   Approach 4:
2. Approaches without mast arms (NB, SB, etc.)
   Approach 1: —
   Approach 2: —
   Approach 3: —
   Approach 4: —
3. Approaches without street lighting (NB, SB, etc.)
   Approach 1: —
   Approach 2: —
   Approach 3: —
   Approach 4: —

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: —
Approach 2: —
Approach 3: —
Approach 4: —

5. Joint use/owned poles (NE, etc.)

Approach 1: —
Approach 2: —
Approach 3: —
Approach 4: —

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
   a. Exterior (Two diagonal corners)
   b. Floor (Conduits and how full they are)
   c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
   d. Face on (Show from ceiling to floor, in multiple straight-on shots)
   e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

NO

If Yes, Type (Opticom, Tomar, etc.)

8. Excessive Pedestrian use (Yes/No)

NO

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

APPENDIX SS-9

Glassford Hill Road Traffic Signal Timing Plans

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR69 @ Glassford Hill Rd. MP: 288.69 Location: Prescott Valley ☑ Active

MU #: 0200S Warrant: UPDATE TIMING Timing As Of: 6/29/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Min Green	8	20	8	8	8	20	8	8
Veh Ext	2.0	6.5	2.0	2.0	2.0	6.5	2.0	2.0
Max I	15	45	15	30	15	45	15	30
Max 2	15	45	15	30	15	45	15	30
Max 3	--	--	--	--	--	--	--	--
Walk	--	7	--	7	--	7	--	7
Ped Clr	--	29	--	30	--	23	--	32
Max Init	--	34	--	--	--	34	--	--
Sec Act	--	1.5	--	--	--	1.5	--	--
TBR	--	15.0	--	--	--	15.0	--	--
TTR	--	10.0	--	--	--	10.0	--	--
Min Gap	--	2.5	--	--	--	2.5	--	--
Guar Pass	--	ON	--	--	--	ON	--	--
Yellow	3.2	4.4	3.0	3.6	3.1	4.4	3.0	3.6
Red Clr	4.6	1.6	3.4	2.4	4.5	1.6	4.1	2.4
CNA	--	--	--	--	--	--	--	--
Det Memory	--	ON	--	--	--	ON	--	--
Dual Entry	--	ON	--	ON	--	ON	--	ON
Recall Mode	--	MIN	--	--	--	MIN	--	--
Ext Start	--	YEL	--	--	--	YEL	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec

OVERLAPS TIMING OPTIONAL

O/L(Phases)	Grn	Yel	Red
(A)	--	--	--
(B)	--	--	--
(C)	--	--	--
(D)	--	--	--

PHASE SEQ: R1) 1,2,3,4 R2) 5,6,7,8

PROTECTED LEFT TURN PHASES: 1,3,5,7

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☑

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☑

Simultaneous Gap Gp1 ON.

INTERSECTION: 0010 - Glassford & Centre Ct

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **10**

N/S Street Name: **Glassford Hill**
E/W Street Name: **Center Ct**

Last Database Change: **8/9/2017 16:56**

Change Record					
Change	By	Date	Change	By	Date

Notes: *Offset changed 8/14/17 due to Long Look*

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	7	<C+0+2>
Area Address	3	<C+0+3>
QuicNet Channel	COM1:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	18	0	35	0	18	0	35
2	Min Green	5	30	0	10	5	30	0	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	3.0	5.0	0.0	3.0	3.0	5.0	0.0	3.0
6	Max Gap	3.0	5.0	0.0	3.0	3.0	5.0	0.0	3.0
7	Min Gap	3.0	5.0	0.0	3.0	3.0	5.0	0.0	3.0
8	Max Limit	15	30	0	20	15	30	0	20
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.6	0.0	3.0	3.0	3.6	0.0	3.0
F	Red Clear	2.9	2.0	0.0	4.1	2.9	2.0	0.0	4.1

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F	
0	Permit	12_456_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_2___6__
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____
F	First Phases	_2___6__

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

INTERSECTION: 0010 - Glassford & Centre Ct

(* = Coordination Recall)

Row	Column Numbers --->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Plan Name --->										0
1	Cycle Length	130	130	135	130	0	0	0	0	0	1
2	Phase 1 - ForceOff	51	57	52	60	0	0	0	0	0	2
3	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 4 - ForceOff	33	36	28	28	0	0	0	0	0	5
6	Phase 5 - ForceOff	51	50	52	52	0	0	0	0	0	6
7	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	8
9	Phase 8 - ForceOff	33	36	28	28	0	0	0	0	0	9
A	Ring Offset	0	0	0	0	0	0	0	0	0	A
B	Offset 1	0	58	60	44	0	0	0	0	0	B
C	Offset 2	0	0	0	0	0	0	0	0	0	C
D	Offset 3	0	0	0	0	0	0	0	0	0	D
E	Permissive	0	0	0	0	0	0	0	0	0	E
F	Hold Release	255	255	255	255	0	0	0	0	0	F
	Zone Offset	0	0	0	0	0	0	0	0	0	

Coordination <C Page>

Row		E	Row
			0
	Plan 1 - Sync	2 6	1
	Plan 2 - Sync	2 6	2
	Plan 3 - Sync	2 6	3
	Plan 4 - Sync	2 6	4
	Plan 5 - Sync		5
	Plan 6 - Sync		6
	Plan 7 - Sync		7
	Plan 8 - Sync		8
	Plan 9 - Sync		9
	Coord Ped *		A
	NEMA Hold		B
			C
			D
			E
			F

Sync Phases <C Page>

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 3 5 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Configuration <E Page>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		F	Row
0	Free Lag	2 4 6 8	0
1	Plan 1 - Lag	2 4 6 8	1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag	2 4 6 8	4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	Coord Max *		A
B	Coord Lag *		B
C			C
D			D
E			E
F			F

Lag Phases <C Page>

INTERSECTION: 0010 - Glassford & Centre Ct

Row	Time	Plan	Offset	Day of Week
0	06:30	1	A	_23456_
1	09:00	2	A	_23456_
2	15:30	3	A	_23456_
3	20:00	E	0	1234567
4	07:00	4	A	1____7
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

INTERSECTION: 0008 - Glassford & Florentine

Group Assignment: NONE
Field Master Assignment: NONE
System Reference Number: 8

N/S Street Name: Glassford Hill
E/W Street Name: Florentine

Last Database Change: 3/24/2014 11:38

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	1	<C+0+0>
Zone Number	1	<C+0+1>
Area Number	7	<C+0+2>
Area Address	1	<C+0+3>
QuicNet Channel	COM1:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	31	0	26	0	36	0	26
2	Min Green	5	10	5	30	5	10	5	30
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
5	Veh Extension	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
6	Max Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
7	Min Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
8	Max Limit	10	30	25	30	25	30	10	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.5	3.0	3.6	3.0	3.5	3.0	3.6
F	Red Clear	3.6	3.7	3.3	2.3	3.6	3.7	3.3	2.3

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12345678	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	__4__8	3
Ped Recall	_____	4
View Set Peds	-----	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_____	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_____	E
First Phases	_2__6__	F

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

→ Should be 4 & 8 ?
Changed to 4 & 8 on 5/14/14

INTERSECTION: 0008 - Glassford & Florentine

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Plan Name ---->										0
1	Cycle Length	130	130	135	130	0	0	0	0	0	1
2	Phase 1 - ForceOff	16	16	14	18	0	0	0	0	0	2
3	Phase 2 - ForceOff	57	54	59	49	0	0	0	0	0	3
4	Phase 3 - ForceOff	85	71	80	75	0	0	0	0	0	4
5	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 5 - ForceOff	28	23	31	27	0	0	0	0	0	6
7	Phase 6 - ForceOff	57	54	59	49	0	0	0	0	0	7
8	Phase 7 - ForceOff	74	71	77	69	0	0	0	0	0	8
9	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0	9
A	Ring Offset	0	0	0	0	0	0	0	0	0	A
B	Offset 1	110	40	47	34	0	0	0	0	0	B
C	Offset 2	0	0	0	0	0	0	0	0	0	C
D	Offset 3	0	0	0	0	0	0	0	0	0	D
E	Permissive	0	0	0	0	0	0	0	0	0	E
F	Hold Release	255	255	255	255	0	0	0	0	0	F
	Zone Offset	0	0	0	0	0	0	0	0	0	

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
0			0
1	Plan 1 - Sync	4 8	1
2	Plan 2 - Sync	4 8	2
3	Plan 3 - Sync	4 8	3
4	Plan 4 - Sync	4 8	4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	Coord Ped *		A
B	NEMA Hold		B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	3 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	9

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

INTERSECTION: 0008 - Glassford & Florentine

Row	Time	Plan	Offset	Day of Week
0	06:30	1	A	_23456_
1	09:00	2	A	_23456_
2	15:30	3	A	_23456_
3	20:00	E	0	1234567
4	07:00	4	A	1____7
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

INTERSECTION: 0008 - Glassford & Florentine

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

INTERSECTION: 0008 - Glassford & Florentine

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	203
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only --->	0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service Int. --->	0	0							
A		---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

<--- Limited Service Interval (Set Dwell = 255)

INTERSECTION: 0018 - Glassford at Sundogs

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **18**

N/S Street Name: **Glassford Hill**
E/W Street Name: **Lakeshore Dr**

Last Database Change: **8/14/2017 17:15**

Change Record					
Change	By	Date	Change	By	Date

Notes: *Offset changed 8/14/17 due to Long Look*

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	2	<C+0+2>
Area Address	1	<C+0+3>
QuicNet Channel	0	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers --->	Phase 1	2	3	4	5	6	7	8
	Phase Names --->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	24	0	36	0	24	0	39
2	Min Green	5	30	0	10	5	30	0	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	3.0	5.0	0.0	5.0	3.0	5.0	0.0	5.0
5	Veh Extension	3.0	5.0	0.0	5.0	3.0	5.0	0.0	5.0
6	Max Gap	3.0	5.0	0.0	5.0	3.0	5.0	0.0	5.0
7	Min Gap	3.0	5.0	0.0	5.0	3.0	5.0	0.0	5.0
8	Max Limit	15	30	0	30	15	30	0	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.6	0.0	3.0	3.0	3.6	0.0	3.0
F	Red Clear	3.2	2.1	0.0	4.2	3.2	2.1	0.0	4.2

Phase Timing - Bank 1 <F Page>

E

RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F

Row		
0	Permit	12_456_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_2___6__
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____
F	First Phases	_2___6__

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

INTERSECTION: 0018 - Glassford at Sundogs

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name ---->									
0	Cycle Length	130	130	135	130	0	0	0	0	0
1	Phase 1 - ForceOff	47	54	52	60	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	29	31	29	39	0	0	0	0	0
5	Phase 5 - ForceOff	47	48	46	60	0	0	0	0	0
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	29	31	29	39	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	129	57	104	42	0	0	0	0	0
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Permissive	0	0	0	0	0	0	0	0	0
E	Hold Release	255	255	255	255	0	0	0	0	0
F	Zone Offset	0	0	0	0	0	0	0	0	0

(* = Coordination Recall)

Sync Phases <C Page>

Row		E
0		
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	
6	Plan 6 - Sync	
7	Plan 7 - Sync	
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	Coord Ped *	
B	NEMA Hold	
C		
D		
E		
F		

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 5
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	2 4 6 8
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

INTERSECTION: 0018 - Glassford at Sundogs

Row	Time	Plan	Offset	Day of Week
0	06:30	1	A	_23456_
1	09:00	2	A	_23456_
2	15:30	3	A	_23456_
3	20:00	E	0	1234567
4	07:00	4	0	1____7
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	235
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only -->	0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service	0	0							
A	Int. -->	---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

<--- Limited Service Interval (Set Dwell = 255)

INTERSECTION: 0019 - Glassford at Lakeshore

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **19**

N/S Street Name: **Glassford Hill**
E/W Street Name: **Lakeshore Dr**

Last Database Change: **8/14/2017 17:14**

Change Record					
Change	By	Date	Change	By	Date

Notes: *Offset changed 8/14/17 due to Long Look*

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	2	<C+0+2>
Area Address	2	<C+0+3>
QuicNet Channel	0	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	25	0	39	0	28	0	39
2	Min Green	5	30	5	10	5	30	5	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
5	Veh Extension	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
6	Max Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
7	Min Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
8	Max Limit	15	30	15	30	15	30	15	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.6	3.0	3.0	3.0	3.6	3.0	3.2
F	Red Clear	3.4	2.2	3.6	3.9	3.4	2.2	3.6	3.9

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row	F
0	Permit: 12345678
1	Red Lock:
2	Yellow Lock:
3	Min Recall: 2 6
4	Ped Recall:
5	*View Set Peds*: -----
6	Rest In Walk:
7	Red Rest:
8	Dual Entry: 2 4 6 8
9	Max Recall:
A	Soft Recall:
B	Max 2:
C	Cond. Service:
D	Man Cntrl Calls:
E	Yellow Start:
F	First Phases: 2 6

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers ----> / Plan Name ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	130	130	135	130	0	0	0	0	0	0
1	Phase 1 - ForceOff	62	76	71	71	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	28	20	24	23	0	0	0	0	0	3
4	Phase 4 - ForceOff	47	57	54	53	0	0	0	0	0	4
5	Phase 5 - ForceOff	83	76	77	71	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	16	18	24	23	0	0	0	0	0	7
8	Phase 8 - ForceOff	47	57	54	53	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	84	20	91	4	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	0	0	0	0	0	0	0	0	0	D
E	Hold Release	255	255	255	255	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

	E	Row
Plan 1 - Sync	2 6	0
Plan 2 - Sync	2 6	1
Plan 3 - Sync	2 6	2
Plan 4 - Sync	2 6	3
Plan 5 - Sync		4
Plan 6 - Sync		5
Plan 7 - Sync		6
Plan 8 - Sync		7
Plan 9 - Sync		8
Coord Ped *		9
NEMA Hold		A
		B
		C
		D
		E
		F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 3 5 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

INTERSECTION: 0019 - Glassford at Lakeshore

Row	Time	Plan	Offset	Day of Week
0	06:30	1	A	23456
1	09:00	2	A	23456
2	15:30	3	A	23456
3	20:00	E	0	1234567
4	07:00	4	0	1 7
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

INTERSECTION: 0009 - Glassford & Long Look

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **9**

N/S Street Name: **Glassford Hill**
E/W Street Name: **Long Look**

Last Database Change: **8/11/2017 6:54**

Change Record					
Change	By	Date	Change	By	Date

Notes: *New timings as of 8/14/17 turn-on of improved intersection with Protected-Only*

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	7	<C+0+2>
Area Address	2	<C+0+3>
QuicNet Channel	COM1:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	39	0	32	0	39	0	30
2	Min Green	5	10	5	30	5	10	5	30
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
5	Veh Extension	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
6	Max Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
7	Min Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
8	Max Limit	25	40	15	30	25	40	20	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.0	3.0	4.5	3.0	3.0	3.0	4.5
F	Red Clear	4.3	4.6	4.7	2.7	4.3	4.6	4.7	2.7

Phase Timing - Bank 1 <F Page>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row		F
0	Permit	12345678
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	___4___8
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____
F	First Phases	___4___8

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

INTERSECTION: 0009 - Glassford & Long Look

Coordination <C Page>

Row	Column Numbers ----> / Plan Name ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	0	130	135	130	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	14	14	14	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	68	68	68	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	82	82	82	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	14	14	14	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	68	68	68	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	82	82	82	0	0	0	0	0	7
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	109	24	79	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	0	0	0	0	0	0	0	0	0	D
E	Hold Release	0	255	255	255	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

	E	Row
		0
Plan 1 - Sync		1
Plan 2 - Sync	4 8	2
Plan 3 - Sync	4 8	3
Plan 4 - Sync	4 8	4
Plan 5 - Sync		5
Plan 6 - Sync		6
Plan 7 - Sync		7
Plan 8 - Sync		8
Plan 9 - Sync		9
Coord Ped *		A
NEMA Hold		B
		C
		D
		E
		F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	10

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag		1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

INTERSECTION: 0009 - Glassford & Long Look

Row	Time	Plan	Offset	Day of Week
0	09:00	2	A	_23456_
1	14:00	E	0	_23_56_
2	15:45	3	A	_23_56_
3	13:00	E	0	___4___
4	14:45	2	A	___4___
5	15:30	3	A	___4___
6	20:00	E	0	1234567
7	07:00	4	A	1_____7
8	00:00	0	0	_____
9	00:00	0	0	_____
A	00:00	0	0	_____
B	00:00	0	0	_____
C	00:00	0	0	_____
D	00:00	0	0	_____
E	00:00	0	0	_____
F	00:00	0	0	_____

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____
00:00	0	_____	_____

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____
00:00	0	0	_____

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	_____
B	Holiday # 2 Date	0	0	0	_____
C	Holiday # 3 Date	0	0	0	_____

Holiday Dates
<8 Key>

INTERSECTION: 0012 - Glassford & Spouse

Group Assignment: NONE
Field Master Assignment: NONE
System Reference Number: 12

N/S Street Name: Glassford
E/W Street Name: Spouse

Last Database Change: 3/24/2014 11:38

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	1	<C+0+0>
Zone Number	1	<C+0+1>
Area Number	7	<C+0+2>
Area Address	5	<C+0+3>
QuicNet Channel	COM2:	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	7	0	7
1	Ped FDW	0	0	0	0	0	20	0	28
2	Min Green	0	30	0	0	5	30	0	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	5.0	0.0	0.0	3.0	5.0	0.0	5.0
6	Max Gap	0.0	5.0	0.0	0.0	3.0	5.0	0.0	5.0
7	Min Gap	0.0	5.0	0.0	0.0	3.0	5.0	0.0	5.0
8	Max Limit	0	45	0	0	20	45	0	30
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	5.0	0.0	0.0	3.0	5.0	0.0	3.0
F	Red Clear	0.0	2.0	0.0	0.0	2.9	2.0	0.0	3.3

Phase Timing - Bank 1 <F Page>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row		F
0	Permit	_2__56_8
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_2___6__
4	Ped Recall	_____
5	*View Set Peds*	- - - - -
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_____
9	Max Recall	_____
A	Soft Recall	_____
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____
F	First Phases	_2___6__

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers ----> / Plan Name ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length	0	0	135	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	0	0	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	72	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	0	0	44	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	9	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	0	0	0	0	0	0	0	0	0	D
E	Hold Release	0	0	255	0	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	Coord Ped *		A
B	NEMA Hold		B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 3 5 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag		1
Plan 2 - Lag		2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag		4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
Coord Max *		A
Coord Lag *		B
		C
		D
		E
		F

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	15:30	3	A	_23456_
3	20:00	E	0	_23456_
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		
00:00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00:00	0	0		0
00:00	0	0		1
00:00	0	0		2
00:00	0	0		3
00:00	0	0		4
00:00	0	0		5
00:00	0	0		6
00:00	0	0		7
00:00	0	0		8
00:00	0	0		9
00:00	0	0		A
00:00	0	0		B
00:00	0	0		C
00:00	0	0		D
00:00	0	0		E
00:00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	3.0	0.0		J-6U	4
8	10.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

INTERSECTION: 0012 - Glassford & Spouse

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <F Page>

Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
Phase Names ---->								
Ped Walk	0	0	0	0	0	0	0	0
Ped FDW	0	0	0	0	0	0	0	0
Min Green	0	0	0	0	0	0	0	0
Type 3 Limit	0	0	0	0	0	0	0	0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Limit	0	0	0	0	0	0	0	0
Max Limit 2	0	0	0	0	0	0	0	0
------	0	0	0	0	0	0	0	235
Call To Phase	0	0	0	0	0	0	0	0
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <F Page>

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

Row	Delay / Limited Service Int.	7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only -->	0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service	0	0							
A	Int. -->	---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

<--- Limited Service Interval (Set Dwell = 255)

INTERSECTION: 0014 - Glassford & Santa Fe

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **14**

N/S Street Name: **Glassford**
E/W Street Name: **Santa Fe**

Last Database Change: **11/8/2007 12:37**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Drop Number	14	<C+0+0>
Zone Number	14	<C+0+1>
Area Number	1	<C+0+2>
Area Address	14	<C+0+3>
QuicNet Channel	0	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	23	0	32	0	23	0	32
2	Min Green	5	30	5	10	5	30	5	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0
6	Max Gap	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0
7	Min Gap	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0
8	Max Limit	15	30	15	20	15	30	15	20
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0
F	Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row	F	
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	2 6
4	Ped Recall	
5	*View Set Peds*	- - - - -
6	Rest In Walk	
7	Red Rest	
8	Dual Entry	2 4 6 8
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	
F	First Phases	2 6

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

INTERSECTION: 0014 - Glassford & Santa Fe

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	110	120	125	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	75	75	75	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	17	17	17	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	60	60	60	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	75	75	75	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	17	17	17	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	60	60	60	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	34	44	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	0	0	0	0	0	0	0	0	0	D
E	Hold Release	255	255	255	0	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E
0		
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	
5	Plan 5 - Sync	
6	Plan 6 - Sync	
7	Plan 7 - Sync	
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	Coord Ped *	
B	NEMA Hold	
C		
D		
E		
F		

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 3 5 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	2

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

INTERSECTION: 0014 - Glassford & Santa Fe

Row	Time	Plan	Offset	Day of Week
0	06 : 30	1	A	1234567
1	09 : 00	2	A	1234567
2	15 : 30	3	A	1234567
3	20 : 00	E	0	1234567
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 1
TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday # 2
TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
00 : 00	0	0		0
00 : 00	0	0		1
00 : 00	0	0		2
00 : 00	0	0		3
00 : 00	0	0		4
00 : 00	0	0		5
00 : 00	0	0		6
00 : 00	0	0		7
00 : 00	0	0		8
00 : 00	0	0		9
00 : 00	0	0		A
00 : 00	0	0		B
00 : 00	0	0		C
00 : 00	0	0		D
00 : 00	0	0		E
00 : 00	0	0		F

Holiday # 3
TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date	0	0	0	
B	Holiday # 2 Date	0	0	0	
C	Holiday # 3 Date	0	0	0	

Holiday Dates
<8 Key>

INTERSECTION: 0013 - Glassford & Granville

Coordination <C Page>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	0	0	0	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	0	0	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	0	0	0	0	0	0	0	0	0	D
E	Hold Release	0	0	0	0	0	0	0	0	0	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
			0
	Plan 1 - Sync		1
	Plan 2 - Sync		2
	Plan 3 - Sync		3
	Plan 4 - Sync		4
	Plan 5 - Sync		5
	Plan 6 - Sync		6
	Plan 7 - Sync		7
	Plan 8 - Sync		8
	Plan 9 - Sync		9
	Coord Ped *		A
	NEMA Hold		B
			C
			D
			E
			F

Configuration <E Page>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 3 5 7
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1
F	IC Select (Interconnect)	

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	6
Ped 4P	4
Ped 8P	8
Yellow Flash Phases	
Overlap A - Phases	
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
(Ped Loadswitch Yellows)
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F	Row
	Free Lag	2 4 6 8	0
	Plan 1 - Lag		1
	Plan 2 - Lag		2
	Plan 3 - Lag		3
	Plan 4 - Lag		4
	Plan 5 - Lag		5
	Plan 6 - Lag		6
	Plan 7 - Lag		7
	Plan 8 - Lag		8
	Plan 9 - Lag		9
	Coord Max *		A
	Coord Lag *		B
			C
			D
			E
			F

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	0.0	0.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	0.0	0.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	3.0	0.0		J-6U	4
8	10.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	2345____

Active Detectors <D Page>

Note: Initialized data is for all detectors to be active (ie, all flag bits set). A Detector which is "not flagged", will not be active as a Phase Detector, and WILL NOT call or extend its associated phase. It will still function as a System Detector.

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

INTERSECTION: 0013 - Glassford & Granville

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **13**

N/S Street Name: **Glassford**
E/W Street Name: **Granville**

Last Database Change: **6/1/2017 7:17**

Change Record					
Change	By	Date	Change	By	Date

Notes: *Updated 6/1/17 to add west leg and Ph 1,3,4,7*

Drop Number	1	<C+0+0>
Zone Number		<C+0+1>
Area Number	1	<C+0+2>
Area Address	1	<C+0+3>
QuicNet Channel	0	(QuicNet)

Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	22	0	36	0	22	0	36
2	Min Green	5	30	5	10	5	30	5	10
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
6	Max Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
7	Min Gap	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
8	Max Limit	15	50	15	40	15	50	15	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	------	0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	4.3	3.0	3.0	3.0	4.3	3.0	3.0
F	Red Clear	2.8	1.6	3.9	3.8	2.8	1.6	3.9	3.8

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	-----	5
Rest In Walk		6
Red Rest		7
Dual Entry	4 8	8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start		E
First Phases	2 6	F

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

ARIZONA DEPARTMENT OF TRANSPORTATION-TRAFFIC SIGNAL TIMING CARD

Intersection: SR89A @ Glassford Hill Rd. MP: 322.15 Location: Prescott Valley ☑ Active

MU #: 0640S Warrant: UPDATE TIMING Timing As Of: 7/9/2014

	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
Mvmnt	SB	NB LT	WB	EB	--	--	--	--
Min Green	8	5	7	7	--	--	--	--
Veh Ext	1.5	2.0	3.0	1.5	--	--	--	--
Max I	20	35	30	20	--	--	--	--
Max 2	--	--	--	--	--	--	--	--
Max 3	--	--	--	--	--	--	--	--
Walk	7	--	7	7	--	--	--	--
Ped Clr	14	--	43	39	--	--	--	--
Max Init	--	--	--	--	--	--	--	--
Sec Act	--	--	--	--	--	--	--	--
TBR	--	--	--	--	--	--	--	--
TTR	--	--	--	--	--	--	--	--
Min Gap	--	--	--	--	--	--	--	--
Guar Pass	--	--	--	--	--	--	--	--
Yellow	3.9	3.9	4.3	4.3	--	--	--	--
Red Clr	1.8	4.0	3.8	2.0	--	--	--	--
CNA	--	--	--	--	--	--	--	--
Det Memory	--	--	ON	--	--	--	--	--
Dual Entry	--	--	--	--	--	--	--	--
Recall Mode	--	MINV	--	--	--	--	--	--
Ext Start	--	RED	--	--	--	--	--	--

TIME OF DAY FUNCTIONS

PGM	Funct'n	On	Off	Skip Days

VEHICLE DETECTOR DELAY/EXTEND TIMING

Phase(s)	Ctrl/Amp	Type	Sec
4 RT	AMP	DELAY	16
4 CL	AMP	DELAY	16
2	AMP	EXT'N	8

OVERLAPS TIMING OPTIONAL

O/L	(Phases)	Grn	Yel	Red
(A)	1+2	--	--	--
(B)	1+2+3 3 lag	8	4.3	1.0
(C)	2+4	--	--	--
(D)	1+2+4	--	--	--

PHASE SEQ: R1) 1,2,3,4

PROTECTED LEFT TURN PHASES: 2, 3

PROT-PRM LEFT TURN PHASES:

RAILROAD PRE-EMPTION: ☐ VIDEO: ☐

EMERGENCY VEHICLE PRE-EMPTION: ☐ LOOPS: ☑

COORDINATION: ☐

Extension timing is for the loops of L14 & L15 for the phase 2 portion of OL-A (1+2).

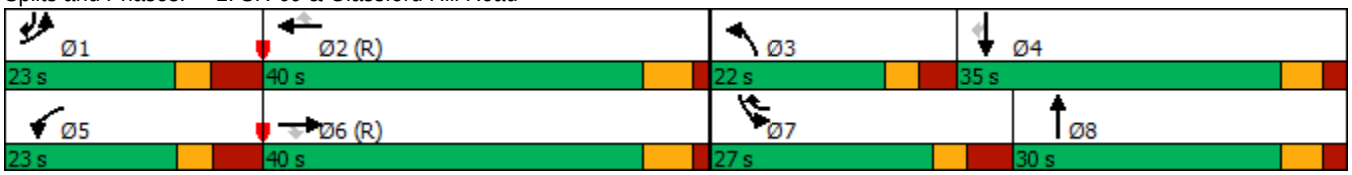
APPENDIX SS-10

Glassford Hill Road Existing Delay and Capacity Analysis Results

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Future Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	23.0	40.0	40.0	23.0	40.0	27.0	22.0	30.0	27.0	35.0	23.0
Total Split (%)	19.2%	33.3%	33.3%	19.2%	33.3%	22.5%	18.3%	25.0%	22.5%	29.2%	19.2%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	15.3	71.1	71.1	8.6	61.1	77.5	8.0	9.1	10.4	18.1	39.4
Actuated g/C Ratio	0.13	0.59	0.59	0.07	0.51	0.65	0.07	0.08	0.09	0.15	0.33
v/c Ratio	0.72	0.34	0.02	0.33	0.54	0.15	0.17	0.30	0.56	0.44	0.62
Control Delay	59.7	15.4	0.0	60.2	22.8	2.0	56.4	38.6	59.8	51.6	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	15.4	0.0	60.2	22.8	2.0	56.4	38.6	59.8	51.6	15.0
LOS	E	B	A	E	C	A	E	D	E	D	B
Approach Delay		28.4			21.6			42.1		31.4	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 119 (99%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	3	32	437	56	660
Future Volume (vph)	1	1	3	32	437	56	660
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	17.1	17.1	17.1	10.9	35.6	10.9	35.6
Total Split (s)	34.5	34.5	34.5	16.8	78.7	16.8	78.7
Total Split (%)	26.5%	26.5%	26.5%	12.9%	60.5%	12.9%	60.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	4.1	2.9	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	5.9	5.6	5.9	5.6
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	105.4	101.9	107.2	104.6
Actuated g/C Ratio	0.08	0.08	0.08	0.81	0.78	0.82	0.80
v/c Ratio	0.01	0.18	0.32	0.06	0.12	0.08	0.18
Control Delay	56.0	23.5	21.3	2.4	4.6	1.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	23.5	21.3	2.4	4.6	1.8	2.7
LOS	E	C	C	A	A	A	A
Approach Delay		24.7	21.3		4.5		2.6
Approach LOS		C	C		A		A

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

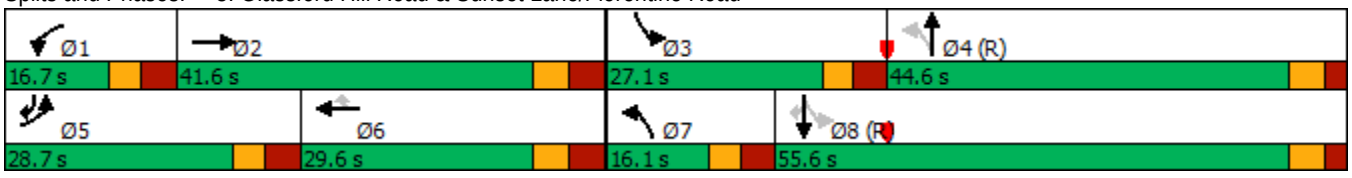
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	133	108	65	66	187	16	363	204	573	45
Future Volume (vph)	133	108	65	66	187	16	363	204	573	45
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6		7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	6	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.6	17.2	11.6	17.2	17.2	11.3	35.9	11.3	35.9	11.6
Total Split (s)	28.7	41.6	16.7	29.6	29.6	16.1	44.6	27.1	55.6	28.7
Total Split (%)	22.1%	32.0%	12.8%	22.8%	22.8%	12.4%	34.3%	20.8%	42.8%	22.1%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.6	3.7	3.6	3.7	3.7	3.3	2.3	3.3	2.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	7.2	6.6	7.2	7.2	6.3	5.9	6.3	5.9	6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	10.8	18.3	8.1	13.0	13.0	73.7	68.1	86.1	81.4	98.1
Actuated g/C Ratio	0.08	0.14	0.06	0.10	0.10	0.57	0.52	0.66	0.63	0.75
v/c Ratio	0.51	0.30	0.33	0.39	0.54	0.04	0.17	0.35	0.20	0.04
Control Delay	62.9	41.5	62.2	60.1	8.5	8.9	14.2	10.7	9.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	41.5	62.2	60.1	8.5	8.9	14.2	10.7	9.0	0.3
LOS	E	D	E	E	A	A	B	B	A	A
Approach Delay		51.9		30.3			14.1		9.0	
Approach LOS		D		C			B		A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 110 (85%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	52	5	61	9	5	52	621	9	813	55
Future Volume (vph)	52	5	61	9	5	52	621	9	813	55
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	17.2	17.2	11.2	17.2	17.2	11.2	35.7	11.2	35.7	35.7
Total Split (s)	30.5	30.5	17.0	30.5	30.5	17.0	82.5	17.0	82.5	82.5
Total Split (%)	23.5%	23.5%	13.1%	23.5%	23.5%	13.1%	63.5%	13.1%	63.5%	63.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	4.2	4.2	3.2	4.2	4.2	3.2	2.1	3.2	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	6.2	7.2	7.2	6.2	5.7	6.2	5.7	5.7
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	13.0	13.0	23.1	13.0	13.0	106.1	106.2	101.4	98.4	98.4
Actuated g/C Ratio	0.10	0.10	0.18	0.10	0.10	0.82	0.82	0.78	0.76	0.76
v/c Ratio	0.41	0.03	0.20	0.07	0.09	0.11	0.17	0.02	0.23	0.05
Control Delay	63.0	50.8	10.4	52.2	30.6	5.8	5.9	1.1	2.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	50.8	10.4	52.2	30.6	5.8	5.9	1.1	2.9	0.5
LOS	E	D	B	D	C	A	A	A	A	A
Approach Delay		35.4			38.9		5.9		2.7	
Approach LOS		D			D		A		A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

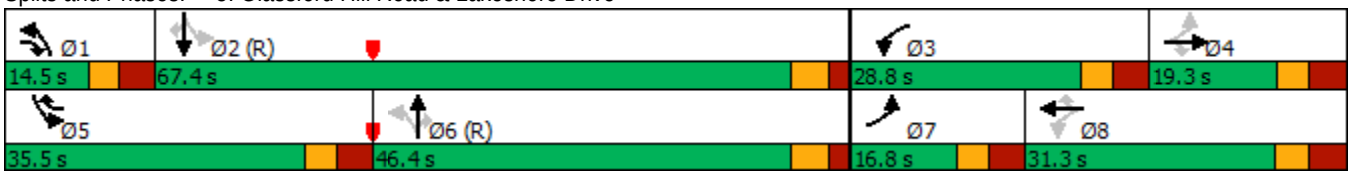
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	25	29	173	93	344	31	565	87	229	675	105
Future Volume (vph)	60	25	29	173	93	344	31	565	87	229	675	105
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.6	16.9	11.4	11.6	17.1	11.4	11.4	35.8	35.8	11.4	35.8	35.8
Total Split (s)	16.8	19.3	14.5	28.8	31.3	35.5	14.5	46.4	46.4	35.5	67.4	67.4
Total Split (%)	12.9%	14.8%	11.2%	22.2%	24.1%	27.3%	11.2%	35.7%	35.7%	27.3%	51.8%	51.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.2	3.0	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	3.6	3.9	3.4	3.6	3.9	3.4	3.4	2.2	2.2	3.4	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.9	6.4	6.6	7.1	6.4	6.4	5.8	5.8	6.4	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.8	10.4	17.0	30.3	16.6	37.2	73.2	67.3	67.3	86.4	76.8	76.8
Actuated g/C Ratio	0.12	0.08	0.13	0.23	0.13	0.29	0.56	0.52	0.52	0.66	0.59	0.59
v/c Ratio	0.34	0.18	0.09	0.58	0.43	0.64	0.08	0.23	0.10	0.45	0.24	0.11
Control Delay	44.2	58.7	0.4	48.2	56.9	23.2	16.2	24.1	2.0	12.8	15.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	58.7	0.4	48.2	56.9	23.2	16.2	24.1	2.0	12.8	15.2	0.2
LOS	D	E	A	D	E	C	B	C	A	B	B	A
Approach Delay		36.1			35.4			20.9			13.1	
Approach LOS		D			D			C			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

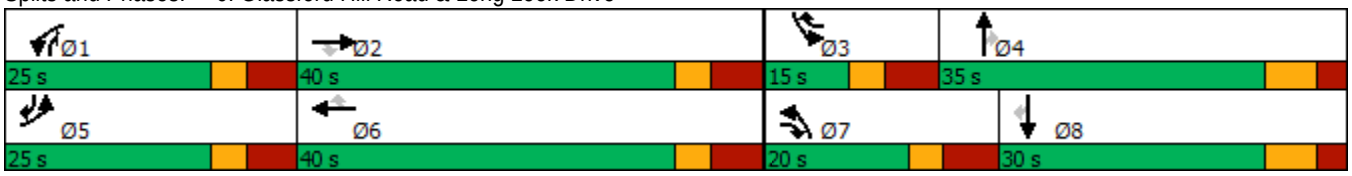
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	95	207	147	201	82	207	579	66	78	902	268
Future Volume (vph)	122	95	207	147	201	82	207	579	66	78	902	268
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	12.3	17.6	12.7	12.3	17.6	12.7	12.7	37.2	12.3	12.7	37.2	12.3
Total Split (s)	25.0	40.0	20.0	25.0	40.0	15.0	20.0	35.0	25.0	15.0	30.0	25.0
Total Split (%)	21.7%	34.8%	17.4%	21.7%	34.8%	13.0%	17.4%	30.4%	21.7%	13.0%	26.1%	21.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	4.3	4.6	4.7	4.3	4.6	4.7	4.7	2.7	4.3	4.7	2.7	4.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.6	7.7	7.3	7.6	7.7	7.7	7.2	7.3	7.7	7.2	7.3
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	8.9	16.8	31.2	13.9	17.8	32.4	10.7	27.9	49.1	6.9	24.1	40.3
Actuated g/C Ratio	0.10	0.18	0.34	0.15	0.19	0.35	0.12	0.30	0.54	0.08	0.26	0.44
v/c Ratio	0.40	0.30	0.36	0.31	0.60	0.14	0.56	0.41	0.08	0.33	0.73	0.34
Control Delay	43.5	34.7	10.3	39.9	41.1	3.2	44.9	27.2	1.0	45.6	36.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	34.7	10.3	39.9	41.1	3.2	44.9	27.2	1.0	45.6	36.0	3.5
LOS	D	C	B	D	D	A	D	C	A	D	D	A
Approach Delay		25.3			33.5			29.5			29.6	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 91.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	226	297	749	28	84	1148
Future Volume (vph)	226	297	749	28	84	1148
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	16.3	16.3	37.0	37.0	10.9	37.0
Total Split (s)	30.0	30.0	45.0	45.0	20.0	65.0
Total Split (%)	31.6%	31.6%	47.4%	47.4%	21.1%	68.4%
Yellow Time (s)	3.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	3.3	3.3	2.0	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.0	7.0	5.9	7.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	17.9	17.9	34.1	34.1	45.6	44.4
Actuated g/C Ratio	0.24	0.24	0.45	0.45	0.60	0.58
v/c Ratio	0.59	0.52	0.51	0.04	0.23	0.60
Control Delay	33.9	6.8	18.0	5.8	8.4	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	6.8	18.0	5.8	8.4	11.9
LOS	C	A	B	A	A	B
Approach Delay	18.5		17.6			11.6
Approach LOS	B		B			B

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

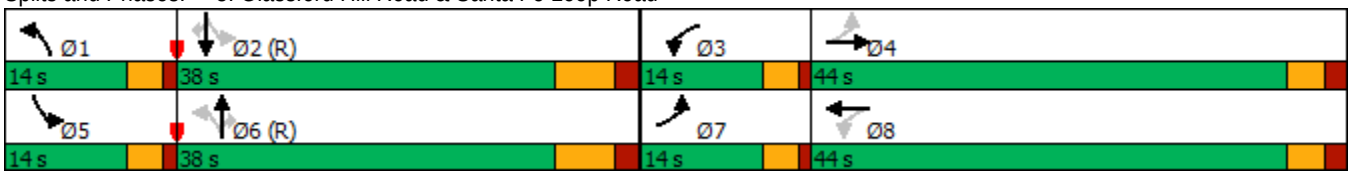
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations										
Traffic Volume (vph)	254	39	0	129	910	7	7	1201	52	
Future Volume (vph)	254	39	0	129	910	7	7	1201	52	
Turn Type	pm+pt	NA	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4	8	1	6		5	2		3
Permitted Phases	4			6		6	2		2	
Detector Phase	7	4	8	1	6	6	5	2	2	
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0	5.0
Minimum Split (s)	9.0	15.0	15.0	9.0	37.0	37.0	9.0	37.0	37.0	9.0
Total Split (s)	14.0	44.0	44.0	14.0	38.0	38.0	14.0	38.0	38.0	14.0
Total Split (%)	12.7%	40.0%	40.0%	12.7%	34.5%	34.5%	12.7%	34.5%	34.5%	13%
Yellow Time (s)	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None
Act Effct Green (s)	22.2	21.2	10.0	79.8	74.8	74.8	71.7	63.0	63.0	
Actuated g/C Ratio	0.20	0.19	0.09	0.73	0.68	0.68	0.65	0.57	0.57	
v/c Ratio	1.05	0.21	0.13	0.46	0.41	0.01	0.02	0.64	0.06	
Control Delay	111.5	22.8	0.7	10.1	9.5	0.0	5.7	19.2	0.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	111.5	22.8	0.7	10.1	9.5	0.0	5.7	19.2	0.8	
LOS	F	C	A	B	A	A	A	B	A	
Approach Delay		92.3	0.7		9.5			18.3		
Approach LOS		F	A		A			B		

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

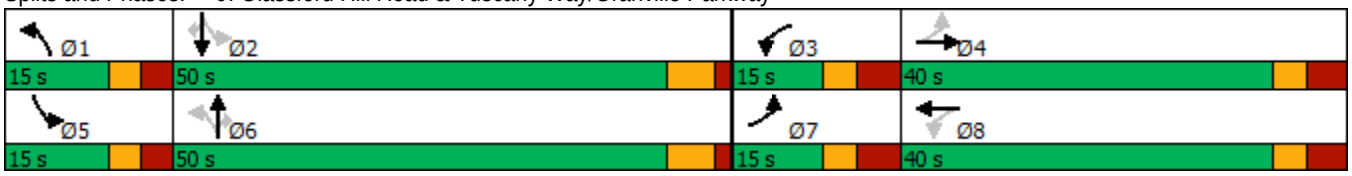
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	12	0	90	0	27	1143	22	21	1085	18
Future Volume (vph)	12	0	90	0	27	1143	22	21	1085	18
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.9	16.8	11.9	16.8	10.8	35.9	35.9	10.8	35.9	35.9
Total Split (s)	15.0	40.0	15.0	40.0	15.0	50.0	50.0	15.0	50.0	50.0
Total Split (%)	12.5%	33.3%	12.5%	33.3%	12.5%	41.7%	41.7%	12.5%	41.7%	41.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.9	3.8	3.9	3.8	2.8	1.6	1.6	2.8	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.8	6.9	6.8	5.8	5.9	5.9	5.8	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.8	10.7	10.7	10.8	45.7	45.3	45.3	45.6	45.2	45.2
Actuated g/C Ratio	0.11	0.16	0.16	0.16	0.67	0.66	0.66	0.66	0.66	0.66
v/c Ratio	0.06	0.02	0.38	0.20	0.09	0.53	0.02	0.07	0.51	0.02
Control Delay	29.7	0.1	32.4	0.9	6.2	11.9	0.0	6.2	11.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	0.1	32.4	0.9	6.2	11.9	0.0	6.2	11.6	0.1
LOS	C	A	C	A	A	B	A	A	B	A
Approach Delay		16.1		16.2		11.6			11.3	
Approach LOS		B		B		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

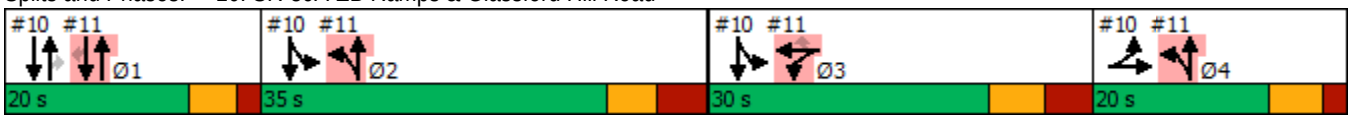
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	587	1016	235	3	537		
Future Volume (vph)	1	587	1016	235	3	537		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.7	13.7			12.9	15.1
Total Split (s)	20.0		20.0	20.0			35.0	30.0
Total Split (%)	19.0%		19.0%	19.0%			33%	29%
Yellow Time (s)	4.3		3.9	3.9			3.9	4.3
All-Red Time (s)	2.0		1.8	1.8			4.0	3.8
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.7	5.7				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes
Recall Mode	None		None	None			Min	None
Act Effct Green (s)	13.8	101.8	14.4	14.4	53.7	76.0		
Actuated g/C Ratio	0.14	1.00	0.14	0.14	0.53	0.75		
v/c Ratio	0.00	0.40	1.54	0.58	0.00	0.22		
Control Delay	40.0	0.8	282.4	11.1	12.0	3.0		
Queue Delay	0.0	0.0	1.5	0.0	0.0	0.2		
Total Delay	40.0	0.8	283.8	11.1	12.0	3.2		
LOS	D	A	F	B	B	A		
Approach Delay			232.7			3.2		
Approach LOS			F			A		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 101.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay: 123.3	Intersection LOS: F
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

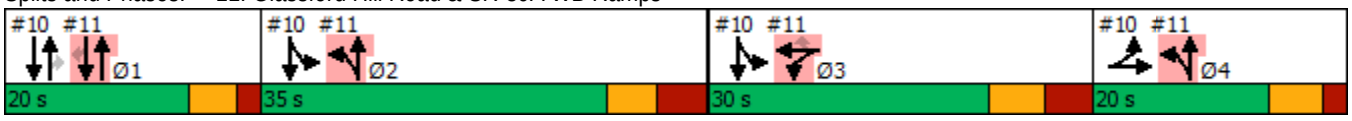
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	NBT	SBT	Ø2	Ø4
Lane Configurations							
Traffic Volume (vph)	539	2	1015	2	1		
Future Volume (vph)	539	2	1015	2	1		
Turn Type	Split	NA	Prot	NA	NA		
Protected Phases	3	3	2 4	1 2 4	1	2	4
Permitted Phases							
Detector Phase	3	3	2 4	1 2 4	1		
Switch Phase							
Minimum Initial (s)	7.0	7.0			8.0	5.0	7.0
Minimum Split (s)	15.1	15.1			13.7	12.9	13.3
Total Split (s)	30.0	30.0			20.0	35.0	20.0
Total Split (%)	28.6%	28.6%			19.0%	33%	19%
Yellow Time (s)	4.3	4.3			3.9	3.9	4.3
All-Red Time (s)	3.8	3.8			1.8	4.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	8.1	8.1			5.7		
Lead/Lag	Lead	Lead			Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	None			None	Min	None
Act Effct Green (s)	20.8	20.8	37.0	67.2	14.4		
Actuated g/C Ratio	0.20	0.20	0.36	0.66	0.14		
v/c Ratio	0.86	0.86	0.89	0.00	0.00		
Control Delay	63.6	64.0	32.6	0.0	39.0		
Queue Delay	0.0	0.0	0.8	0.0	0.0		
Total Delay	63.6	64.0	33.5	0.0	39.0		
LOS	E	E	C	A	D		
Approach Delay		63.8		33.4	39.0		
Approach LOS		E		C	D		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 101.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay: 44.0	Intersection LOS: D
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Future Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	33.0	55.0	55.0	33.0	55.0	25.0	20.0	22.0	25.0	27.0	33.0
Total Split (%)	24.4%	40.7%	40.7%	24.4%	40.7%	18.5%	14.8%	16.3%	18.5%	20.0%	24.4%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	23.4	76.9	76.9	9.6	59.7	78.4	8.5	12.2	12.7	22.9	52.4
Actuated g/C Ratio	0.17	0.57	0.57	0.07	0.44	0.58	0.06	0.09	0.09	0.17	0.39
v/c Ratio	0.85	0.55	0.02	0.47	0.40	0.12	0.32	0.68	0.66	0.34	0.52
Control Delay	67.6	21.7	0.0	72.0	27.6	5.2	68.1	60.4	68.7	53.4	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.6	21.7	0.0	72.0	27.6	5.2	68.1	60.4	68.7	53.4	18.0
LOS	E	C	A	E	C	A	E	E	E	D	B
Approach Delay		35.6			27.5			61.4		39.0	
Approach LOS		D			C			E		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 66 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 35.7	Intersection LOS: D
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

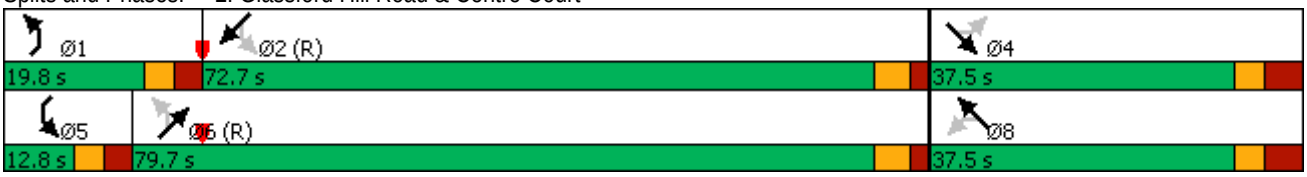
Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	2	24	678	42	595
Future Volume (vph)	1	1	2	24	678	42	595
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	17.1	17.1	17.1	10.9	35.6	10.9	35.6
Total Split (s)	37.5	37.5	37.5	19.8	79.7	12.8	72.7
Total Split (%)	28.8%	28.8%	28.8%	15.2%	61.3%	9.8%	55.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	4.1	2.9	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	5.9	5.6	5.9	5.6
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	105.5	102.1	107.1	104.7
Actuated g/C Ratio	0.08	0.08	0.08	0.81	0.79	0.82	0.81
v/c Ratio	0.01	0.14	0.26	0.04	0.19	0.08	0.16
Control Delay	56.0	25.6	22.3	2.4	4.8	2.1	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	25.6	22.3	2.4	4.8	2.1	3.3
LOS	E	C	C	A	A	A	A
Approach Delay		27.1	22.3		4.7		3.3
Approach LOS		C	C		A		A

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 58 (45%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 4.8	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

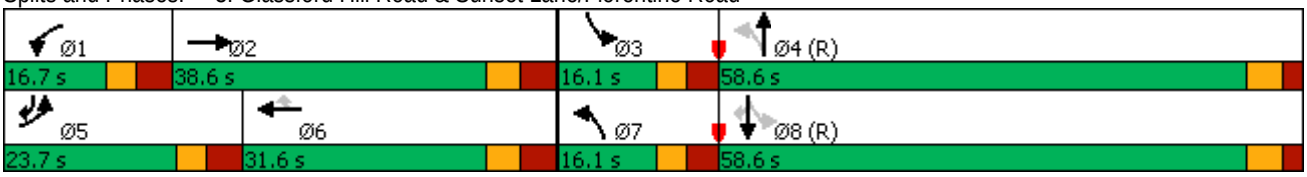
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	160	162	111	196	244	104	612	256	623	109
Future Volume (vph)	160	162	111	196	244	104	612	256	623	109
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6		7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	6	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.6	17.2	11.6	17.2	17.2	11.3	35.9	11.3	35.9	11.6
Total Split (s)	23.7	38.6	16.7	31.6	31.6	16.1	58.6	16.1	58.6	23.7
Total Split (%)	18.2%	29.7%	12.8%	24.3%	24.3%	12.4%	45.1%	12.4%	45.1%	18.2%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.6	3.7	3.6	3.7	3.7	3.3	2.3	3.3	2.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	7.2	6.6	7.2	7.2	6.3	5.9	6.3	5.9	6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	11.9	25.6	9.9	23.6	23.6	61.0	51.9	73.9	59.0	76.8
Actuated g/C Ratio	0.09	0.20	0.08	0.18	0.18	0.47	0.40	0.57	0.45	0.59
v/c Ratio	0.55	0.32	0.46	0.63	0.53	0.27	0.37	0.63	0.29	0.12
Control Delay	63.0	40.1	62.9	56.8	8.8	16.1	25.9	34.1	14.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	40.1	62.9	56.8	8.8	16.1	25.9	34.1	14.8	0.6
LOS	E	D	E	E	A	B	C	C	B	A
Approach Delay		50.3		36.8			24.6		18.3	
Approach LOS		D		D			C		B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

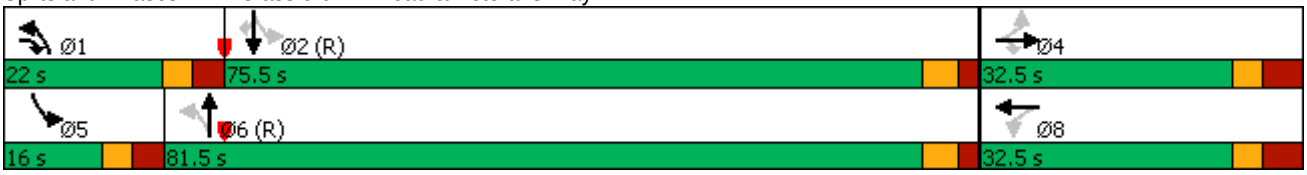
Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	84	5	136	7	5	167	840	7	843	49
Future Volume (vph)	84	5	136	7	5	167	840	7	843	49
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	17.2	17.2	11.2	17.2	17.2	11.2	35.7	11.2	35.7	35.7
Total Split (s)	32.5	32.5	22.0	32.5	32.5	22.0	81.5	16.0	75.5	75.5
Total Split (%)	25.0%	25.0%	16.9%	25.0%	25.0%	16.9%	62.7%	12.3%	58.1%	58.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	4.2	4.2	3.2	4.2	4.2	3.2	2.1	3.2	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	6.2	7.2	7.2	6.2	5.7	6.2	5.7	5.7
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.7	15.7	32.9	15.7	15.7	100.9	99.0	90.4	85.2	85.2
Actuated g/C Ratio	0.12	0.12	0.25	0.12	0.12	0.78	0.76	0.70	0.66	0.66
v/c Ratio	0.54	0.02	0.31	0.05	0.07	0.38	0.24	0.02	0.27	0.05
Control Delay	64.9	47.4	11.5	48.3	29.3	11.5	5.7	2.0	3.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	47.4	11.5	48.3	29.3	11.5	5.7	2.0	3.6	0.1
LOS	E	D	B	D	C	B	A	A	A	A
Approach Delay		32.2			35.9		6.7		3.4	
Approach LOS		C			D		A		A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 57 (44%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

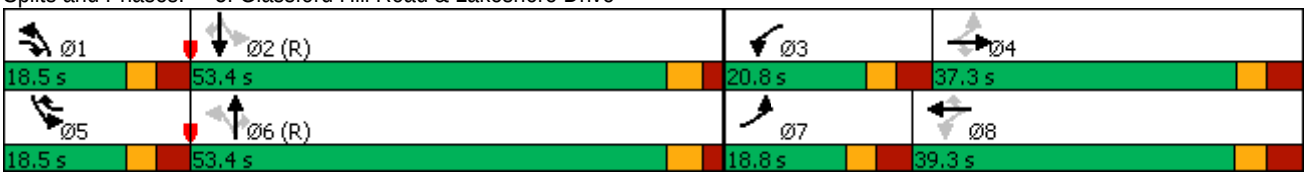
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	82	36	138	109	114	39	759	135	126	725	92
Future Volume (vph)	103	82	36	138	109	114	39	759	135	126	725	92
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.6	16.9	11.4	11.6	17.1	11.4	11.4	35.8	35.8	11.4	35.8	35.8
Total Split (s)	18.8	37.3	18.5	20.8	39.3	18.5	18.5	53.4	53.4	18.5	53.4	53.4
Total Split (%)	14.5%	28.7%	14.2%	16.0%	30.2%	14.2%	14.2%	41.1%	41.1%	14.2%	41.1%	41.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.2	3.0	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	3.6	3.9	3.4	3.6	3.9	3.4	3.4	2.2	2.2	3.4	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.9	6.4	6.6	7.1	6.4	6.4	5.8	5.8	6.4	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.7	13.6	27.3	30.6	15.9	32.7	72.8	66.7	66.7	79.8	72.1	72.1
Actuated g/C Ratio	0.20	0.10	0.21	0.24	0.12	0.25	0.56	0.51	0.51	0.61	0.55	0.55
v/c Ratio	0.38	0.46	0.10	0.45	0.52	0.25	0.10	0.32	0.17	0.33	0.28	0.11
Control Delay	39.8	61.6	0.9	41.3	61.0	6.9	18.0	28.4	14.3	9.6	14.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	61.6	0.9	41.3	61.0	6.9	18.0	28.4	14.3	9.6	14.6	2.9
LOS	D	E	A	D	E	A	B	C	B	A	B	A
Approach Delay		41.6			36.4			25.9			12.8	
Approach LOS		D			D			C			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 20 (15%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	

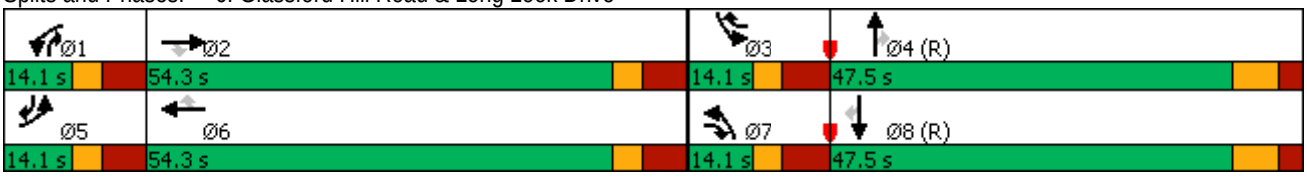
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	25	85	6	48	15	848	136	45	720	21
Future Volume (vph)	19	8	25	85	6	48	15	848	136	45	720	21
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	12.3	17.6	12.7	12.3	17.6	12.7	12.7	37.2	12.3	12.7	37.2	12.3
Total Split (s)	14.1	54.3	14.1	14.1	54.3	14.1	14.1	47.5	14.1	14.1	47.5	14.1
Total Split (%)	10.8%	41.8%	10.8%	10.8%	41.8%	10.8%	10.8%	36.5%	10.8%	10.8%	36.5%	10.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	4.3	4.6	4.7	4.3	4.6	4.7	4.7	2.7	4.3	4.7	2.7	4.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.6	7.7	7.3	7.6	7.7	7.7	7.2	7.3	7.7	7.2	7.3
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	7.5	10.0	9.6	10.1	10.7	18.6	6.1	89.5	108.3	7.3	93.4	108.1
Actuated g/C Ratio	0.06	0.08	0.07	0.08	0.08	0.14	0.05	0.69	0.83	0.06	0.72	0.83
v/c Ratio	0.11	0.06	0.13	0.35	0.05	0.17	0.10	0.26	0.11	0.26	0.21	0.02
Control Delay	58.7	56.9	1.3	60.6	54.7	1.8	76.5	10.8	4.9	61.5	7.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	56.9	1.3	60.6	54.7	1.8	76.5	10.8	4.9	61.5	7.7	0.0
LOS	E	E	A	E	D	A	E	B	A	E	A	A
Approach Delay		31.2			40.1			11.0			10.6	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 109 (84%), Referenced to phase 4:NBT and 8:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

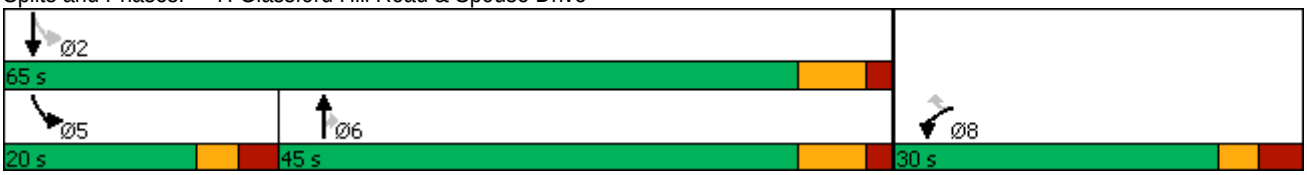
Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	60	816	44	94	729
Future Volume (vph)	50	60	816	44	94	729
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	16.3	16.3	37.0	37.0	10.9	37.0
Total Split (s)	30.0	30.0	45.0	45.0	20.0	65.0
Total Split (%)	31.6%	31.6%	47.4%	47.4%	21.1%	68.4%
Yellow Time (s)	3.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	3.3	3.3	2.0	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.0	7.0	5.9	7.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.7	10.7	38.1	38.1	48.4	49.1
Actuated g/C Ratio	0.16	0.16	0.57	0.57	0.72	0.73
v/c Ratio	0.19	0.21	0.44	0.05	0.21	0.31
Control Delay	29.6	10.4	13.4	4.0	5.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	10.4	13.4	4.0	5.0	5.0
LOS	C	B	B	A	A	A
Approach Delay	19.1		12.9			5.0
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 67.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

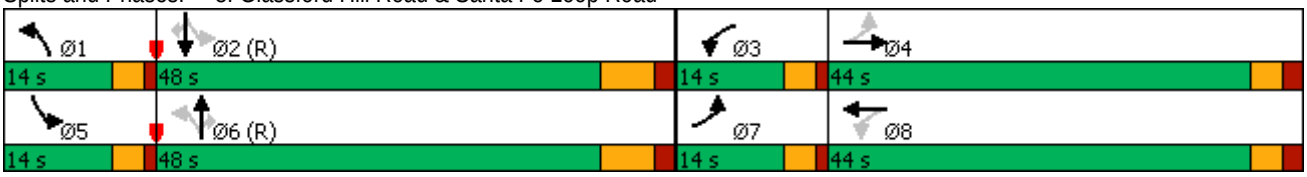
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	72	0	4	0	113	761	2	2	795	57
Future Volume (vph)	72	0	4	0	113	761	2	2	795	57
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	9.0	15.0	9.0	15.0	9.0	37.0	37.0	9.0	37.0	37.0
Total Split (s)	14.0	44.0	14.0	44.0	14.0	48.0	48.0	14.0	48.0	48.0
Total Split (%)	11.7%	36.7%	11.7%	36.7%	11.7%	40.0%	40.0%	11.7%	40.0%	40.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	13.1	11.0	8.0	10.0	101.0	97.4	97.4	94.4	85.8	85.8
Actuated g/C Ratio	0.11	0.09	0.07	0.08	0.84	0.81	0.81	0.79	0.72	0.72
v/c Ratio	0.44	0.05	0.03	0.02	0.23	0.29	0.00	0.00	0.34	0.05
Control Delay	55.2	0.2	45.8	0.1	3.7	5.0	0.0	3.5	8.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	0.2	45.8	0.1	3.7	5.0	0.0	3.5	8.4	1.0
LOS	E	A	D	A	A	A	A	A	A	A
Approach Delay		41.5		14.2		4.8			7.9	
Approach LOS		D		B		A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 34 (28%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

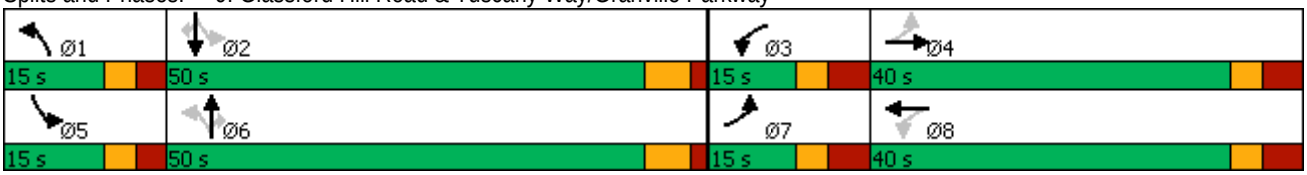
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	0	52	0	6	791	37	58	884	4
Future Volume (vph)	13	0	52	0	6	791	37	58	884	4
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.9	16.8	11.9	16.8	10.8	35.9	35.9	10.8	35.9	35.9
Total Split (s)	15.0	40.0	15.0	40.0	15.0	50.0	50.0	15.0	50.0	50.0
Total Split (%)	12.5%	33.3%	12.5%	33.3%	12.5%	41.7%	41.7%	12.5%	41.7%	41.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.9	3.8	3.9	3.8	2.8	1.6	1.6	2.8	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.8	6.9	6.8	5.8	5.9	5.9	5.8	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	9.5	10.8	12.3	13.3	43.7	40.6	40.6	49.2	51.2	51.2
Actuated g/C Ratio	0.14	0.16	0.18	0.19	0.63	0.59	0.59	0.71	0.74	0.74
v/c Ratio	0.06	0.04	0.22	0.07	0.02	0.41	0.04	0.14	0.37	0.00
Control Delay	25.9	0.2	26.7	0.2	7.7	14.3	0.1	7.3	9.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	0.2	26.7	0.2	7.7	14.3	0.1	7.3	9.2	0.0
LOS	C	A	C	A	A	B	A	A	A	A
Approach Delay		10.5		15.8		13.6			9.1	
Approach LOS		B		B		B			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

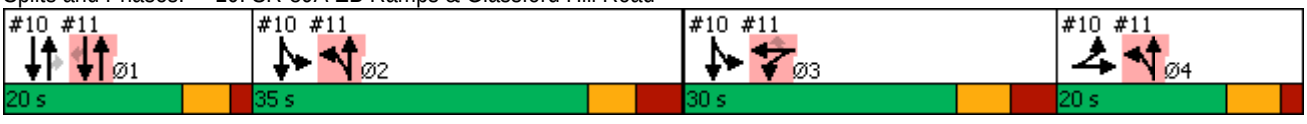
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	672	446	395	2	274		
Future Volume (vph)	1	672	446	395	2	274		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.7	13.7			12.9	15.1
Total Split (s)	20.0		20.0	20.0			35.0	30.0
Total Split (%)	19.0%		19.0%	19.0%			33%	29%
Yellow Time (s)	4.3		3.9	3.9			3.9	4.3
All-Red Time (s)	2.0		1.8	1.8			4.0	3.8
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.7	5.7				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes
Recall Mode	None		None	None			Min	None
Act Effct Green (s)	9.0	71.9	11.8	11.8	30.7	50.6		
Actuated g/C Ratio	0.13	1.00	0.16	0.16	0.43	0.70		
v/c Ratio	0.00	0.46	0.58	0.70	0.00	0.12		
Control Delay	32.0	1.0	32.1	10.3	3.5	1.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.0	1.0	32.1	10.3	3.5	1.1		
LOS	C	A	C	B	A	A		
Approach Delay			21.9			1.1		
Approach LOS			C			A		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 71.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

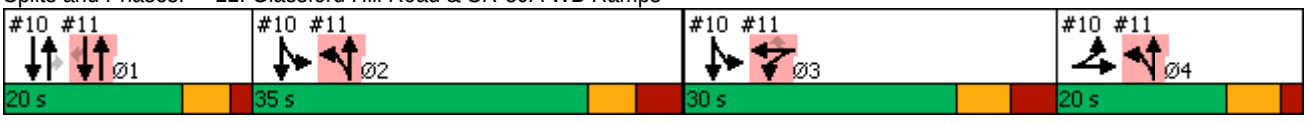
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	Ø1	Ø2	Ø4
Lane Configurations						
Traffic Volume (vph)	276	0	447			
Future Volume (vph)	276	0	447			
Turn Type	Split	NA	Prot			
Protected Phases	3	3	2 4	1	2	4
Permitted Phases						
Detector Phase	3	3	2 4			
Switch Phase						
Minimum Initial (s)	7.0	7.0		8.0	5.0	7.0
Minimum Split (s)	15.1	15.1		13.7	12.9	13.3
Total Split (s)	30.0	30.0		20.0	35.0	20.0
Total Split (%)	28.6%	28.6%		19%	33%	19%
Yellow Time (s)	4.3	4.3		3.9	3.9	4.3
All-Red Time (s)	3.8	3.8		1.8	4.0	2.0
Lost Time Adjust (s)	0.0	0.0				
Total Lost Time (s)	8.1	8.1				
Lead/Lag	Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	Min	None
Act Effct Green (s)	12.4	12.4	17.4			
Actuated g/C Ratio	0.17	0.17	0.24			
v/c Ratio	0.52	0.52	0.59			
Control Delay	35.1	35.1	18.1			
Queue Delay	0.0	0.0	0.0			
Total Delay	35.1	35.1	18.1			
LOS	D	D	B			
Approach Delay		35.1				
Approach LOS		D				

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 71.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Future Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.8	26.0	26.0	15.6	26.0	15.1	14.4	14.0	15.1	14.0	15.8
Total Split (s)	40.0	59.0	59.0	31.0	50.0	25.0	18.0	20.0	25.0	27.0	40.0
Total Split (%)	29.6%	43.7%	43.7%	23.0%	37.0%	18.5%	13.3%	14.8%	18.5%	20.0%	29.6%
Yellow Time (s)	3.2	4.4	4.4	3.1	4.4	3.0	3.0	3.6	3.0	3.6	3.2
All-Red Time (s)	4.6	1.6	1.6	4.5	1.6	4.1	3.4	2.4	4.1	2.4	4.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	6.0	6.0	7.6	6.0	7.1	6.4	6.0	7.1	6.0	7.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	29.8	68.4	68.4	10.8	49.2	70.3	9.0	14.0	15.1	23.7	59.5
Actuated g/C Ratio	0.22	0.51	0.51	0.08	0.36	0.52	0.07	0.10	0.11	0.18	0.44
v/c Ratio	0.89	0.83	0.02	0.56	0.65	0.18	0.40	0.82	0.74	0.44	0.65
Control Delay	65.1	34.3	0.1	74.3	38.9	3.7	70.4	69.9	68.7	67.2	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	34.3	0.1	74.3	38.9	3.7	70.4	69.9	68.7	67.2	32.5
LOS	E	C	A	E	D	A	E	E	E	E	C
Approach Delay		43.5			37.0			70.0		49.0	
Approach LOS		D			D			E		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 110 (81%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 44.5	Intersection LOS: D
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

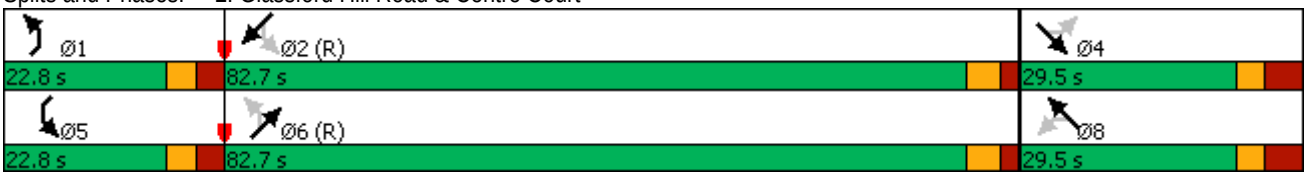
Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	3	32	837	56	685
Future Volume (vph)	1	1	3	32	837	56	685
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	17.1	17.1	17.1	10.9	35.6	10.9	35.6
Total Split (s)	29.5	29.5	29.5	22.8	82.7	22.8	82.7
Total Split (%)	21.9%	21.9%	21.9%	16.9%	61.3%	16.9%	61.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	4.1	2.9	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	5.9	5.6	5.9	5.6
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	110.4	106.9	112.2	109.6
Actuated g/C Ratio	0.07	0.07	0.07	0.82	0.79	0.83	0.81
v/c Ratio	0.01	0.18	0.33	0.06	0.23	0.12	0.18
Control Delay	58.0	24.6	22.1	4.2	13.8	2.1	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	24.6	22.1	4.2	13.8	2.1	3.4
LOS	E	C	C	A	B	A	A
Approach Delay		25.9	22.1		13.5		3.3
Approach LOS		C	C		B		A

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 60 (44%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

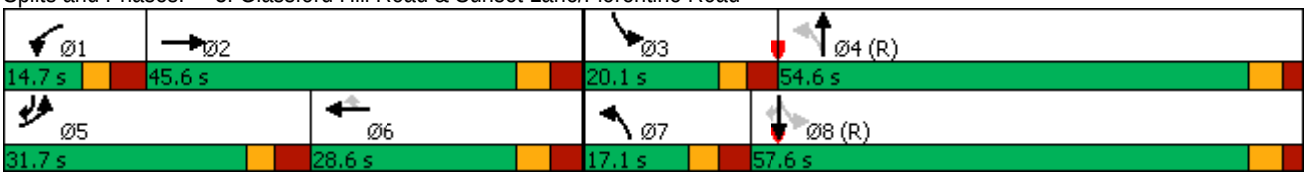
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	307	224	115	263	281	70	662	292	596	223
Future Volume (vph)	307	224	115	263	281	70	662	292	596	223
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6		7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	6	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.6	17.2	11.6	17.2	17.2	11.3	35.9	11.3	35.9	11.6
Total Split (s)	31.7	45.6	14.7	28.6	28.6	17.1	54.6	20.1	57.6	31.7
Total Split (%)	23.5%	33.8%	10.9%	21.2%	21.2%	12.7%	40.4%	14.9%	42.7%	23.5%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	3.6	3.0	3.6	3.0
All-Red Time (s)	3.6	3.7	3.6	3.7	3.7	3.3	2.3	3.3	2.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	7.2	6.6	7.2	7.2	6.3	5.9	6.3	5.9	6.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	18.5	39.1	10.3	30.8	30.8	49.5	41.3	64.7	53.5	77.9
Actuated g/C Ratio	0.14	0.29	0.08	0.23	0.23	0.37	0.31	0.48	0.40	0.58
v/c Ratio	0.71	0.30	0.48	0.67	0.57	0.23	0.55	0.88	0.32	0.24
Control Delay	63.9	34.7	65.6	56.1	17.3	20.7	46.6	67.4	39.4	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	34.7	65.6	56.1	17.3	20.7	46.6	67.4	39.4	14.3
LOS	E	C	E	E	B	C	D	E	D	B
Approach Delay		50.0		41.2			44.5		41.7	
Approach LOS		D		D			D		D	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 47 (35%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 43.9	Intersection LOS: D
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

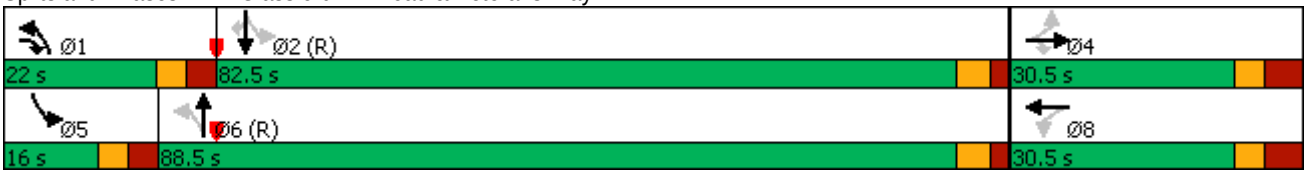
Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	79	6	148	9	7	166	1072	9	959	72
Future Volume (vph)	79	6	148	9	7	166	1072	9	959	72
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	17.2	17.2	11.2	17.2	17.2	11.2	35.7	11.2	35.7	35.7
Total Split (s)	30.5	30.5	22.0	30.5	30.5	22.0	88.5	16.0	82.5	82.5
Total Split (%)	22.6%	22.6%	16.3%	22.6%	22.6%	16.3%	65.6%	11.9%	61.1%	61.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	4.2	4.2	3.2	4.2	4.2	3.2	2.1	3.2	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	6.2	7.2	7.2	6.2	5.7	6.2	5.7	5.7
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.6	15.6	32.9	15.6	15.6	106.0	104.0	95.4	90.2	90.2
Actuated g/C Ratio	0.12	0.12	0.24	0.12	0.12	0.79	0.77	0.71	0.67	0.67
v/c Ratio	0.54	0.03	0.35	0.06	0.10	0.41	0.30	0.03	0.31	0.07
Control Delay	67.8	50.3	18.3	51.2	30.1	7.4	1.8	2.6	5.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	50.3	18.3	51.2	30.1	7.4	1.8	2.6	5.9	0.9
LOS	E	D	B	D	C	A	A	A	A	A
Approach Delay		36.0			36.9		2.5		5.6	
Approach LOS		D			D		A		A	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 104 (77%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

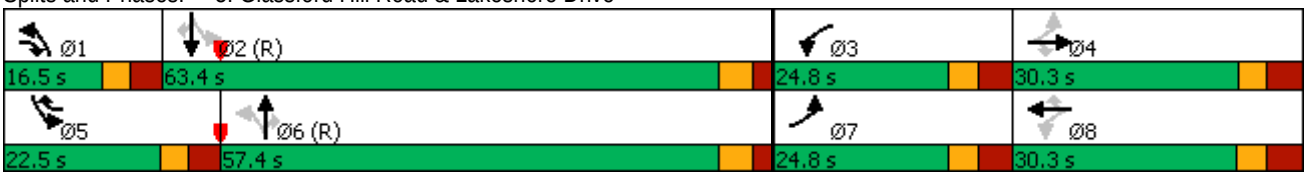
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	117	55	183	128	179	48	875	240	187	802	181
Future Volume (vph)	197	117	55	183	128	179	48	875	240	187	802	181
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.6	16.9	11.4	11.6	17.1	11.4	11.4	35.8	35.8	11.4	35.8	35.8
Total Split (s)	24.8	30.3	16.5	24.8	30.3	22.5	16.5	57.4	57.4	22.5	63.4	63.4
Total Split (%)	18.4%	22.4%	12.2%	18.4%	22.4%	16.7%	12.2%	42.5%	42.5%	16.7%	47.0%	47.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.2	3.0	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	3.6	3.9	3.4	3.6	3.9	3.4	3.4	2.2	2.2	3.4	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.9	6.4	6.6	7.1	6.4	6.4	5.8	5.8	6.4	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	35.9	18.3	32.5	34.0	17.2	37.0	68.6	61.9	61.9	79.9	69.8	69.8
Actuated g/C Ratio	0.27	0.14	0.24	0.25	0.13	0.27	0.51	0.46	0.46	0.59	0.52	0.52
v/c Ratio	0.59	0.50	0.14	0.54	0.59	0.38	0.15	0.41	0.30	0.56	0.33	0.22
Control Delay	42.9	60.4	5.3	41.3	65.1	17.0	12.7	20.3	2.5	19.5	20.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	60.4	5.3	41.3	65.1	17.0	12.7	20.3	2.5	19.5	20.1	8.8
LOS	D	E	A	D	E	B	B	C	A	B	C	A
Approach Delay		42.8			38.6			16.3			18.2	
Approach LOS		D			D			B			B	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 91 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

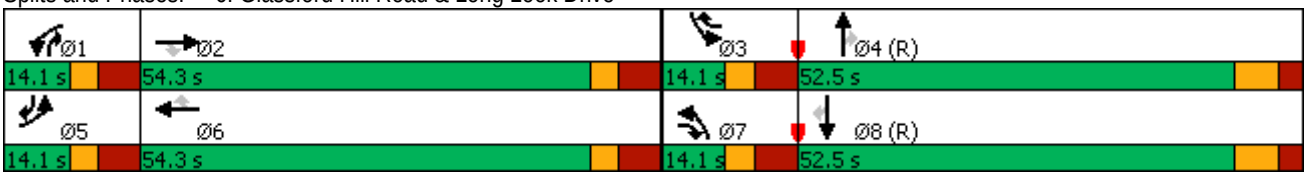
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	11	34	114	8	64	21	1130	181	61	893	28
Future Volume (vph)	26	11	34	114	8	64	21	1130	181	61	893	28
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	12.3	17.6	12.7	12.3	17.6	12.7	12.7	37.2	12.3	12.7	37.2	12.3
Total Split (s)	14.1	54.3	14.1	14.1	54.3	14.1	14.1	52.5	14.1	14.1	52.5	14.1
Total Split (%)	10.4%	40.2%	10.4%	10.4%	40.2%	10.4%	10.4%	38.9%	10.4%	10.4%	38.9%	10.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	4.3	4.6	4.7	4.3	4.6	4.7	4.7	2.7	4.3	4.7	2.7	4.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.6	7.7	7.3	7.6	7.7	7.7	7.2	7.3	7.7	7.2	7.3
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.4	10.0	13.4	9.8	10.0	15.0	6.4	88.0	105.0	8.0	92.2	111.8
Actuated g/C Ratio	0.09	0.07	0.10	0.07	0.07	0.11	0.05	0.65	0.78	0.06	0.68	0.83
v/c Ratio	0.09	0.09	0.15	0.50	0.07	0.27	0.14	0.37	0.16	0.33	0.28	0.02
Control Delay	55.7	59.9	1.4	67.6	59.4	6.5	74.9	6.1	0.5	62.8	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	59.9	1.4	67.6	59.4	6.5	74.9	6.1	0.5	62.8	8.9	0.0
LOS	E	E	A	E	E	A	E	A	A	E	A	A
Approach Delay		30.2			46.2			6.4			12.0	
Approach LOS		C			D			A			B	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 24 (18%), Referenced to phase 4:NBT and 8:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	113	1092	112	180	929
Future Volume (vph)	97	113	1092	112	180	929
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	16.3	16.3	37.0	37.0	10.9	37.0
Total Split (s)	43.3	43.3	64.1	64.1	27.6	91.7
Total Split (%)	32.1%	32.1%	47.5%	47.5%	20.4%	67.9%
Yellow Time (s)	3.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	3.3	3.3	2.0	2.0	2.9	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	7.0	7.0	5.9	7.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	15.3	15.3	88.6	88.6	107.5	106.4
Actuated g/C Ratio	0.11	0.11	0.66	0.66	0.80	0.79
v/c Ratio	0.53	0.43	0.51	0.11	0.50	0.36
Control Delay	65.1	13.2	28.5	11.2	8.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	13.2	28.5	11.2	8.1	4.9
LOS	E	B	C	B	A	A
Approach Delay	37.1		26.9			5.4
Approach LOS	D		C			A

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 9 (7%), Referenced to phase 2:SBTL and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

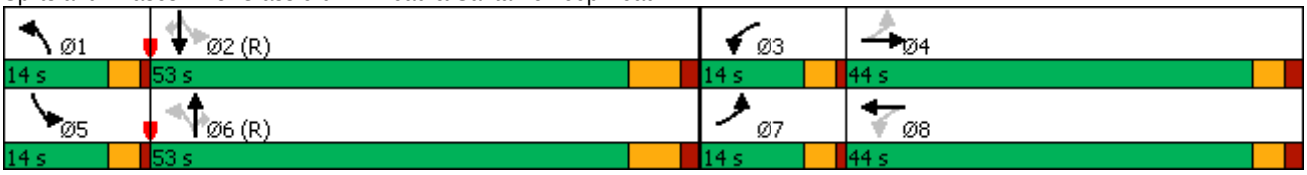
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations										
Traffic Volume (vph)	108	6	2	148	1055	2	16	1064	138	
Future Volume (vph)	108	6	2	148	1055	2	16	1064	138	
Turn Type	pm+pt	NA	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4	8	1	6		5	2		3
Permitted Phases	4			6		6	2		2	
Detector Phase	7	4	8	1	6	6	5	2	2	
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0	5.0
Minimum Split (s)	9.0	15.0	15.0	9.0	37.0	37.0	9.0	37.0	37.0	9.0
Total Split (s)	14.0	44.0	44.0	14.0	53.0	53.0	14.0	53.0	53.0	14.0
Total Split (%)	11.2%	35.2%	35.2%	11.2%	42.4%	42.4%	11.2%	42.4%	42.4%	11%
Yellow Time (s)	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None
Act Effct Green (s)	19.9	18.9	10.0	97.1	90.1	90.1	85.8	76.9	76.9	
Actuated g/C Ratio	0.16	0.15	0.08	0.78	0.72	0.72	0.69	0.62	0.62	
v/c Ratio	0.55	0.20	0.16	0.40	0.45	0.00	0.05	0.53	0.15	
Control Delay	55.6	15.4	25.1	7.1	9.4	0.0	5.4	16.4	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	15.4	25.1	7.1	9.4	0.0	5.4	16.4	2.5	
LOS	E	B	C	A	A	A	A	B	A	
Approach Delay		42.6	25.1		9.1			14.7		
Approach LOS		D	C		A			B		

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 125	
Offset: 44 (35%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 63.6%	ICU Level of Service B
Analysis Period (min) 15	

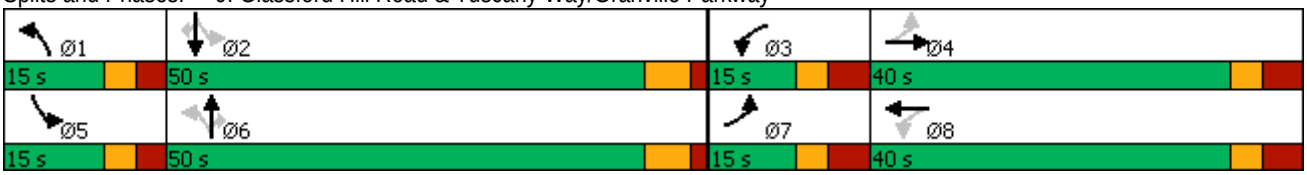
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	17	0	69	0	8	1074	50	78	1207	5
Future Volume (vph)	17	0	69	0	8	1074	50	78	1207	5
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.9	16.8	11.9	16.8	10.8	35.9	35.9	10.8	35.9	35.9
Total Split (s)	15.0	40.0	15.0	40.0	15.0	50.0	50.0	15.0	50.0	50.0
Total Split (%)	12.5%	33.3%	12.5%	33.3%	12.5%	41.7%	41.7%	12.5%	41.7%	41.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.9	3.8	3.9	3.8	2.8	1.6	1.6	2.8	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.8	6.9	6.8	5.8	5.9	5.9	5.8	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.6	10.5	14.9	13.4	50.4	47.8	47.8	56.1	56.2	56.2
Actuated g/C Ratio	0.14	0.13	0.18	0.16	0.61	0.58	0.58	0.68	0.68	0.68
v/c Ratio	0.08	0.07	0.31	0.11	0.03	0.57	0.06	0.26	0.55	0.00
Control Delay	28.3	0.3	31.6	0.4	8.1	18.7	0.1	9.4	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	0.3	31.6	0.4	8.1	18.7	0.1	9.4	12.7	0.0
LOS	C	A	C	A	A	B	A	A	B	A
Approach Delay		11.3		18.6		17.8			12.5	
Approach LOS		B		B		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

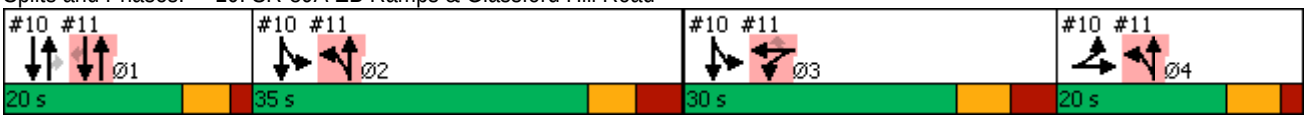
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	910	604	537	3	380		
Future Volume (vph)	1	910	604	537	3	380		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.7	13.7			12.9	15.1
Total Split (s)	20.0		20.0	20.0			35.0	30.0
Total Split (%)	19.0%		19.0%	19.0%			33%	29%
Yellow Time (s)	4.3		3.9	3.9			3.9	4.3
All-Red Time (s)	2.0		1.8	1.8			4.0	3.8
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.7	5.7				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes
Recall Mode	None		None	None			Min	None
Act Effct Green (s)	11.3	84.6	14.4	14.4	38.7	61.1		
Actuated g/C Ratio	0.13	1.00	0.17	0.17	0.46	0.72		
v/c Ratio	0.00	0.62	0.76	0.78	0.00	0.16		
Control Delay	35.0	1.9	41.9	11.6	5.0	1.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	35.0	1.9	41.9	11.6	5.0	1.1		
LOS	C	A	D	B	A	A		
Approach Delay			27.6			1.2		
Approach LOS			C			A		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 84.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

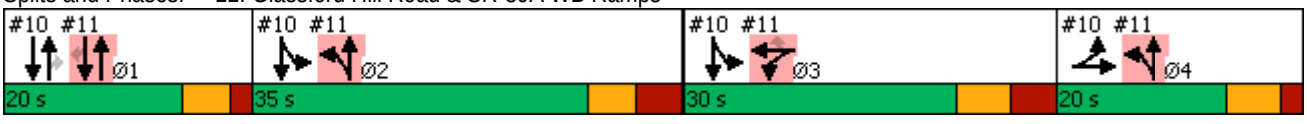
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	Ø1	Ø2	Ø4
Lane Configurations						
Traffic Volume (vph)	383	0	605			
Future Volume (vph)	383	0	605			
Turn Type	Split	NA	Prot			
Protected Phases	3	3	2 4	1	2	4
Permitted Phases						
Detector Phase	3	3	2 4			
Switch Phase						
Minimum Initial (s)	7.0	7.0		8.0	5.0	7.0
Minimum Split (s)	15.1	15.1		13.7	12.9	13.3
Total Split (s)	30.0	30.0		20.0	35.0	20.0
Total Split (%)	28.6%	28.6%		19%	33%	19%
Yellow Time (s)	4.3	4.3		3.9	3.9	4.3
All-Red Time (s)	3.8	3.8		1.8	4.0	2.0
Lost Time Adjust (s)	0.0	0.0				
Total Lost Time (s)	8.1	8.1				
Lead/Lag	Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	Min	None
Act Effct Green (s)	16.1	16.1	24.0			
Actuated g/C Ratio	0.19	0.19	0.28			
v/c Ratio	0.65	0.65	0.68			
Control Delay	42.5	42.5	23.2			
Queue Delay	0.0	0.0	0.0			
Total Delay	42.5	42.5	23.2			
LOS	D	D	C			
Approach Delay		42.5				
Approach LOS		D				

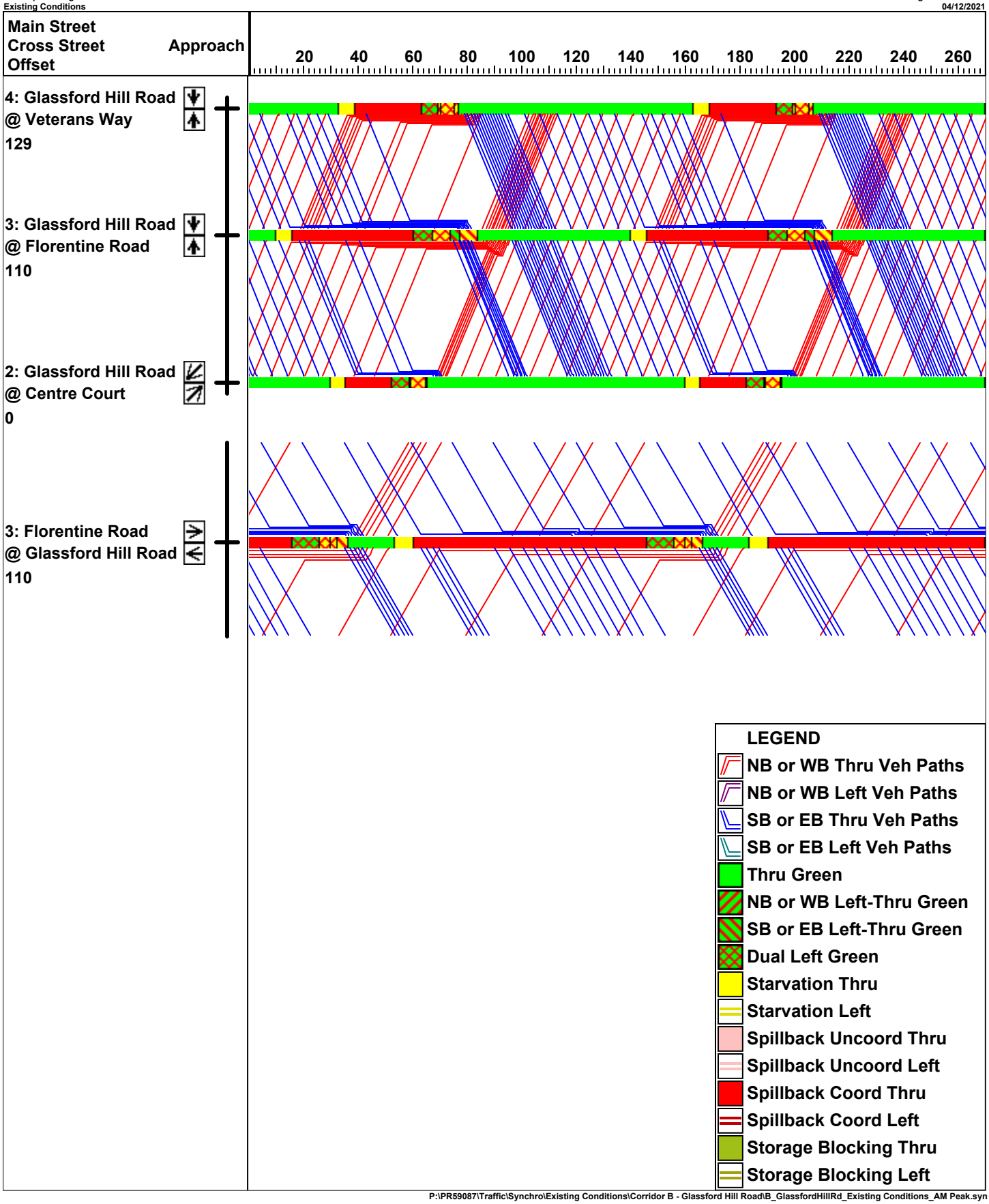
Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 84.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

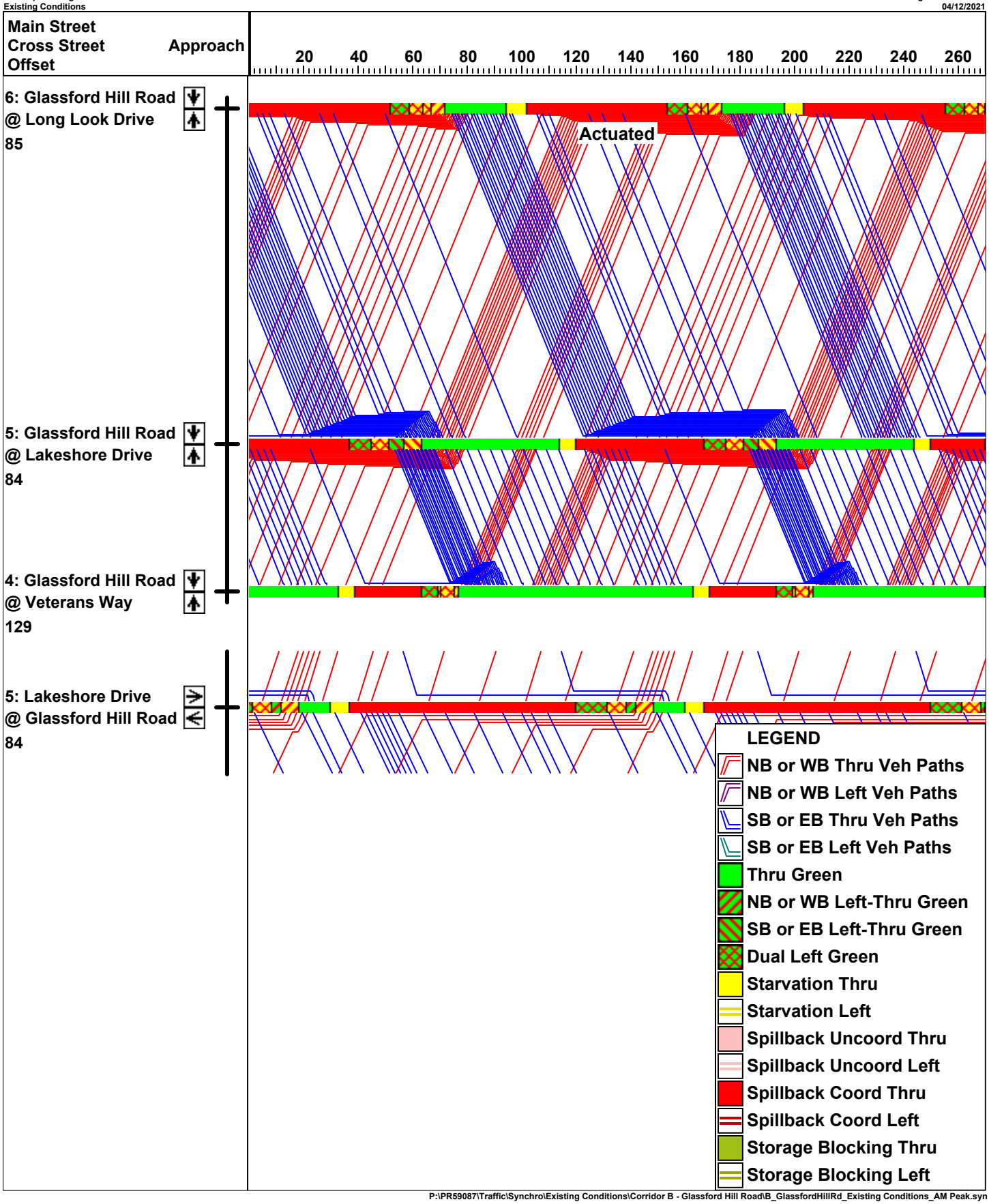
Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps

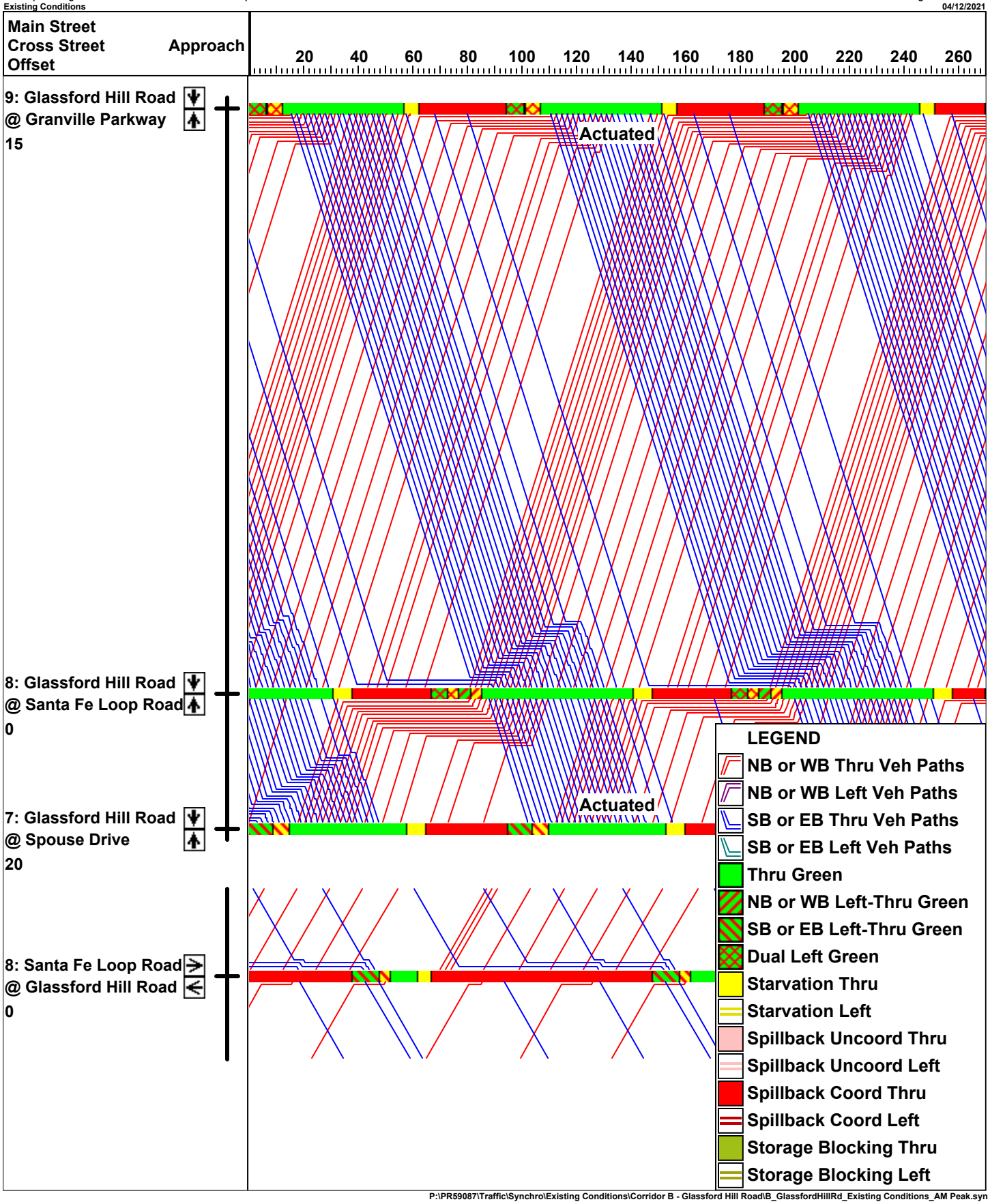


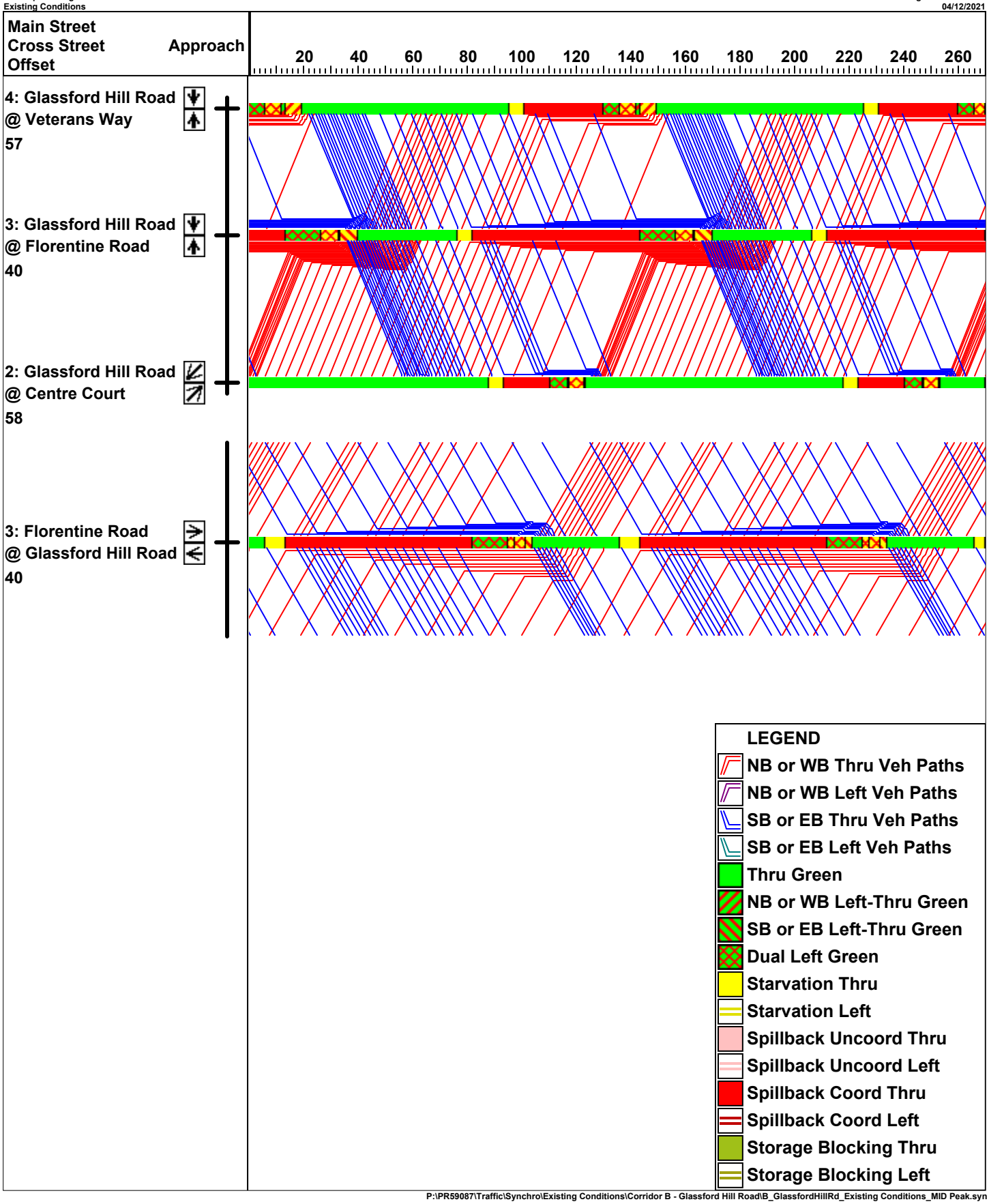
APPENDIX SS-11

Glassford Hill Road Existing Time-Space Diagrams


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
260
4: Glassford Hill Road
@ Veterans Way
129
3: Glassford Hill Road
@ Florentine Road
110
2: Glassford Hill Road
@ Centre Court
0
3: Florentine Road
@ Glassford Hill Road
110
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

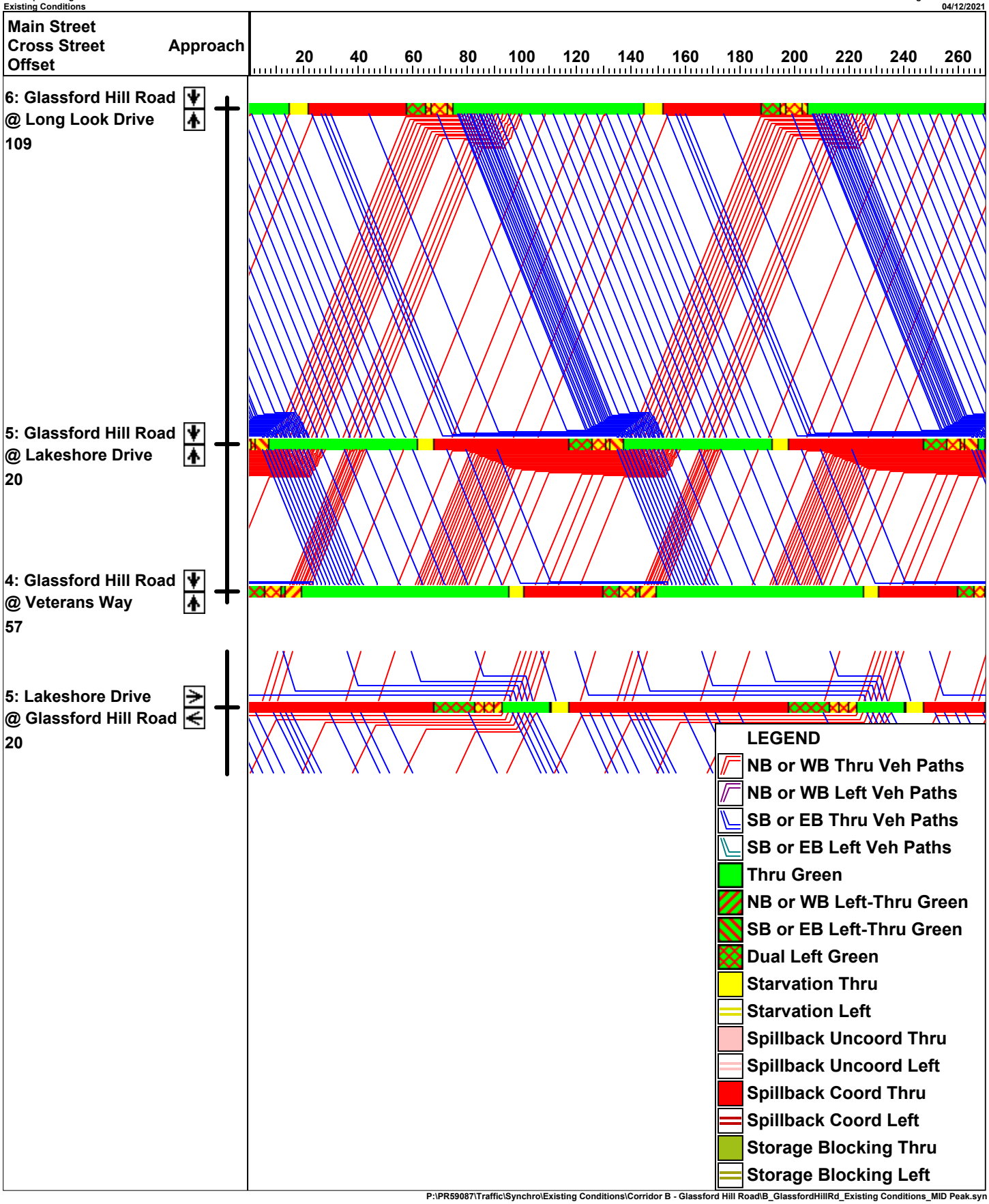

Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
6: Glassford Hill Road
@ Long Look Drive
85
Actuated
5: Glassford Hill Road
@ Lakeshore Drive
84
4: Glassford Hill Road
@ Veterans Way
129
5: Lakeshore Drive
@ Glassford Hill Road
84
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
9: Glassford Hill Road
@ Granville Parkway
15
Actuated
8: Glassford Hill Road
@ Santa Fe Loop Road
0
7: Glassford Hill Road
@ Spouse Drive
20
Actuated
8: Santa Fe Loop Road
@ Glassford Hill Road
0
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

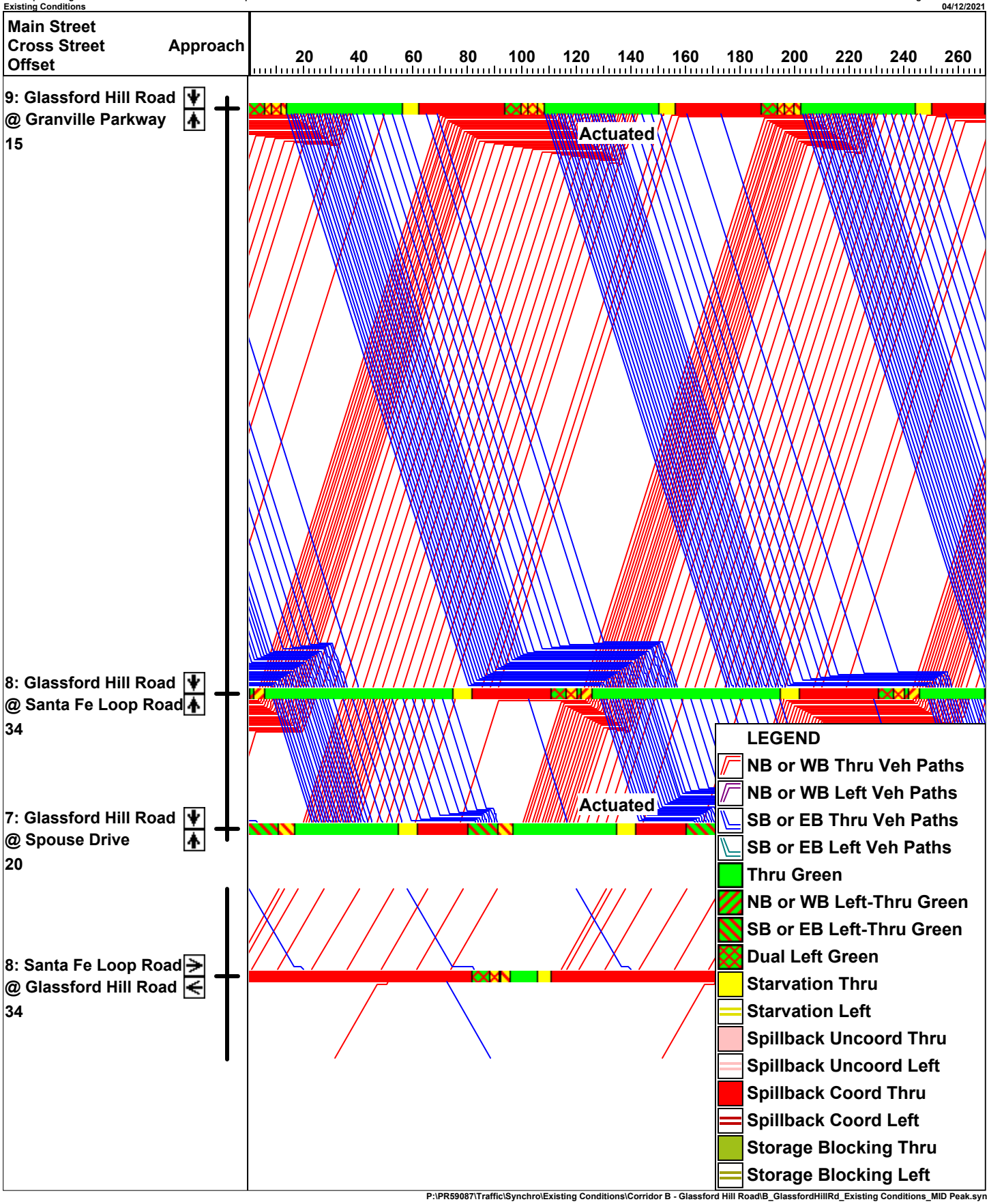

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
260
4: Glassford Hill Road
@ Veterans Way
57
3: Glassford Hill Road
@ Florentine Road
40
2: Glassford Hill Road
@ Centre Court
58
3: Florentine Road
@ Glassford Hill Road
40
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Glassford Hill Road & Lakeshore Drive
Existing Conditions

Timing Plan: Mid Peak
04/12/2021

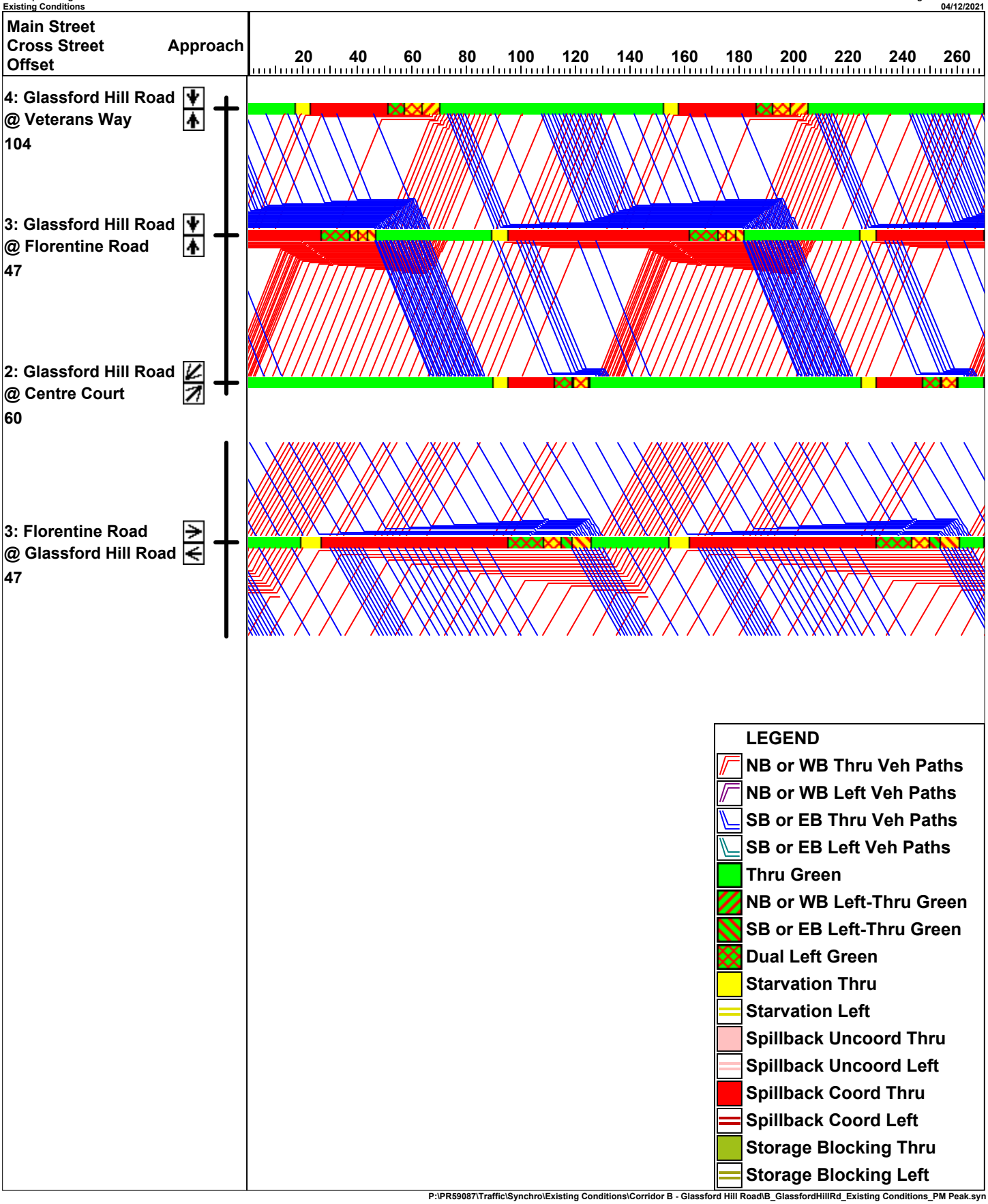


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Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
9: Glassford Hill Road
@ Granville Parkway
15
Actuated
8: Glassford Hill Road
@ Santa Fe Loop Road
34
Actuated
7: Glassford Hill Road
@ Spouse Drive
20
8: Santa Fe Loop Road
@ Glassford Hill Road
34
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Glassford Hill Road & Sunset Lane/Florentine Road
Existing Conditions

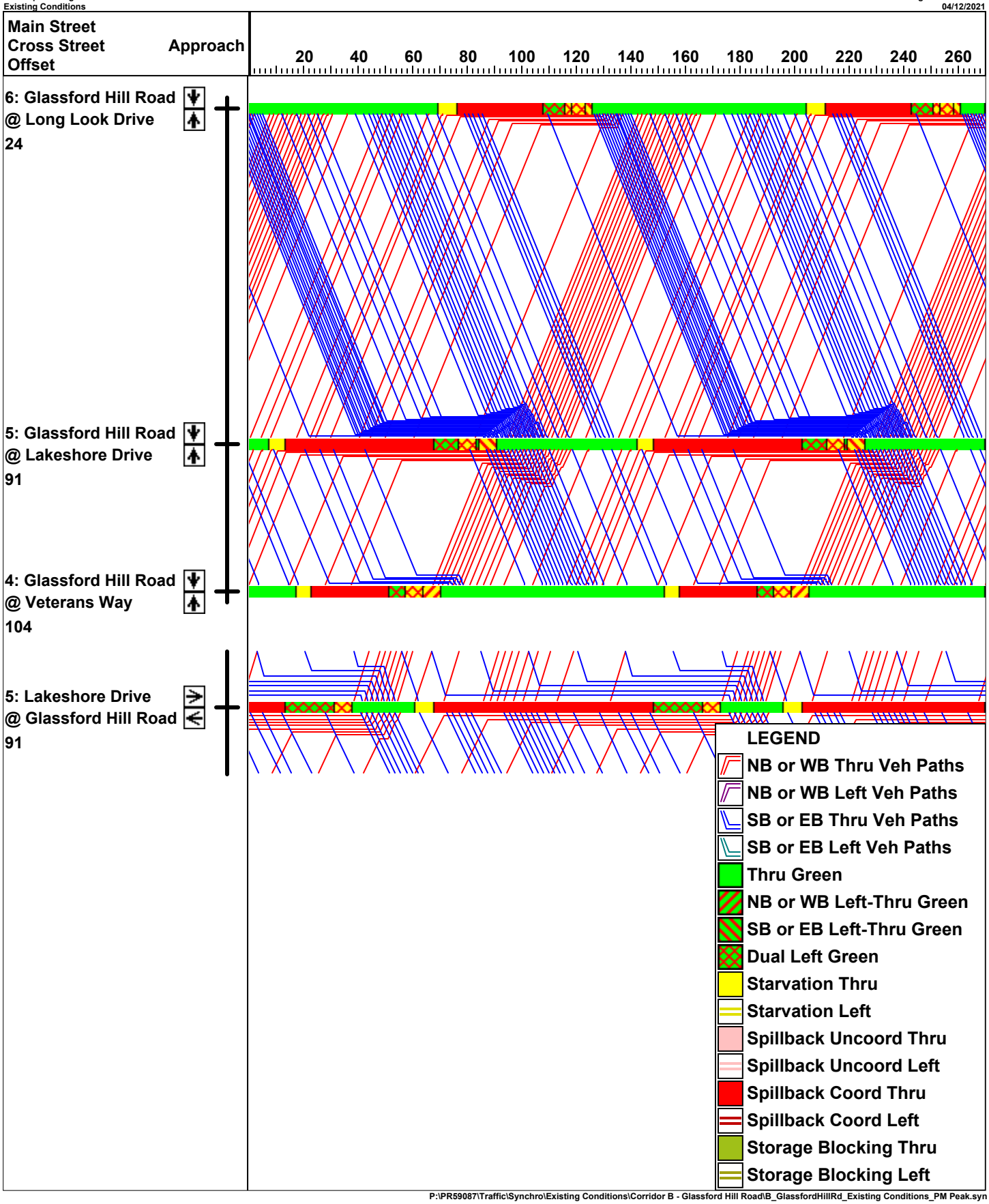
Timing Plan: PM Peak
04/12/2021



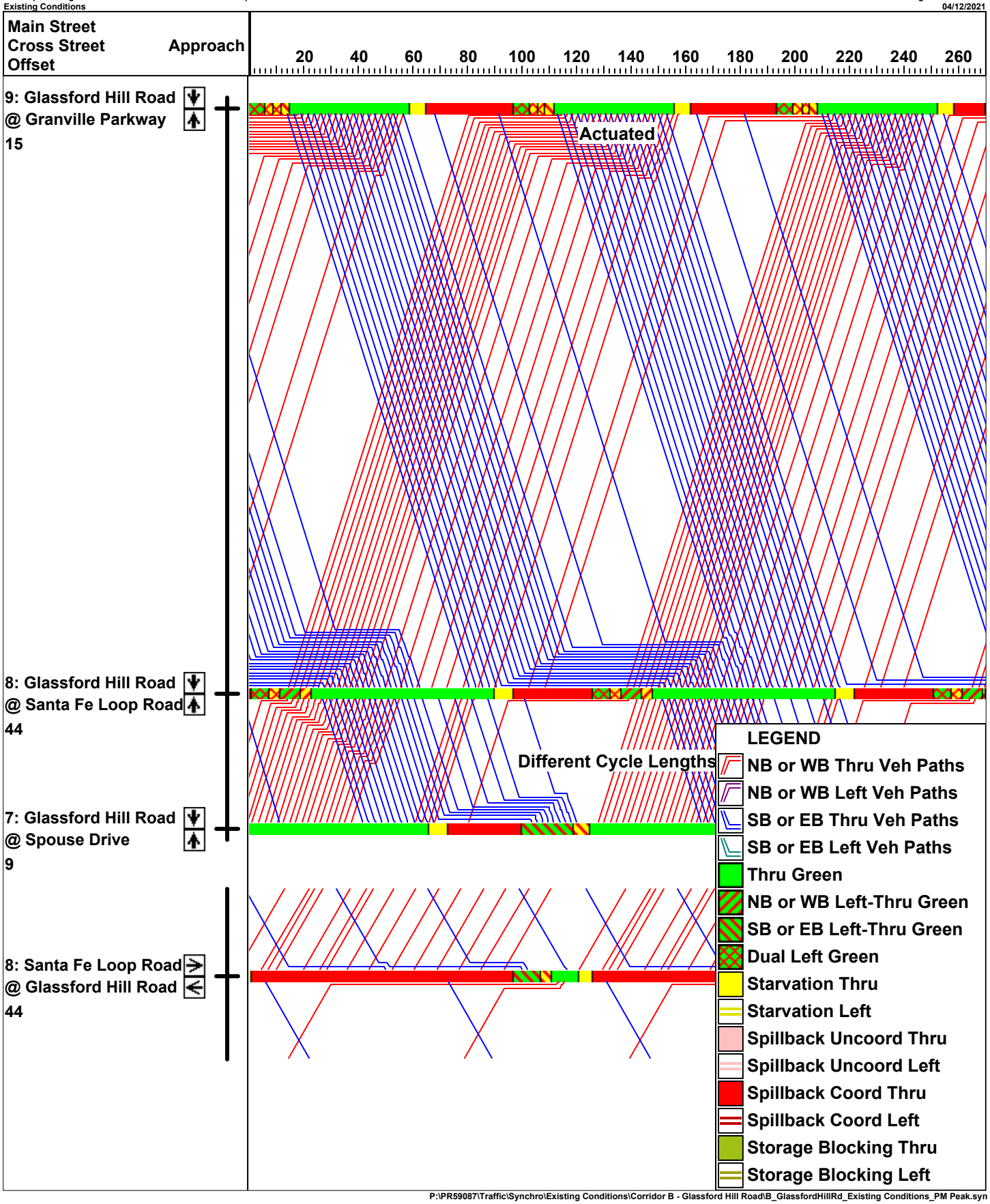
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Time-Space Diagram - Glassford Hill Road & Lakeshore Drive
Existing Conditions

Timing Plan: PM Peak
04/12/2021



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Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
260
9: Glassford Hill Road
@ Granville Parkway
15
Actuated
8: Glassford Hill Road
@ Santa Fe Loop Road
44
Different Cycle Lengths
7: Glassford Hill Road
@ Spouse Drive
9
8: Santa Fe Loop Road
@ Glassford Hill Road
44
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

APPENDIX SS-12

Glassford Hill Road Clearance and Pedestrian Interval Calculations

Street (NB/SB)	Street (WB/EB)	App-roach	Width (W)	Posted Approach Speed (v)	Assumed Speed for Comput-ations (v)	Change period (CP) [Y + R]	Calculated		Existing		Recommended	
							Yellow Interval (Y)	All-Red (R)	Yellow Interval (Y)	All-Red (R)	Yellow Interval (Y)	All-Red (R)
			ft	mph	mph	sec	sec	sec	sec	sec	sec	sec
Glassford Hill Road	SR 69	NB	105	-	35	6.1	3.6	2.5	3.6	2.4	3.6	2.5
		SB	105	35	35	6.1	3.6	2.5	3.6	2.4	3.6	2.5
		EB	95	45	45	6.1	4.4	1.8	4.4	1.6	4.4	1.8
		WB	95	45	45	6.1	4.4	1.8	4.4	1.6	4.4	1.8
Glassford Hill Road	Centre Court	NB	55	35	35	5.1	3.6	1.5	3.6	2.0	3.6	1.5
		SB	55	35	35	5.1	3.6	1.5	3.6	2.0	3.6	1.5
		EB	100	-	35	6.0	3.6	2.4	3.0	4.1	3.6	2.4
		WB	100	-	35	6.0	3.6	2.4	3.0	4.1	3.6	2.4
Glassford Hill Road	Florentine Road	NB	75	35	35	5.5	3.6	1.9	3.6	2.3	3.6	1.9
		SB	75	35	35	5.5	3.6	1.9	3.6	2.3	3.6	1.9
		EB	90	25	35	5.8	3.6	2.2	3.5	3.7	3.6	2.5
		WB	105	25	35	6.1	3.6	2.5	3.5	3.7	3.6	2.5
Glassford Hill Road	Veterans Way	NB	65	35	35	5.3	3.6	1.7	3.6	2.1	3.6	1.7
		SB	65	35	35	5.3	3.6	1.7	3.6	2.1	3.6	1.7
		EB	105	-	35	6.1	3.6	2.5	3.0	4.2	3.6	2.6
		WB	110	-	35	6.1	3.6	2.6	3.0	4.2	3.6	2.6
Glassford Hill Road	Lakeshore Drive	NB	75	35	35	5.5	3.6	1.9	3.6	2.2	3.6	1.9
		SB	70	35	35	5.4	3.6	1.8	3.6	2.2	3.6	1.9
		EB	115	-	35	6.2	3.6	2.7	3.0	3.9	3.6	2.7
		WB	115	30	35	6.2	3.6	2.7	3.2	3.9	3.6	2.7
Glassford Hill Road	Long Look Drive	NB	75	35	35	5.5	3.6	1.9	4.5	2.7	3.6	1.9
		SB	75	35	35	5.5	3.6	1.9	4.5	2.7	3.6	1.9
		EB	105	-	35	6.1	3.6	2.5	3.0	4.6	3.6	2.5
		WB	105	25	35	6.1	3.6	2.5	3.0	4.6	3.6	2.5
Glassford Hill Road	Spouse Drive	NB	55	45	45	5.5	4.4	1.2	5.0	2.0	4.4	1.2
		SB	55	45	45	5.5	4.4	1.2	5.0	2.0	4.4	1.2
		EB	85	25	35	5.7	3.6	2.1	3.0	3.3	3.6	2.1
		WB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Glassford Hill Road	Santa Fe Loop Road	NB	65	45	45	5.6	4.4	1.3	5.0	2.0	4.4	1.3
		SB	65	45	45	5.6	4.4	1.3	5.0	2.0	4.4	1.3
		EB	90	25	35	5.8	3.6	2.2	3.0	2.0	3.6	2.2
		WB	90	-	35	5.8	3.6	2.2	2.0	2.0	3.6	2.2
Glassford Hill Road	Granville Parkway/ Tuscany Way	NB	70	45	45	5.7	4.4	1.4	4.3	1.6	4.4	1.4
		SB	70	45	45	5.7	4.4	1.4	4.3	1.6	4.4	1.4
		EB	115	25	35	6.2	3.6	2.7	3.0	3.8	3.6	2.7
		WB	115	25	35	6.2	3.6	2.7	3.0	3.8	3.6	2.7
Glassford Hill Road	SR 89A EB Ramps	NB	45	40	40	5.1	4.0	1.2	3.9	1.8	4.0	1.2
		SB	50	-	40	5.2	4.0	1.2	3.9	1.8	4.0	1.2
		EB	110	65	40	6.2	4.0	2.3	4.3	2.0	4.0	2.3
		WB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Glassford Hill Road	SR 89A WB Ramps	NB	50	40	40	5.2	4.0	1.2	3.9	1.8	4.0	1.2
		SB	45	-	40	5.1	4.0	1.2	3.9	1.8	4.0	1.2
		EB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		WB	110	65	40	6.2	4.0	2.3	4.3	3.8	4.0	2.3

Assumptions:

1. Equation used to compute all-red and yellow clearance intervals <https://ops.fhwa.dot.gov/publications/fhwahop08024/chapter5.htm#5.3>.
2. Although values will vary by driver population and local conditions, the following values are often cited for use in Equation 5-3:

t = 1.0 s

a = 10 ft/s^2

L_v = 20 ft

3. Intersection width is the distance between prolongations of the curb lines (to nearest 5 feet)
4. Intersection widths at Glassford Hill Road and Long Look Drive were assumed; measurement should be confirmed before implementation

$$CP = \left[t + \frac{1.47v}{2(a + 32.2g)} \right] + \left[\frac{W + L_v}{1.47v} \right]$$

where:

CP = change period (yellow change plus red clearance intervals), s;
t = perception-reaction time to the onset of a yellow indication, s;
v = approach speed, mph;
a = deceleration rate in response to the onset of a yellow indication;
g = grade, with uphill positive and downhill negative (percent grade / 100), ft/ft;
W = width of intersection, ft; and
L_v = length of vehicle.

Street (NB/SB)	Street (WB/EB)	Leg	Crosswalk Width (W)	Walk	FDW	Recommended (excludes Yellow + All Red)
			ft	sec	sec	sec
Glassford Hill Road	SR 69	N	95	7	28	22
		S	90	7	26	20
		E	115	7	33	27
		W	115	7	33	27
Glassford Hill Road	Centre Court	N	120	7	35	30
		S	115	7	33	28
		E	50	7	15	9
		W	50	7	15	9
Glassford Hill Road	Florentine Road	N	100	7	29	24
		S	120	7	35	30
		E	90	7	26	20
		W	85	7	25	19
Glassford Hill Road	Veterans Way	N	115	7	33	28
		S	130	7	38	33
		E	75	7	22	16
		W	75	7	22	16
Glassford Hill Road	Lakeshore Drive	N	130	7	38	33
		S	130	7	38	33
		E	90	7	26	20
		W	75	7	22	16
Glassford Hill Road	Long Look Drive	N	130	7	38	33
		S	130	7	38	33
		E	70	7	20	14
		W	70	7	20	14
Glassford Hill Road	Spouse Drive	N	N/A	N/A	N/A	N/A
		S	95	7	28	23
		E	N/A		N/A	N/A
		W	65	7	19	19
Glassford Hill Road	Santa Fe Loop Road	N	110	7	32	27
		S	110	7	32	27
		E	70	7	20	15
		W	75	7	22	17
Glassford Hill Road	Granville Parkway	N	125	7	36	31
		S	125	7	36	31
		E	75	7	22	16
		W	75	7	22	16
Glassford Hill Road	SR 89A EB Ramps	N	150	7	43	38
		S	N/A	N/A	N/A	N/A
		E	60	7	18	12
		W	N/A	N/A	N/A	N/A

Glassford Hill Road	SR 89A WB Ramps	N	N/A	N/A	N/A	N/A
		S	160	7	46	41
		E	50	7	15	15
		W	N/A	N/A	N/A	N/A

Assumptions:

1. Crosswalk length measured from center of curb ramp to center of curb ramp (to nearest 5 feet)
2. Assumed pedestrian speed:

v = 3.5 ft/s

3. Crosswalk widths at Glassford Hill Road and Long Look Drive were assumed; measurement should be confirmed before implementation

APPENDIX SS-13

Glassford Hill Road Optimized Plans Delay and Capacity Analysis Results

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Future Volume (vph)	290	661	16	39	1294	154	18	52	153	114	405
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	34.0	70.0	70.0	15.0	51.0	17.0	15.0	18.0	17.0	20.0	34.0
Total Split (%)	28.3%	58.3%	58.3%	12.5%	42.5%	14.2%	12.5%	15.0%	14.2%	16.7%	28.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	C-Min	None	None	C-Min	None	None	None	None	None	None	C-Min
Act Effct Green (s)	26.3	61.2	61.2	17.8	52.6	68.6	8.0	9.5	9.8	16.9	49.3
Actuated g/C Ratio	0.22	0.51	0.51	0.15	0.44	0.57	0.07	0.08	0.08	0.14	0.41
v/c Ratio	0.42	0.40	0.02	0.16	0.63	0.17	0.17	0.29	0.59	0.47	0.60
Control Delay	43.8	18.5	0.1	53.4	28.1	2.4	56.4	38.1	50.7	46.6	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	18.5	0.1	53.4	28.1	2.4	56.4	38.1	50.7	46.6	28.6
LOS	D	B	A	D	C	A	E	D	D	D	C
Approach Delay		25.8			26.1			41.6		36.7	
Approach LOS		C			C			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 1:EBL and 5:WBL, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	3	32	437	56	660
Future Volume (vph)	1	1	3	32	437	56	660
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	16.0	16.0	16.0	10.1	35.1	10.1	35.1
Total Split (s)	20.0	20.0	20.0	21.0	77.0	23.0	79.0
Total Split (%)	16.7%	16.7%	16.7%	17.5%	64.2%	19.2%	65.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.4	2.4	2.4	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.1	5.1	5.1	5.1
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	97.7	93.9	99.3	96.4
Actuated g/C Ratio	0.08	0.08	0.08	0.81	0.78	0.83	0.80
v/c Ratio	0.01	0.17	0.31	0.06	0.12	0.08	0.18
Control Delay	51.0	22.2	19.8	1.2	3.0	0.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	22.2	19.8	1.2	3.0	0.9	1.4
LOS	D	C	B	A	A	A	A
Approach Delay		23.2	19.8		2.9		1.4
Approach LOS		C	B		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

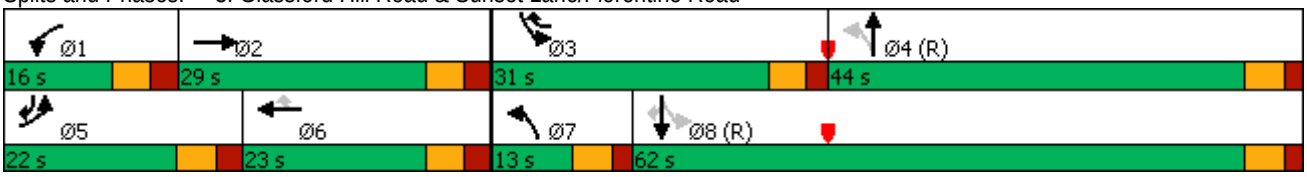
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	133	108	65	66	187	16	363	204	573	45
Future Volume (vph)	133	108	65	66	187	16	363	204	573	45
Turn Type	Prot	NA	Prot	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	3	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	11.1	16.1	10.5	10.5	35.5	10.5	35.5	11.1
Total Split (s)	22.0	29.0	16.0	23.0	31.0	13.0	44.0	31.0	62.0	22.0
Total Split (%)	18.3%	24.2%	13.3%	19.2%	25.8%	10.8%	36.7%	25.8%	51.7%	18.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	5.5	5.5	5.5	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	10.9	14.4	7.9	12.3	26.5	71.5	65.5	82.4	77.6	95.2
Actuated g/C Ratio	0.09	0.12	0.07	0.10	0.22	0.60	0.55	0.69	0.65	0.79
v/c Ratio	0.47	0.35	0.31	0.38	0.40	0.03	0.16	0.34	0.19	0.04
Control Delay	56.6	39.9	56.7	55.5	6.7	4.2	5.8	7.0	6.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	39.9	56.7	55.5	6.7	4.2	5.8	7.0	6.3	0.1
LOS	E	D	E	E	A	A	A	A	A	A
Approach Delay		48.0		27.1			5.7		6.1	
Approach LOS		D		C			A		A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 46 (38%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 68.1%	ICU Level of Service C
Analysis Period (min) 15	

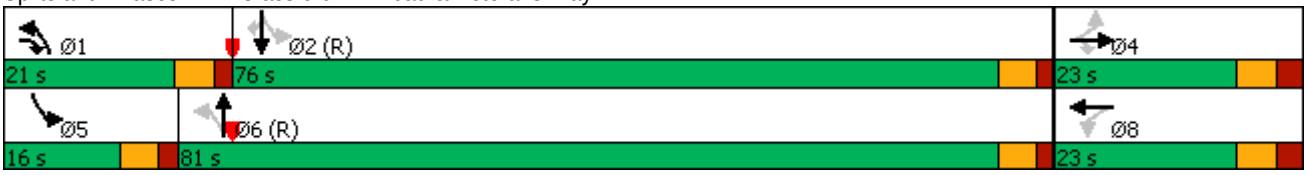
Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	52	5	61	9	5	52	621	9	813	55
Future Volume (vph)	52	5	61	9	5	52	621	9	813	55
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	16.2	16.2	10.3	16.2	16.2	10.3	35.3	10.3	35.3	35.3
Total Split (s)	23.0	23.0	21.0	23.0	23.0	21.0	81.0	16.0	76.0	76.0
Total Split (%)	19.2%	19.2%	17.5%	19.2%	19.2%	17.5%	67.5%	13.3%	63.3%	63.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.6	2.6	1.7	2.6	2.6	1.7	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	5.3	6.2	6.2	5.3	5.3	5.3	5.3	5.3
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	12.6	12.6	21.9	12.6	12.6	98.3	97.9	94.2	90.7	90.7
Actuated g/C Ratio	0.10	0.10	0.18	0.10	0.10	0.82	0.82	0.78	0.76	0.76
v/c Ratio	0.39	0.03	0.19	0.07	0.09	0.11	0.17	0.02	0.23	0.05
Control Delay	57.2	46.4	9.9	47.7	28.6	2.7	3.2	1.1	2.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	46.4	9.9	47.7	28.6	2.7	3.2	1.1	2.1	0.5
LOS	E	D	A	D	C	A	A	A	A	A
Approach Delay		32.4			35.9		3.2		1.9	
Approach LOS		C			D		A		A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 45 (38%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

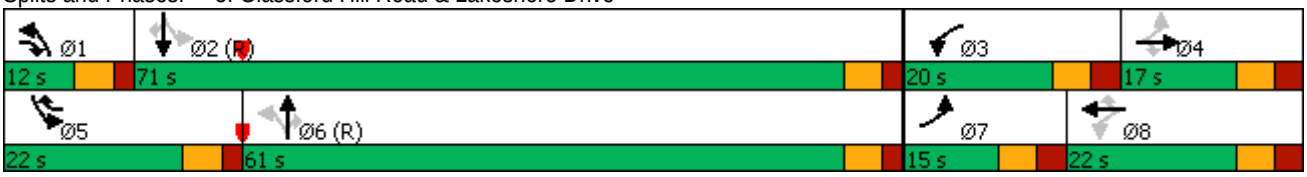
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	25	29	173	93	344	31	565	87	229	675	105
Future Volume (vph)	60	25	29	173	93	344	31	565	87	229	675	105
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.3	16.3	10.5	11.3	16.3	10.5	10.5	35.5	35.5	10.5	35.5	35.5
Total Split (s)	15.0	17.0	12.0	20.0	22.0	22.0	12.0	61.0	61.0	22.0	71.0	71.0
Total Split (%)	12.5%	14.2%	10.0%	16.7%	18.3%	18.3%	10.0%	50.8%	50.8%	18.3%	59.2%	59.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.7	2.7	1.9	2.7	2.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.5	6.3	6.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.1	10.3	16.5	29.0	16.2	35.7	67.0	60.6	60.6	79.1	69.5	69.5
Actuated g/C Ratio	0.13	0.09	0.14	0.24	0.14	0.30	0.56	0.50	0.50	0.66	0.58	0.58
v/c Ratio	0.33	0.17	0.10	0.56	0.40	0.58	0.08	0.24	0.11	0.45	0.25	0.12
Control Delay	39.6	53.4	0.6	43.2	51.1	14.3	7.3	12.6	2.1	12.2	8.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	53.4	0.6	43.2	51.1	14.3	7.3	12.6	2.1	12.2	8.5	0.7
LOS	D	D	A	D	D	B	A	B	A	B	A	A
Approach Delay		32.6			28.1			11.0			8.5	
Approach LOS		C			C			B			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 119 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

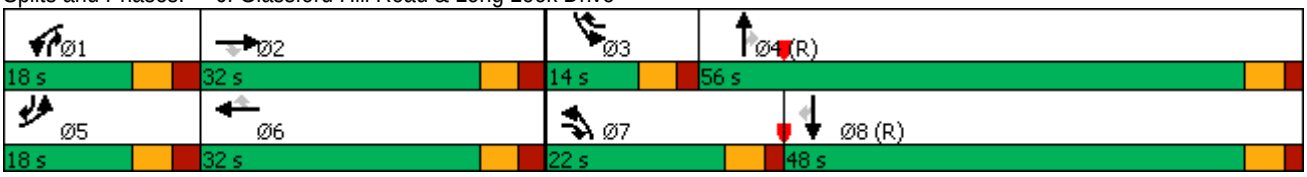
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	95	207	147	201	82	207	579	66	78	902	268
Future Volume (vph)	122	95	207	147	201	82	207	579	66	78	902	268
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	10.5	11.1	16.1	10.5	10.5	35.5	11.1	10.5	35.5	11.1
Total Split (s)	18.0	32.0	22.0	18.0	32.0	14.0	22.0	56.0	18.0	14.0	48.0	18.0
Total Split (%)	15.0%	26.7%	18.3%	15.0%	26.7%	11.7%	18.3%	46.7%	15.0%	11.7%	40.0%	15.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	1.9	2.5	2.5	1.9	1.9	1.9	2.5	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	5.5	6.1	6.1	5.5	5.5	5.5	6.1	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.8	20.0	39.2	10.5	20.7	34.7	13.1	58.4	74.4	7.9	53.2	68.5
Actuated g/C Ratio	0.08	0.17	0.33	0.09	0.17	0.29	0.11	0.49	0.62	0.07	0.44	0.57
v/c Ratio	0.47	0.33	0.40	0.53	0.68	0.16	0.60	0.25	0.07	0.38	0.43	0.29
Control Delay	58.0	45.8	20.7	58.9	57.0	2.3	52.5	18.8	4.3	61.3	18.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	45.8	20.7	58.9	57.0	2.3	52.5	18.8	4.3	61.3	18.6	1.7
LOS	E	D	C	E	E	A	D	B	A	E	B	A
Approach Delay		37.1			47.2			25.9			17.7	
Approach LOS		D			D			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 62 (52%), Referenced to phase 4:NBT and 8:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	226	297	749	28	84	1148
Future Volume (vph)	226	297	749	28	84	1148
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	15.7	15.7	35.6	35.6	10.6	35.6
Total Split (s)	43.0	43.0	63.0	63.0	14.0	77.0
Total Split (%)	35.8%	35.8%	52.5%	52.5%	11.7%	64.2%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.6	5.6	5.6	5.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	24.9	24.9	70.6	70.6	83.8	83.8
Actuated g/C Ratio	0.21	0.21	0.59	0.59	0.70	0.70
v/c Ratio	0.67	0.62	0.39	0.03	0.21	0.50
Control Delay	52.2	16.6	10.9	2.8	3.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	16.6	10.9	2.8	3.6	3.4
LOS	D	B	B	A	A	A
Approach Delay	32.0		10.6			3.5
Approach LOS	C		B			A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:SBTL and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

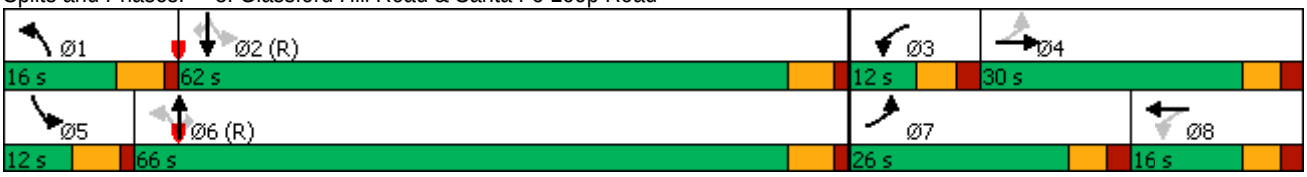
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations										
Traffic Volume (vph)	254	39	0	129	910	7	7	1201	52	
Future Volume (vph)	254	39	0	129	910	7	7	1201	52	
Turn Type	pm+pt	NA	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4	8	1	6		5	2		3
Permitted Phases	4			6		6	2		2	
Detector Phase	7	4	8	1	6	6	5	2	2	
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0	5.0
Minimum Split (s)	10.8	15.8	15.8	10.7	35.7	35.7	10.7	35.7	35.7	10.8
Total Split (s)	26.0	30.0	16.0	16.0	66.0	66.0	12.0	62.0	62.0	12.0
Total Split (%)	21.7%	25.0%	13.3%	13.3%	55.0%	55.0%	10.0%	51.7%	51.7%	10%
Yellow Time (s)	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4	3.6
All-Red Time (s)	2.2	2.2	2.2	1.3	1.3	1.3	1.3	1.3	1.3	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None
Act Effct Green (s)	32.2	32.2	10.0	76.0	73.9	73.9	67.2	61.5	61.5	
Actuated g/C Ratio	0.27	0.27	0.08	0.63	0.62	0.62	0.56	0.51	0.51	
v/c Ratio	0.75	0.16	0.17	0.61	0.45	0.01	0.02	0.72	0.06	
Control Delay	50.2	20.5	1.2	36.3	9.5	0.0	5.3	22.4	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.2	20.5	1.2	36.3	9.5	0.0	5.3	22.4	0.3	
LOS	D	C	A	D	A	A	A	C	A	
Approach Delay		43.8	1.2		12.8			21.4		
Approach LOS		D	A		B			C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 95 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

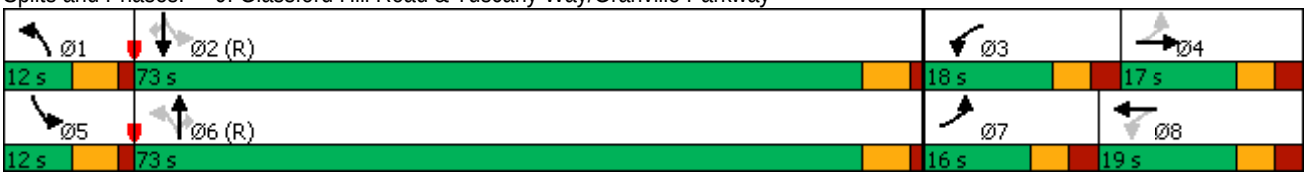
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	12	0	90	0	27	1143	22	21	1085	18
Future Volume (vph)	12	0	90	0	27	1143	22	21	1085	18
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.3	16.3	11.3	16.3	10.8	35.8	35.8	10.8	35.8	35.8
Total Split (s)	16.0	17.0	18.0	19.0	12.0	73.0	73.0	12.0	73.0	73.0
Total Split (%)	13.3%	14.2%	15.0%	15.8%	10.0%	60.8%	60.8%	10.0%	60.8%	60.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.4	10.0	16.1	11.1	88.0	84.1	84.1	87.8	84.1	84.1
Actuated g/C Ratio	0.07	0.08	0.13	0.09	0.73	0.70	0.70	0.73	0.70	0.70
v/c Ratio	0.10	0.04	0.45	0.28	0.09	0.50	0.02	0.08	0.48	0.02
Control Delay	47.1	0.2	51.7	1.9	8.4	15.0	0.0	3.7	7.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	0.2	51.7	1.9	8.4	15.0	0.0	3.7	7.5	0.0
LOS	D	A	D	A	A	B	A	A	A	A
Approach Delay		25.6		26.1		14.6			7.3	
Approach LOS		C		C		B			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 19 (16%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

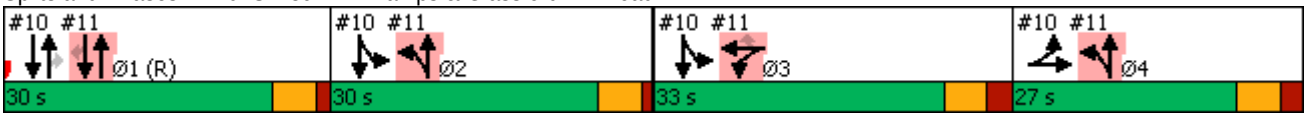
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	587	1016	235	3	537		
Future Volume (vph)	1	587	1016	235	3	537		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.2	13.2			10.2	13.3
Total Split (s)	27.0		30.0	30.0			30.0	33.0
Total Split (%)	22.5%		25.0%	25.0%			25%	28%
Yellow Time (s)	4.0		4.0	4.0			4.0	4.0
All-Red Time (s)	2.3		1.2	1.2			1.2	2.3
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.2	5.2				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None		C-Min	C-Min			Min	None
Act Effct Green (s)	19.7	120.0	27.3	27.3	56.3	88.8		
Actuated g/C Ratio	0.16	1.00	0.23	0.23	0.47	0.74		
v/c Ratio	0.00	0.40	0.95	0.46	0.00	0.22		
Control Delay	41.0	0.8	70.4	21.0	8.7	3.1		
Queue Delay	0.0	0.0	43.8	0.0	0.0	0.2		
Total Delay	41.0	0.8	114.2	21.0	8.7	3.3		
LOS	D	A	F	C	A	A		
Approach Delay			96.7			3.4		
Approach LOS			F			A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 31 (26%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 51.8	Intersection LOS: D
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

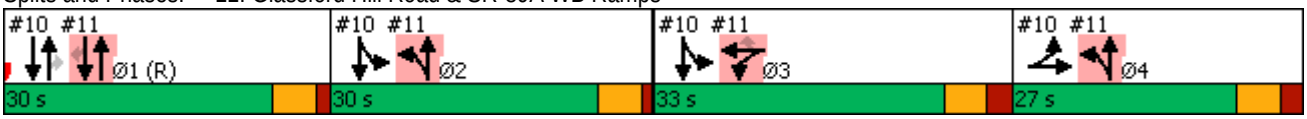
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	NBT	SBT	Ø2	Ø4
Lane Configurations							
Traffic Volume (vph)	539	2	1015	2	1		
Future Volume (vph)	539	2	1015	2	1		
Turn Type	Split	NA	Prot	NA	NA		
Protected Phases	3	3	2 4	1 2 4	1	2	4
Permitted Phases							
Detector Phase	3	3	2 4	1 2 4	1		
Switch Phase							
Minimum Initial (s)	7.0	7.0			8.0	5.0	7.0
Minimum Split (s)	13.3	13.3			13.2	10.2	13.3
Total Split (s)	33.0	33.0			30.0	30.0	27.0
Total Split (%)	27.5%	27.5%			25.0%	25%	23%
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.3	2.3			1.2	1.2	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	6.3	6.3			5.2		
Lead/Lag	Lead	Lead			Lead	Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None			C-Min	Min	None
Act Effct Green (s)	25.2	25.2	45.6	83.3	27.3		
Actuated g/C Ratio	0.21	0.21	0.38	0.69	0.23		
v/c Ratio	0.83	0.83	0.85	0.00	0.00		
Control Delay	65.4	65.7	48.7	0.0	38.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	65.4	65.7	48.7	0.0	38.0		
LOS	E	E	D	A	D		
Approach Delay		65.6		48.7	38.0		
Approach LOS		E		D	D		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 31 (26%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 54.5	Intersection LOS: D
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Future Volume (vph)	463	1025	15	54	837	109	32	153	195	98	343
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	35.0	63.0	63.0	17.0	45.0	20.0	15.0	20.0	20.0	25.0	35.0
Total Split (%)	29.2%	52.5%	52.5%	14.2%	37.5%	16.7%	12.5%	16.7%	16.7%	20.8%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	C-Min	None	None	C-Min	None	None	None	None	None	None	C-Min
Act Effct Green (s)	30.5	53.9	53.9	18.9	42.3	60.0	8.2	11.1	11.5	20.0	56.6
Actuated g/C Ratio	0.25	0.45	0.45	0.16	0.35	0.50	0.07	0.09	0.10	0.17	0.47
v/c Ratio	0.58	0.70	0.02	0.21	0.51	0.14	0.29	0.66	0.65	0.34	0.46
Control Delay	43.2	29.0	0.1	51.1	31.9	1.9	59.6	52.6	40.5	36.7	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	29.0	0.1	51.1	31.9	1.9	59.6	52.6	40.5	36.7	16.2
LOS	D	C	A	D	C	A	E	D	D	D	B
Approach Delay		33.1			29.7			53.6		26.8	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 1:EBL and 5:WBL, Start of Green, Master Intersection	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 32.4	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

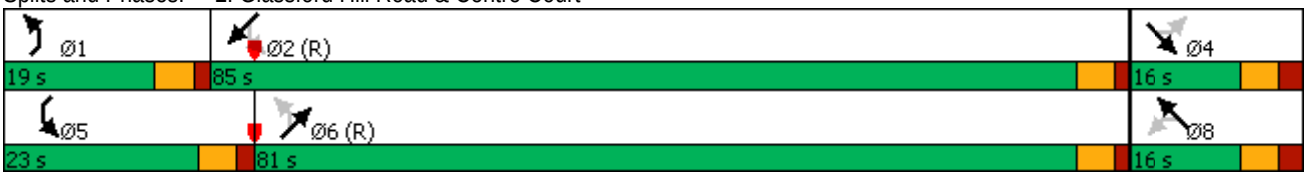
Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	2	24	678	42	595
Future Volume (vph)	1	1	2	24	678	42	595
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	16.0	16.0	16.0	10.1	35.1	10.1	35.1
Total Split (s)	16.0	16.0	16.0	19.0	81.0	23.0	85.0
Total Split (%)	13.3%	13.3%	13.3%	15.8%	67.5%	19.2%	70.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.4	2.4	2.4	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.1	5.1	5.1	5.1
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	97.8	94.1	99.2	96.5
Actuated g/C Ratio	0.08	0.08	0.08	0.82	0.78	0.83	0.80
v/c Ratio	0.01	0.13	0.24	0.04	0.19	0.08	0.16
Control Delay	51.0	24.2	20.5	0.5	0.8	1.2	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	24.2	20.5	0.5	0.8	1.2	2.4
LOS	D	C	C	A	A	A	A
Approach Delay		25.6	20.5		0.8		2.4
Approach LOS		C	C		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44 (37%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.24	
Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

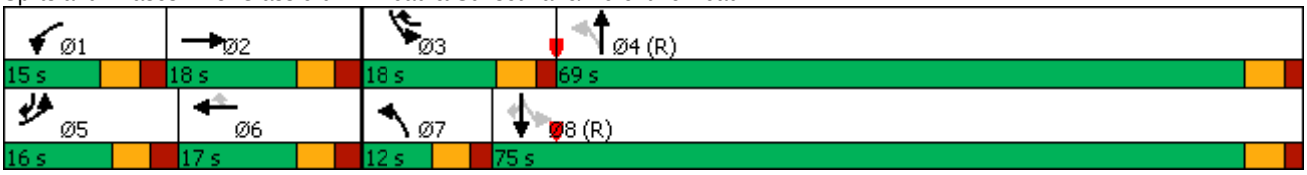
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	160	162	111	196	244	104	612	256	623	109
Future Volume (vph)	160	162	111	196	244	104	612	256	623	109
Turn Type	Prot	NA	Prot	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	3	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	11.1	16.1	10.5	10.5	35.5	10.5	35.5	11.1
Total Split (s)	16.0	18.0	15.0	17.0	18.0	12.0	69.0	18.0	75.0	16.0
Total Split (%)	13.3%	15.0%	12.5%	14.2%	15.0%	10.0%	57.5%	15.0%	62.5%	13.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	5.5	5.5	5.5	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	11.4	28.9	9.6	27.1	49.2	51.7	42.4	63.6	49.0	65.8
Actuated g/C Ratio	0.10	0.24	0.08	0.23	0.41	0.43	0.35	0.53	0.41	0.55
v/c Ratio	0.54	0.26	0.44	0.51	0.35	0.29	0.42	0.66	0.33	0.13
Control Delay	57.6	35.0	57.3	46.2	8.0	7.7	10.1	25.8	16.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	35.0	57.3	46.2	8.0	7.7	10.1	25.8	16.0	0.8
LOS	E	C	E	D	A	A	B	C	B	A
Approach Delay		45.0		31.5			9.8		16.9	
Approach LOS		D		C			A		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 35 (29%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

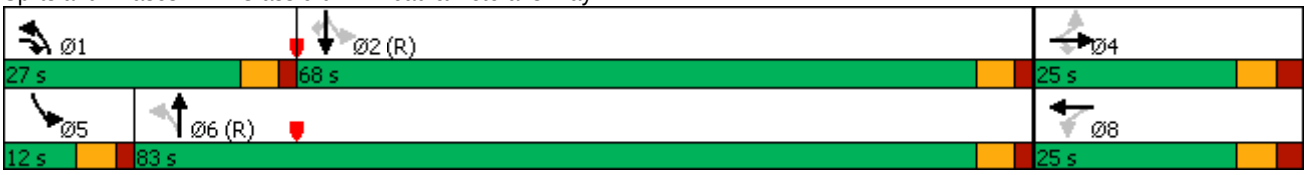
Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	84	5	136	7	5	167	840	7	843	49
Future Volume (vph)	84	5	136	7	5	167	840	7	843	49
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	16.2	16.2	10.3	16.2	16.2	10.3	35.3	10.3	35.3	35.3
Total Split (s)	25.0	25.0	27.0	25.0	25.0	27.0	83.0	12.0	68.0	68.0
Total Split (%)	20.8%	20.8%	22.5%	20.8%	20.8%	22.5%	69.2%	10.0%	56.7%	56.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.6	2.6	1.7	2.6	2.6	1.7	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	5.3	6.2	6.2	5.3	5.3	5.3	5.3	5.3
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.1	15.1	30.0	15.1	15.1	93.4	91.1	85.0	79.4	79.4
Actuated g/C Ratio	0.13	0.13	0.25	0.13	0.13	0.78	0.76	0.71	0.66	0.66
v/c Ratio	0.52	0.02	0.31	0.05	0.07	0.38	0.24	0.02	0.27	0.05
Control Delay	58.9	43.2	12.6	44.0	26.9	9.6	6.7	2.1	7.5	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	43.2	12.6	44.0	26.9	9.6	6.7	2.1	7.5	1.3
LOS	E	D	B	D	C	A	A	A	A	A
Approach Delay		30.5			32.8		7.2		7.1	
Approach LOS		C			C		A		A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 42 (35%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 59.6%	ICU Level of Service B
Analysis Period (min) 15	

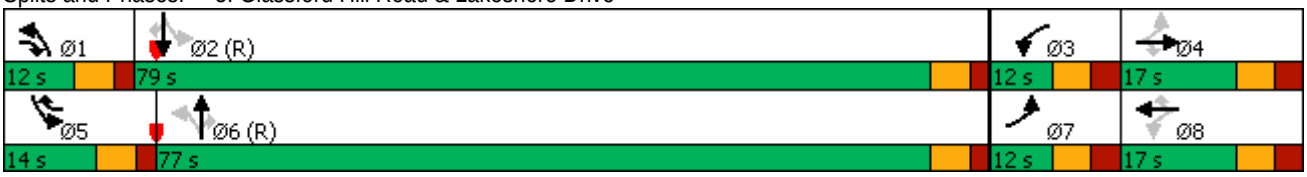
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	82	36	138	109	114	39	759	135	126	725	92
Future Volume (vph)	103	82	36	138	109	114	39	759	135	126	725	92
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.3	16.3	10.5	11.3	16.3	10.5	10.5	35.5	35.5	10.5	35.5	35.5
Total Split (s)	12.0	17.0	12.0	12.0	17.0	14.0	12.0	77.0	77.0	14.0	79.0	79.0
Total Split (%)	10.0%	14.2%	10.0%	10.0%	14.2%	11.7%	10.0%	64.2%	64.2%	11.7%	65.8%	65.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.7	2.7	1.9	2.7	2.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.5	6.3	6.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	24.4	13.1	26.2	30.5	16.2	32.0	66.2	59.4	59.4	72.7	64.5	64.5
Actuated g/C Ratio	0.20	0.11	0.22	0.25	0.14	0.27	0.55	0.50	0.50	0.61	0.54	0.54
v/c Ratio	0.37	0.44	0.10	0.43	0.47	0.24	0.10	0.33	0.17	0.33	0.29	0.11
Control Delay	35.5	56.1	0.9	36.5	53.5	6.2	5.7	12.6	4.5	10.1	12.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	56.1	0.9	36.5	53.5	6.2	5.7	12.6	4.5	10.1	12.8	2.2
LOS	D	E	A	D	D	A	A	B	A	B	B	A
Approach Delay		37.5			32.0			11.2			11.4	
Approach LOS		D			C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 112 (93%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

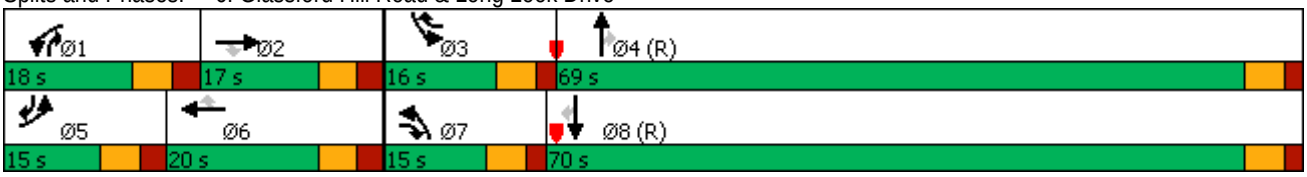
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	25	85	6	48	15	848	136	45	720	21
Future Volume (vph)	19	8	25	85	6	48	15	848	136	45	720	21
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	10.5	11.1	16.1	10.5	10.5	35.5	11.1	10.5	35.5	11.1
Total Split (s)	15.0	17.0	15.0	18.0	20.0	16.0	15.0	69.0	18.0	16.0	70.0	15.0
Total Split (%)	12.5%	14.2%	12.5%	15.0%	16.7%	13.3%	12.5%	57.5%	15.0%	13.3%	58.3%	12.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	1.9	2.5	2.5	1.9	1.9	1.9	2.5	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	5.5	6.1	6.1	5.5	5.5	5.5	6.1	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	7.3	10.0	9.3	9.8	10.7	17.5	6.1	85.0	101.5	7.1	88.2	101.0
Actuated g/C Ratio	0.06	0.08	0.08	0.08	0.09	0.15	0.05	0.71	0.85	0.06	0.74	0.84
v/c Ratio	0.10	0.06	0.14	0.33	0.04	0.18	0.09	0.26	0.11	0.24	0.21	0.02
Control Delay	53.7	51.8	1.5	55.3	49.7	4.7	77.4	2.2	0.2	57.4	4.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	51.8	1.5	55.3	49.7	4.7	77.4	2.2	0.2	57.4	4.2	0.0
LOS	D	D	A	E	D	A	E	A	A	E	A	A
Approach Delay		28.7			37.6			3.1			7.1	
Approach LOS		C			D			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 64 (53%), Referenced to phase 4:NBT and 8:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 7.8	Intersection LOS: A
Intersection Capacity Utilization 47.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	60	816	44	94	729
Future Volume (vph)	50	60	816	44	94	729
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	15.7	15.7	35.6	35.6	10.6	35.6
Total Split (s)	20.0	20.0	84.0	84.0	16.0	100.0
Total Split (%)	16.7%	16.7%	70.0%	70.0%	13.3%	83.3%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.6	5.6	5.6	5.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	11.5	11.5	87.9	87.9	100.3	101.4
Actuated g/C Ratio	0.10	0.10	0.73	0.73	0.84	0.84
v/c Ratio	0.32	0.31	0.34	0.04	0.20	0.26
Control Delay	55.2	15.7	2.0	0.1	1.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	15.7	2.0	0.1	1.4	0.6
LOS	E	B	A	A	A	A
Approach Delay	33.6		1.9			0.7
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 10 (8%), Referenced to phase 2:SBTL and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 52.6%	ICU Level of Service A
Analysis Period (min) 15	

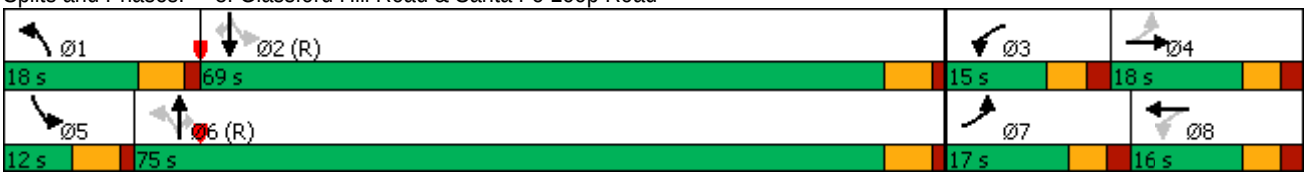
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	72	0	4	0	113	761	2	2	795	57
Future Volume (vph)	72	0	4	0	113	761	2	2	795	57
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.8	15.8	10.8	15.8	10.7	35.7	35.7	10.7	35.7	35.7
Total Split (s)	17.0	18.0	15.0	16.0	18.0	75.0	75.0	12.0	69.0	69.0
Total Split (%)	14.2%	15.0%	12.5%	13.3%	15.0%	62.5%	62.5%	10.0%	57.5%	57.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.2	2.2	2.2	2.2	1.3	1.3	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	13.8	12.0	7.8	10.0	97.0	96.0	96.0	89.5	83.9	83.9
Actuated g/C Ratio	0.12	0.10	0.06	0.08	0.81	0.80	0.80	0.75	0.70	0.70
v/c Ratio	0.43	0.06	0.03	0.02	0.25	0.29	0.00	0.00	0.35	0.05
Control Delay	53.9	0.2	44.0	0.1	5.1	3.9	0.0	3.0	4.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	0.2	44.0	0.1	5.1	3.9	0.0	3.0	4.2	0.1
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		40.5		13.6		4.0			4.0	
Approach LOS		D		B		A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

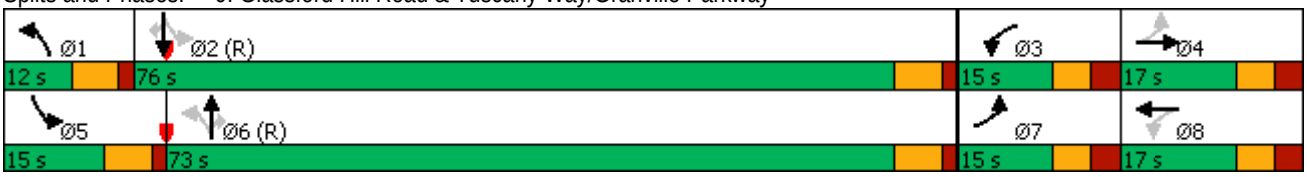
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	0	52	0	6	791	37	58	884	4
Future Volume (vph)	13	0	52	0	6	791	37	58	884	4
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.3	16.3	11.3	16.3	10.8	35.8	35.8	10.8	35.8	35.8
Total Split (s)	15.0	17.0	15.0	17.0	12.0	73.0	73.0	15.0	76.0	76.0
Total Split (%)	12.5%	14.2%	12.5%	14.2%	10.0%	60.8%	60.8%	12.5%	63.3%	63.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	10.4	10.0	14.9	11.4	88.7	85.3	85.3	93.6	93.1	93.1
Actuated g/C Ratio	0.09	0.08	0.12	0.10	0.74	0.71	0.71	0.78	0.78	0.78
v/c Ratio	0.09	0.06	0.33	0.09	0.02	0.34	0.03	0.13	0.35	0.00
Control Delay	41.7	0.3	47.6	0.4	3.7	5.5	0.1	4.2	4.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	0.3	47.6	0.4	3.7	5.5	0.1	4.2	4.9	0.0
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		16.9		28.1		5.3			4.8	
Approach LOS		B		C		A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 56 (47%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 53.6%	ICU Level of Service A
Analysis Period (min) 15	

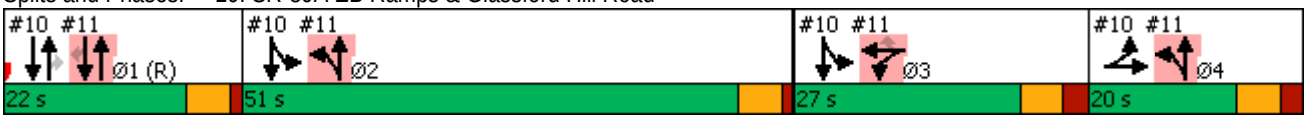
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	672	446	395	2	274		
Future Volume (vph)	1	672	446	395	2	274		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.8	13.8			13.0	15.1
Total Split (s)	20.0		22.0	22.0			51.0	27.0
Total Split (%)	16.7%		18.3%	18.3%			43%	23%
Yellow Time (s)	4.0		4.0	4.0			4.0	4.0
All-Red Time (s)	2.3		1.2	1.2			1.2	2.3
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.2	5.2				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None		C-Min	C-Min			Min	None
Act Effct Green (s)	9.0	120.0	54.4	54.4	39.9	99.5		
Actuated g/C Ratio	0.08	1.00	0.45	0.45	0.33	0.83		
v/c Ratio	0.01	0.46	0.21	0.45	0.00	0.10		
Control Delay	50.0	1.0	19.3	6.1	3.0	1.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	50.0	1.0	19.3	6.1	3.0	1.2		
LOS	D	A	B	A	A	A		
Approach Delay			13.1			1.2		
Approach LOS			B			A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 84 (70%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

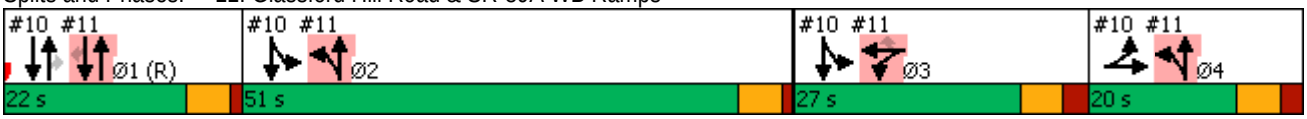
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	Ø1	Ø2	Ø4
Lane Configurations						
Traffic Volume (vph)	276	0	447			
Future Volume (vph)	276	0	447			
Turn Type	Split	NA	Prot			
Protected Phases	3	3	2 4	1	2	4
Permitted Phases						
Detector Phase	3	3	2 4			
Switch Phase						
Minimum Initial (s)	7.0	7.0		8.0	5.0	7.0
Minimum Split (s)	15.1	15.1		13.8	13.0	13.3
Total Split (s)	27.0	27.0		22.0	51.0	20.0
Total Split (%)	22.5%	22.5%		18%	43%	17%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.3	2.3		1.2	1.2	2.3
Lost Time Adjust (s)	0.0	0.0				
Total Lost Time (s)	6.3	6.3				
Lead/Lag	Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None		C-Min	Min	None
Act Effct Green (s)	16.6	16.6	27.1			
Actuated g/C Ratio	0.14	0.14	0.23			
v/c Ratio	0.65	0.65	0.63			
Control Delay	61.1	61.1	44.8			
Queue Delay	0.0	0.0	0.0			
Total Delay	61.1	61.1	44.8			
LOS	E	E	D			
Approach Delay		61.1				
Approach LOS		E				

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 84 (70%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 51.0	Intersection LOS: D
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Future Volume (vph)	617	1367	19	73	1116	145	43	205	260	131	457
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	1	6		5	2	7	3	8	7	4	1
Permitted Phases			6			2					4
Detector Phase	1	6	6	5	2	7	3	8	7	4	1
Switch Phase											
Minimum Initial (s)	8.0	20.0	20.0	8.0	20.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.2	26.2	26.2	14.2	26.2	14.1	14.1	14.1	14.1	14.1	14.2
Total Split (s)	35.0	67.0	67.0	15.0	47.0	19.0	15.0	19.0	19.0	23.0	35.0
Total Split (%)	29.2%	55.8%	55.8%	12.5%	39.2%	15.8%	12.5%	15.8%	15.8%	19.2%	29.2%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	3.6	3.6	3.6	3.6	3.6	4.4
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	2.5	2.5	2.5	2.5	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	C-Min	None	None	C-Min	None	None	None	None	None	None	C-Min
Act Effct Green (s)	27.6	61.1	61.1	9.7	43.1	61.7	8.4	12.3	12.4	19.1	52.8
Actuated g/C Ratio	0.23	0.51	0.51	0.08	0.36	0.51	0.07	0.10	0.10	0.16	0.44
v/c Ratio	0.85	0.83	0.02	0.56	0.66	0.18	0.38	0.82	0.80	0.48	0.66
Control Delay	55.5	29.9	0.1	69.3	34.9	4.0	62.5	63.5	54.8	43.1	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	29.9	0.1	69.3	34.9	4.0	62.5	63.5	54.8	43.1	24.5
LOS	E	C	A	E	C	A	E	E	D	D	C
Approach Delay		37.5			33.4			63.4		36.6	
Approach LOS		D			C			E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 1:EBL and 5:WBL, Start of Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 38.0	Intersection LOS: D
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR-69 & Glassford Hill Road



Lane Group	SEL	SET	NWT	NEL	NET	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	1	1	3	32	837	56	685
Future Volume (vph)	1	1	3	32	837	56	685
Turn Type	Perm	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	8	1	6	5	2
Permitted Phases	4			6		2	
Detector Phase	4	4	8	1	6	5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	30.0	5.0	30.0
Minimum Split (s)	16.0	16.0	16.0	10.1	35.1	10.1	35.1
Total Split (s)	16.0	16.0	16.0	12.0	92.0	12.0	92.0
Total Split (%)	13.3%	13.3%	13.3%	10.0%	76.7%	10.0%	76.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.4	2.4	2.4	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.1	5.1	5.1	5.1
Lead/Lag				Lead	Lag	Lead	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	10.0	10.0	10.0	97.7	93.9	99.3	96.4
Actuated g/C Ratio	0.08	0.08	0.08	0.81	0.78	0.83	0.80
v/c Ratio	0.01	0.17	0.31	0.06	0.23	0.12	0.18
Control Delay	51.0	22.2	19.8	0.8	3.3	1.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	22.2	19.8	0.8	3.3	1.3	1.3
LOS	D	C	B	A	A	A	A
Approach Delay		23.2	19.8		3.2		1.3
Approach LOS		C	B		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 2:SWTL and 6:NETL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 3.2	Intersection LOS: A
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

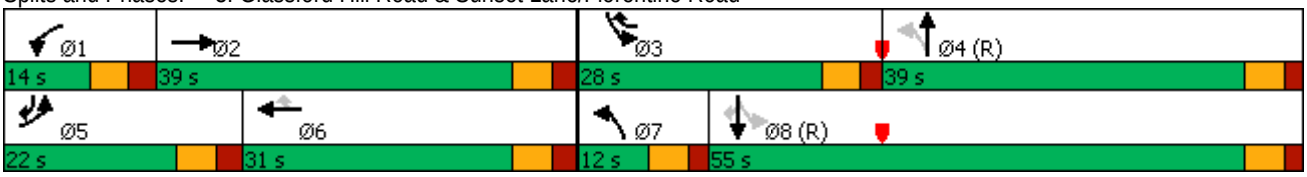
Splits and Phases: 2: Glassford Hill Road & Centre Court



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	307	224	115	263	281	70	662	292	596	223
Future Volume (vph)	307	224	115	263	281	70	662	292	596	223
Turn Type	Prot	NA	Prot	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	3	8	5
Permitted Phases					6	4		8		8
Detector Phase	5	2	1	6	3	7	4	3	8	5
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	30.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	11.1	16.1	10.5	10.5	35.5	10.5	35.5	11.1
Total Split (s)	22.0	39.0	14.0	31.0	28.0	12.0	39.0	28.0	55.0	22.0
Total Split (%)	18.3%	32.5%	11.7%	25.8%	23.3%	10.0%	32.5%	23.3%	45.8%	18.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	5.5	5.5	5.5	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	15.3	30.2	8.2	23.1	47.3	47.1	40.3	63.9	53.9	74.7
Actuated g/C Ratio	0.13	0.25	0.07	0.19	0.39	0.39	0.34	0.53	0.45	0.62
v/c Ratio	0.77	0.34	0.53	0.80	0.43	0.22	0.50	0.77	0.28	0.22
Control Delay	62.8	34.2	62.7	62.9	15.2	5.8	7.4	21.1	14.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	34.2	62.7	62.9	15.2	5.8	7.4	21.1	14.4	4.9
LOS	E	C	E	E	B	A	A	C	B	A
Approach Delay		49.2		42.5			7.3		14.2	
Approach LOS		D		D			A		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 43 (36%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

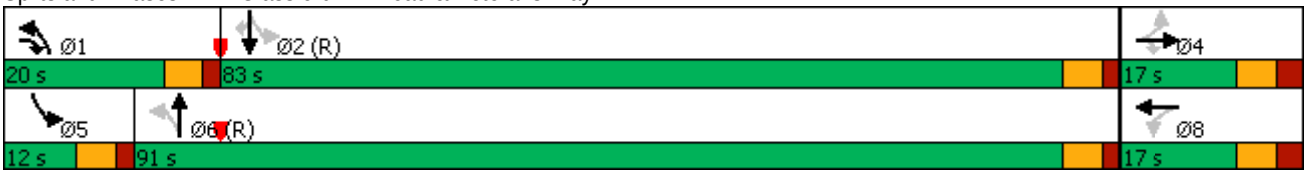
Splits and Phases: 3: Glassford Hill Road & Sunset Lane/Florentine Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	79	6	148	9	7	166	1072	9	959	72
Future Volume (vph)	79	6	148	9	7	166	1072	9	959	72
Turn Type	Perm	NA	pm+ov	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4	1		8	1	6	5	2	
Permitted Phases	4		4	8		6		2		2
Detector Phase	4	4	1	8	8	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	30.0	5.0	30.0	30.0
Minimum Split (s)	16.2	16.2	10.3	16.2	16.2	10.3	35.3	10.3	35.3	35.3
Total Split (s)	17.0	17.0	20.0	17.0	17.0	20.0	91.0	12.0	83.0	83.0
Total Split (%)	14.2%	14.2%	16.7%	14.2%	14.2%	16.7%	75.8%	10.0%	69.2%	69.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.6	2.6	1.7	2.6	2.6	1.7	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	5.3	6.2	6.2	5.3	5.3	5.3	5.3	5.3
Lead/Lag			Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.1	15.1	29.9	15.1	15.1	93.4	91.2	85.2	79.5	79.5
Actuated g/C Ratio	0.13	0.13	0.25	0.13	0.13	0.78	0.76	0.71	0.66	0.66
v/c Ratio	0.50	0.03	0.33	0.06	0.09	0.42	0.31	0.03	0.31	0.07
Control Delay	57.9	43.7	10.5	44.6	26.8	10.7	10.4	3.1	5.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	43.7	10.5	44.6	26.8	10.7	10.4	3.1	5.7	0.2
LOS	E	D	B	D	C	B	B	A	A	A
Approach Delay		27.5			32.6		10.5		5.3	
Approach LOS		C			C		B		A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 22 (18%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

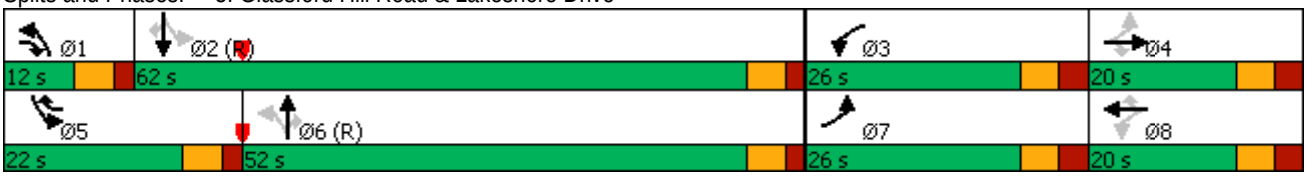
Splits and Phases: 4: Glassford Hill Road & Veterans Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	117	55	183	128	179	48	875	240	187	802	181
Future Volume (vph)	197	117	55	183	128	179	48	875	240	187	802	181
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	1	3	8	5	1	6		5	2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	7	4	1	3	8	5	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	11.3	16.3	10.5	11.3	16.3	10.5	10.5	35.5	35.5	10.5	35.5	35.5
Total Split (s)	26.0	20.0	12.0	26.0	20.0	22.0	12.0	52.0	52.0	22.0	62.0	62.0
Total Split (%)	21.7%	16.7%	10.0%	21.7%	16.7%	18.3%	10.0%	43.3%	43.3%	18.3%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.7	2.7	1.9	2.7	2.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.5	6.3	6.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	31.3	14.9	27.6	29.7	14.2	32.5	60.2	53.8	53.8	71.0	61.7	61.7
Actuated g/C Ratio	0.26	0.12	0.23	0.25	0.12	0.27	0.50	0.45	0.45	0.59	0.51	0.51
v/c Ratio	0.59	0.55	0.13	0.54	0.63	0.38	0.15	0.42	0.31	0.55	0.33	0.22
Control Delay	39.5	58.8	0.6	37.8	63.9	15.0	4.3	8.5	2.0	18.6	12.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	58.8	0.6	37.8	63.9	15.0	4.3	8.5	2.0	18.6	12.8	3.8
LOS	D	E	A	D	E	B	A	A	A	B	B	A
Approach Delay		39.8			36.3			7.0			12.3	
Approach LOS		D			D			A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

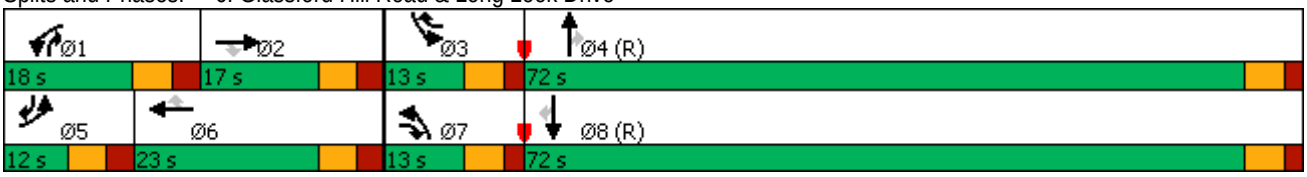
Splits and Phases: 5: Glassford Hill Road & Lakeshore Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	11	34	114	8	64	21	1130	181	61	893	28
Future Volume (vph)	26	11	34	114	8	64	21	1130	181	61	893	28
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	30.0	5.0	5.0	30.0	5.0
Minimum Split (s)	11.1	16.1	10.5	11.1	16.1	10.5	10.5	35.5	11.1	10.5	35.5	11.1
Total Split (s)	12.0	17.0	13.0	18.0	23.0	13.0	13.0	72.0	18.0	13.0	72.0	12.0
Total Split (%)	10.0%	14.2%	10.8%	15.0%	19.2%	10.8%	10.8%	60.0%	15.0%	10.8%	60.0%	10.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.5	2.5	1.9	2.5	2.5	1.9	1.9	1.9	2.5	1.9	1.9	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	5.5	6.1	6.1	5.5	5.5	5.5	6.1	5.5	5.5	6.1
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	8.5	10.0	9.5	10.3	10.9	15.1	6.3	84.0	101.0	7.7	85.3	99.2
Actuated g/C Ratio	0.07	0.08	0.08	0.09	0.09	0.13	0.05	0.70	0.84	0.06	0.71	0.83
v/c Ratio	0.12	0.08	0.19	0.42	0.05	0.26	0.13	0.35	0.14	0.30	0.27	0.02
Control Delay	53.0	52.1	2.5	56.4	49.4	9.8	68.0	4.6	0.5	53.0	5.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	52.1	2.5	56.4	49.4	9.8	68.0	4.6	0.5	53.0	5.4	0.2
LOS	D	D	A	E	D	A	E	A	A	D	A	A
Approach Delay		28.6			40.0			5.0			8.2	
Approach LOS		C			D			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 58 (48%), Referenced to phase 4:NBT and 8:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 47.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Glassford Hill Road & Long Look Drive



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	113	1092	112	180	929
Future Volume (vph)	97	113	1092	112	180	929
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	30.0	30.0	5.0	30.0
Minimum Split (s)	15.7	15.7	35.6	35.6	10.6	35.6
Total Split (s)	24.0	24.0	78.0	78.0	18.0	96.0
Total Split (%)	20.0%	20.0%	65.0%	65.0%	15.0%	80.0%
Yellow Time (s)	3.6	3.6	4.4	4.4	4.4	4.4
All-Red Time (s)	2.1	2.1	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.6	5.6	5.6	5.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	14.4	14.4	79.9	79.9	94.3	94.3
Actuated g/C Ratio	0.12	0.12	0.67	0.67	0.79	0.79
v/c Ratio	0.50	0.41	0.50	0.11	0.53	0.36
Control Delay	56.8	12.3	6.6	0.4	23.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	12.3	6.6	0.4	23.0	6.4
LOS	E	B	A	A	C	A
Approach Delay	32.8		6.0			9.1
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 96 (80%), Referenced to phase 2:SBTL and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 62.6%	ICU Level of Service B
Analysis Period (min) 15	

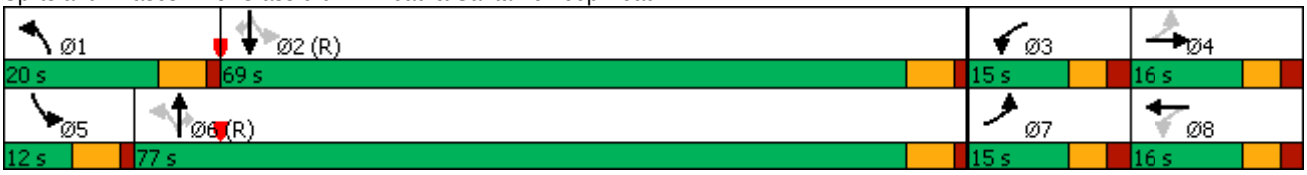
Splits and Phases: 7: Glassford Hill Road & Spouse Drive



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations										
Traffic Volume (vph)	108	6	2	148	1055	2	16	1064	138	
Future Volume (vph)	108	6	2	148	1055	2	16	1064	138	
Turn Type	pm+pt	NA	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4	8	1	6		5	2		3
Permitted Phases	4			6		6	2		2	
Detector Phase	7	4	8	1	6	6	5	2	2	
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0	5.0
Minimum Split (s)	10.8	15.8	15.8	10.7	35.7	35.7	10.7	35.7	35.7	10.8
Total Split (s)	15.0	16.0	16.0	20.0	77.0	77.0	12.0	69.0	69.0	15.0
Total Split (%)	12.5%	13.3%	13.3%	16.7%	64.2%	64.2%	10.0%	57.5%	57.5%	13%
Yellow Time (s)	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4	3.6
All-Red Time (s)	2.2	2.2	2.2	1.3	1.3	1.3	1.3	1.3	1.3	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min	None
Act Effct Green (s)	20.9	20.9	10.0	87.2	82.8	82.8	78.6	72.8	72.8	
Actuated g/C Ratio	0.17	0.17	0.08	0.73	0.69	0.69	0.66	0.61	0.61	
v/c Ratio	0.52	0.17	0.15	0.48	0.47	0.00	0.05	0.54	0.15	
Control Delay	50.6	14.0	24.0	14.8	3.2	0.0	3.4	8.2	1.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.6	14.0	24.0	14.8	3.2	0.0	3.4	8.2	1.1	
LOS	D	B	C	B	A	A	A	A	A	
Approach Delay		38.8	24.0		4.6			7.3		
Approach LOS		D	C		A			A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 106 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

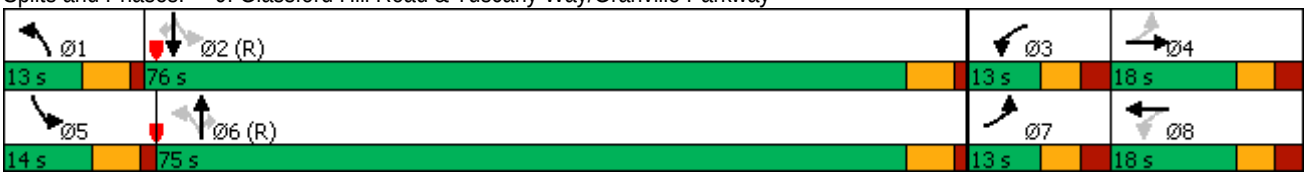
Splits and Phases: 8: Glassford Hill Road & Santa Fe Loop Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	17	0	69	0	8	1074	50	78	1207	5
Future Volume (vph)	17	0	69	0	8	1074	50	78	1207	5
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	1	6		5	2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	7	4	3	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	12.5	17.4	12.5	17.4	12.2	36.0	36.0	12.2	36.0	36.0
Total Split (s)	13.0	18.0	13.0	18.0	13.0	75.0	75.0	14.0	76.0	76.0
Total Split (%)	10.8%	15.0%	10.8%	15.0%	10.8%	62.5%	62.5%	11.7%	63.3%	63.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	12.3	10.0	16.6	13.8	86.0	82.5	82.5	91.4	90.8	90.8
Actuated g/C Ratio	0.10	0.08	0.14	0.12	0.72	0.69	0.69	0.76	0.76	0.76
v/c Ratio	0.11	0.10	0.41	0.14	0.03	0.48	0.05	0.25	0.49	0.00
Control Delay	41.3	0.7	49.5	0.8	3.0	5.0	0.1	5.6	6.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	0.7	49.5	0.8	3.0	5.0	0.1	5.6	6.7	0.0
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		16.6		29.1		4.8			6.6	
Approach LOS		B		C		A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 46 (38%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

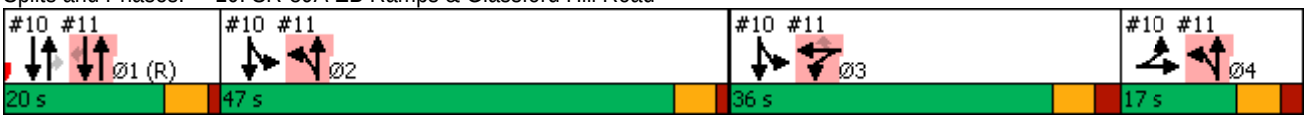
Splits and Phases: 9: Glassford Hill Road & Tuscany Way/Granville Parkway



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	1	910	604	537	3	380		
Future Volume (vph)	1	910	604	537	3	380		
Turn Type	Split	Free	NA	Perm	Prot	NA		
Protected Phases	4		1		2 3	1 2 3	2	3
Permitted Phases		Free		1				
Detector Phase	4		1	1	2 3	1 2 3		
Switch Phase								
Minimum Initial (s)	7.0		8.0	8.0			5.0	7.0
Minimum Split (s)	13.3		13.8	13.8			13.0	15.1
Total Split (s)	17.0		20.0	20.0			47.0	36.0
Total Split (%)	14.2%		16.7%	16.7%			39%	30%
Yellow Time (s)	4.0		4.0	4.0			4.0	4.0
All-Red Time (s)	2.3		1.2	1.2			1.2	2.3
Lost Time Adjust (s)	0.0		0.0	0.0				
Total Lost Time (s)	6.3		5.2	5.2				
Lead/Lag	Lag		Lead	Lead			Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None		C-Min	C-Min			Min	None
Act Effct Green (s)	12.2	120.0	40.3	40.3	50.8	96.3		
Actuated g/C Ratio	0.10	1.00	0.34	0.34	0.42	0.80		
v/c Ratio	0.01	0.62	0.39	0.64	0.00	0.15		
Control Delay	45.0	1.9	29.6	10.2	2.7	1.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	45.0	1.9	29.7	10.2	2.7	1.3		
LOS	D	A	C	B	A	A		
Approach Delay			20.5			1.3		
Approach LOS			C			A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

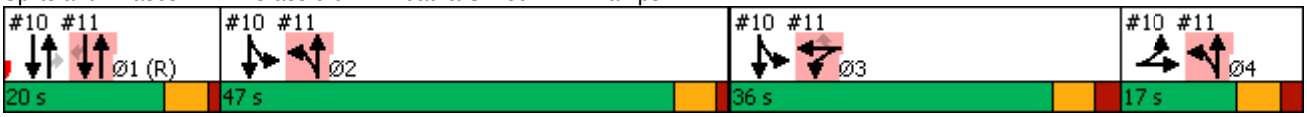
Splits and Phases: 10: SR-89A EB Ramps & Glassford Hill Road



Lane Group	WBL	WBT	NBL	Ø1	Ø2	Ø4
Lane Configurations						
Traffic Volume (vph)	383	0	605			
Future Volume (vph)	383	0	605			
Turn Type	Split	NA	Prot			
Protected Phases	3	3	2 4	1	2	4
Permitted Phases						
Detector Phase	3	3	2 4			
Switch Phase						
Minimum Initial (s)	7.0	7.0		8.0	5.0	7.0
Minimum Split (s)	15.1	15.1		13.8	13.0	13.3
Total Split (s)	36.0	36.0		20.0	47.0	17.0
Total Split (%)	30.0%	30.0%		17%	39%	14%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.3	2.3		1.2	1.2	2.3
Lost Time Adjust (s)	0.0	0.0				
Total Lost Time (s)	6.3	6.3				
Lead/Lag	Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None		C-Min	Min	None
Act Effct Green (s)	21.7	21.7	36.1			
Actuated g/C Ratio	0.18	0.18	0.30			
v/c Ratio	0.68	0.68	0.64			
Control Delay	56.6	56.6	39.9			
Queue Delay	0.0	0.0	0.0			
Total Delay	56.6	56.6	39.9			
LOS	E	E	D			
Approach Delay		56.6				
Approach LOS		E				

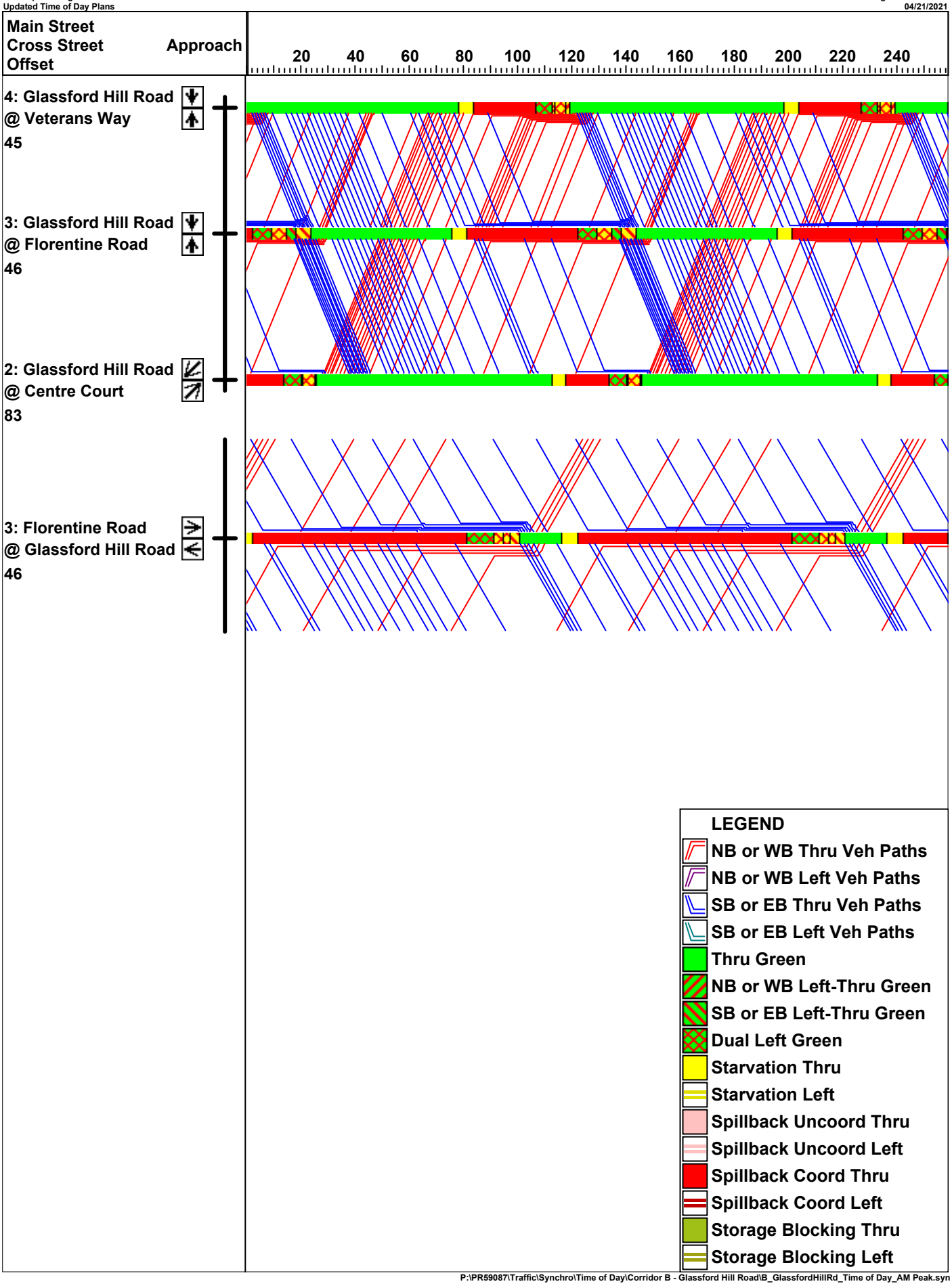
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 1:NBSB, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

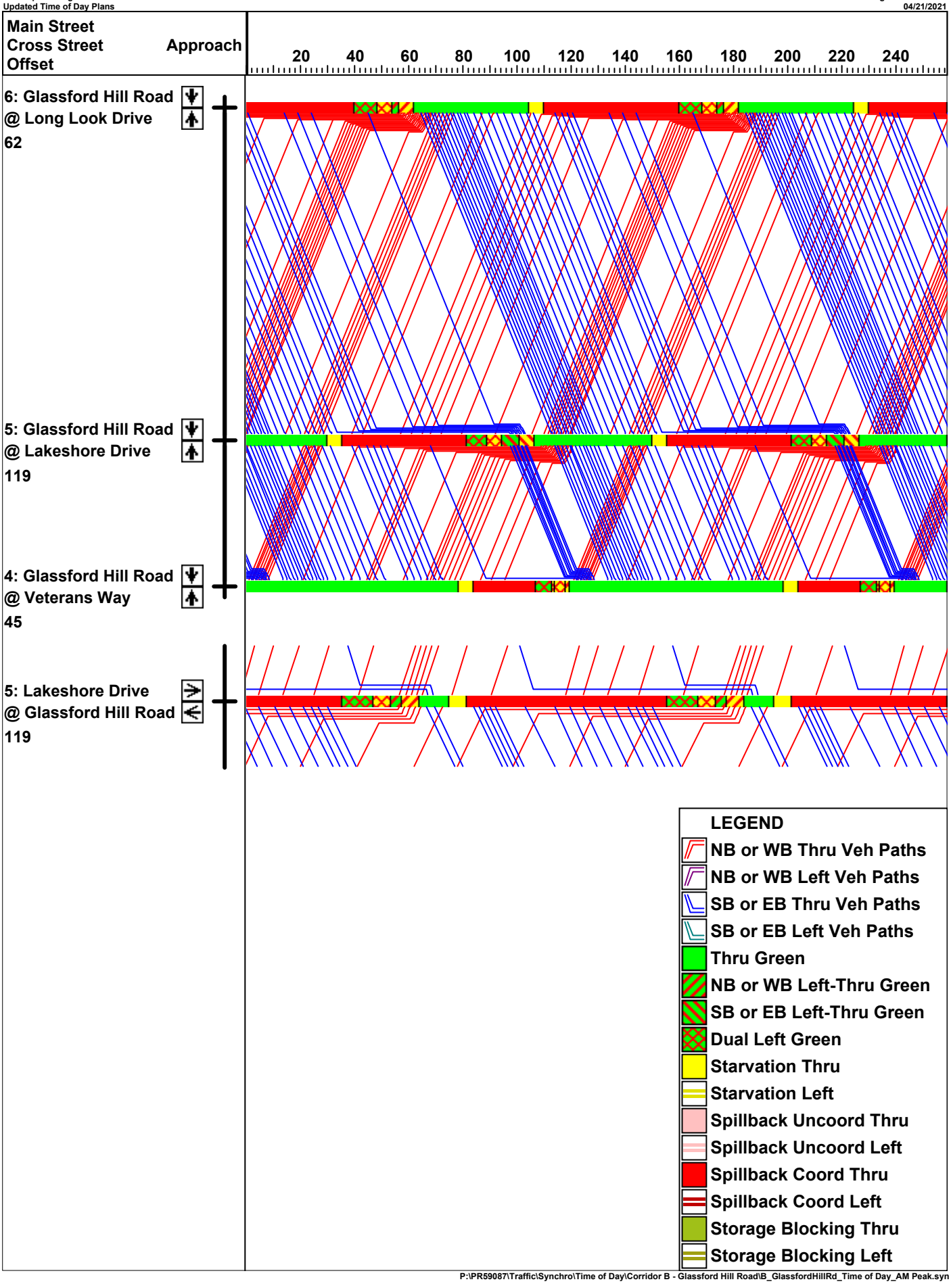
Splits and Phases: 11: Glassford Hill Road & SR-89A WB Ramps



APPENDIX SS-14

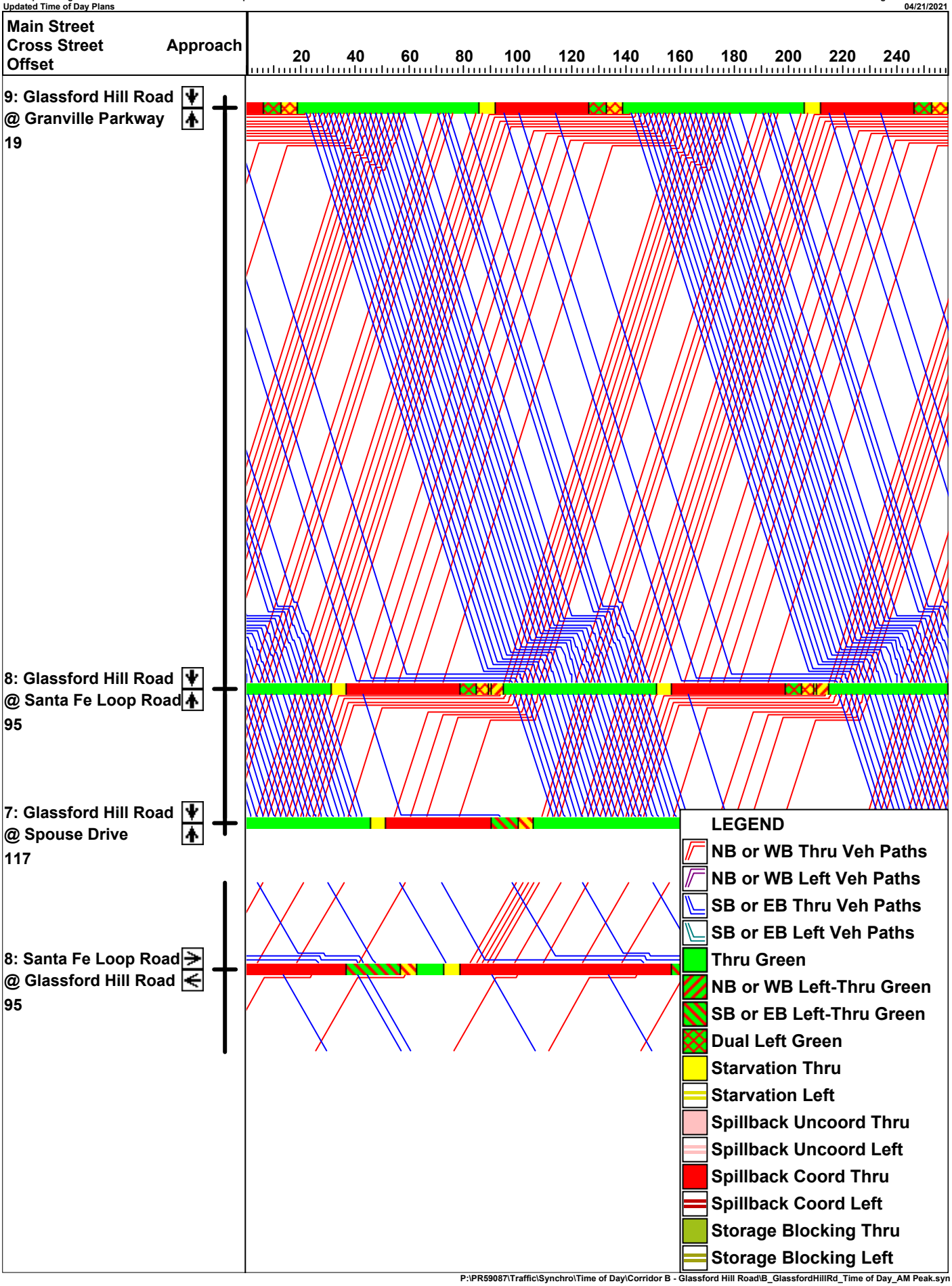
Glassford Hill Road Optimized Plans Time-Space Diagrams


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
4: Glassford Hill Road
@ Veterans Way
45
3: Glassford Hill Road
@ Florentine Road
46
2: Glassford Hill Road
@ Centre Court
83
3: Florentine Road
@ Glassford Hill Road
46
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

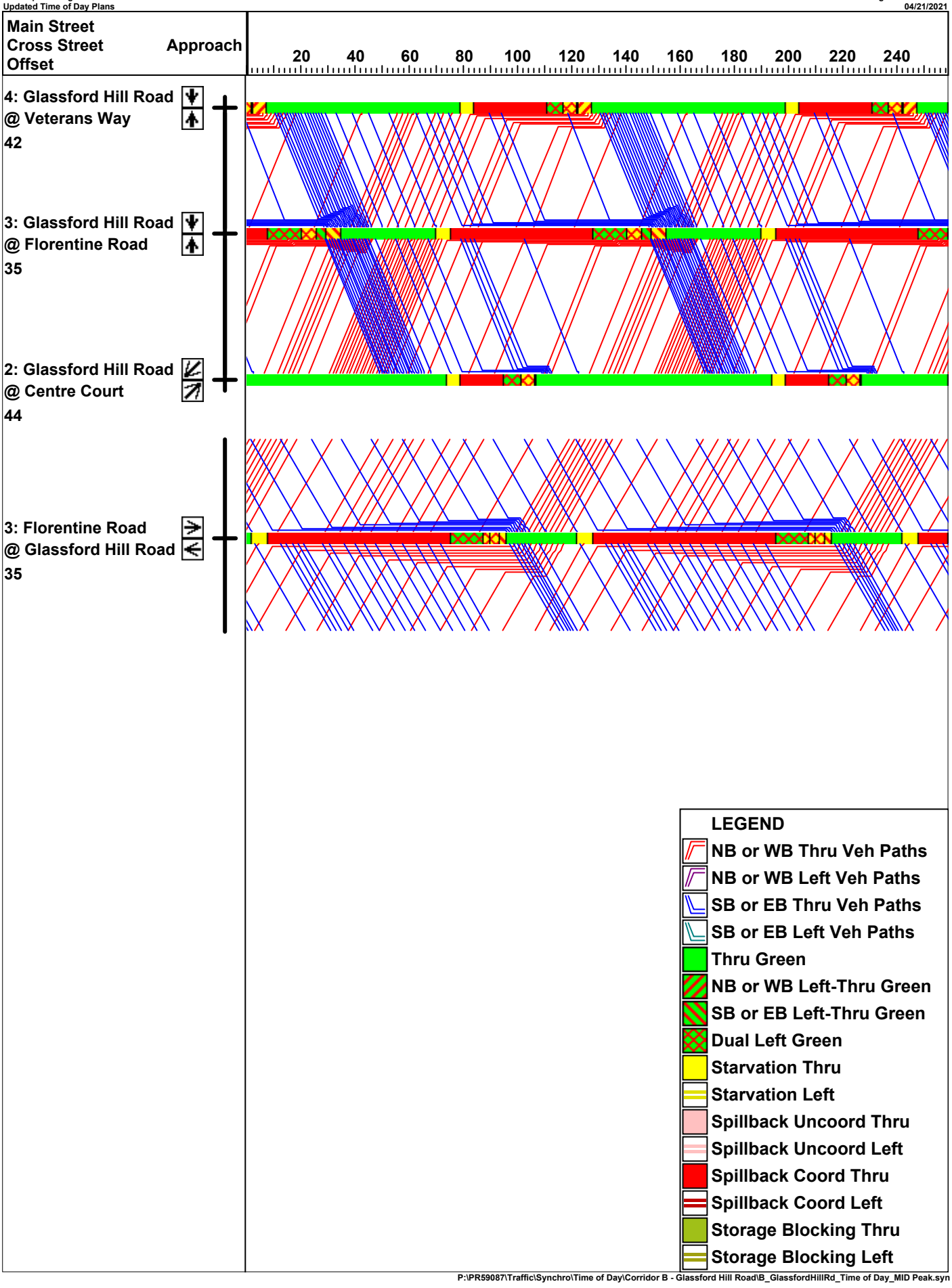

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
6: Glassford Hill Road
@ Long Look Drive
62
5: Glassford Hill Road
@ Lakeshore Drive
119
4: Glassford Hill Road
@ Veterans Way
45
5: Lakeshore Drive
@ Glassford Hill Road
119
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

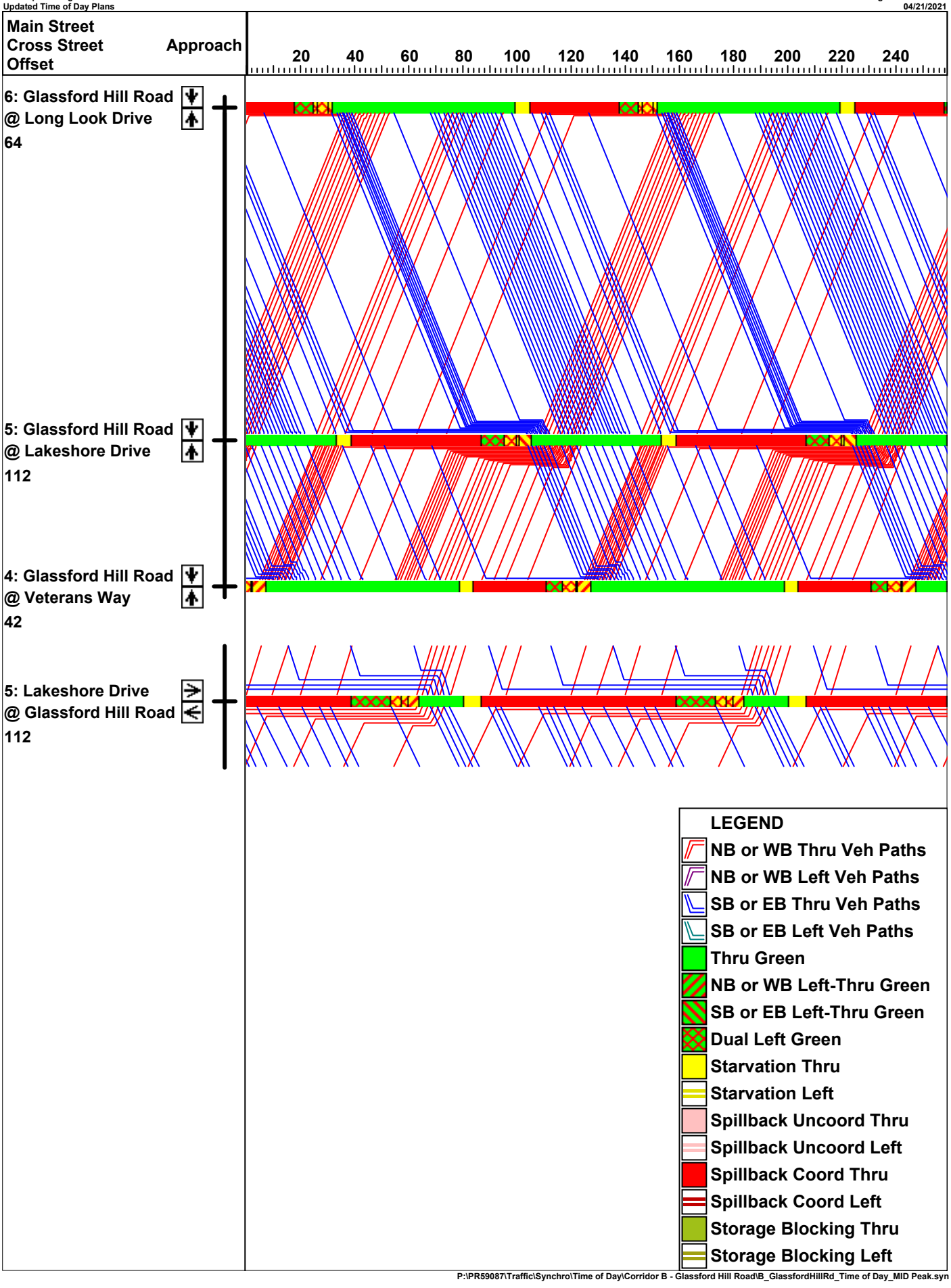
Time-Space Diagram - Glassford Hill Road & Santa Fe Loop Road
Updated Time of Day Plans

Timing Plan: AM Peak
04/21/2021



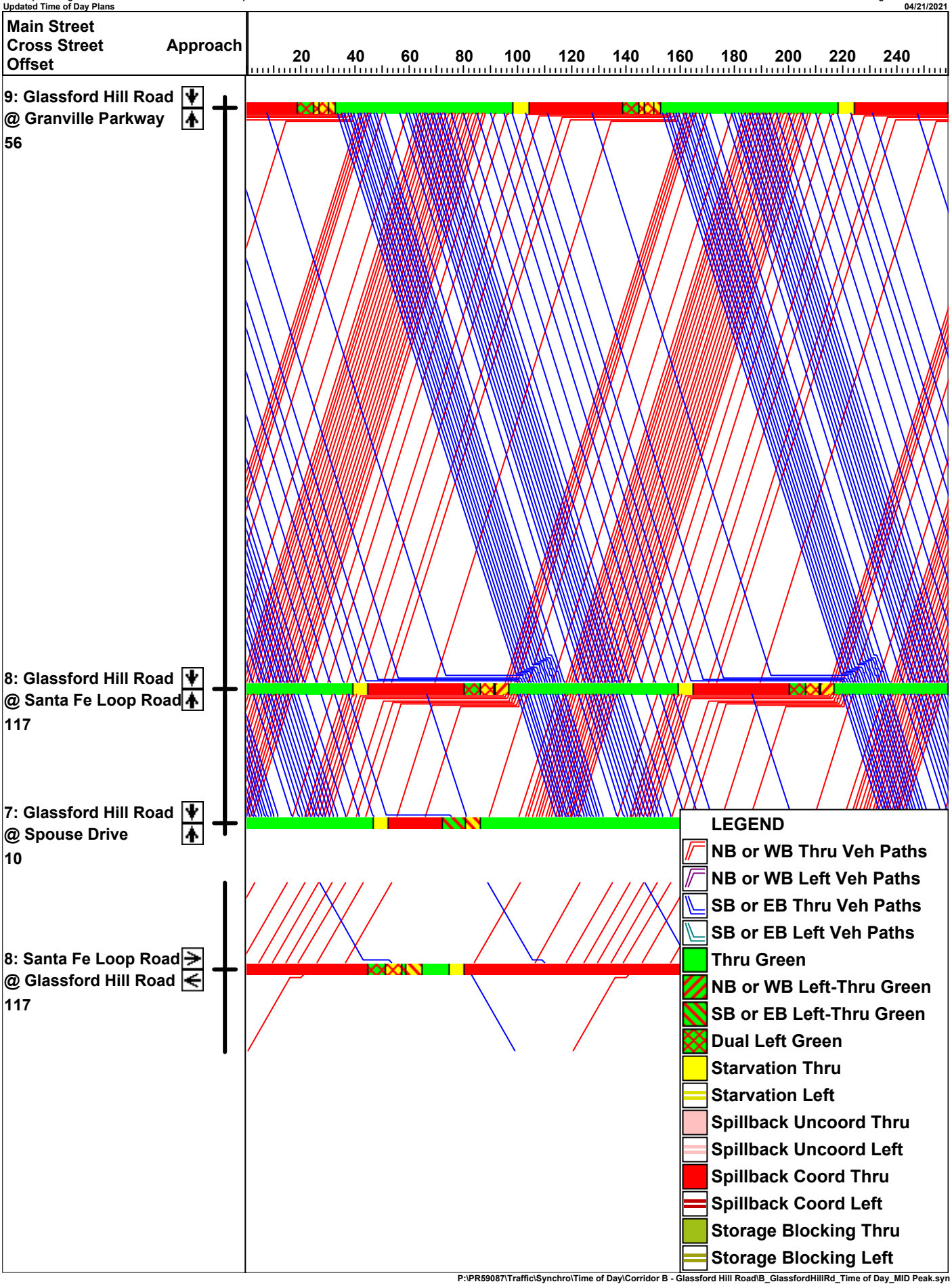
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Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
4: Glassford Hill Road
@ Veterans Way
42
3: Glassford Hill Road
@ Florentine Road
35
2: Glassford Hill Road
@ Centre Court
44
3: Florentine Road
@ Glassford Hill Road
35
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
6: Glassford Hill Road
@ Long Look Drive
64
5: Glassford Hill Road
@ Lakeshore Drive
112
4: Glassford Hill Road
@ Veterans Way
42
5: Lakeshore Drive
@ Glassford Hill Road
112
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

Time-Space Diagram - Glassford Hill Road & Santa Fe Loop Road
Updated Time of Day Plans

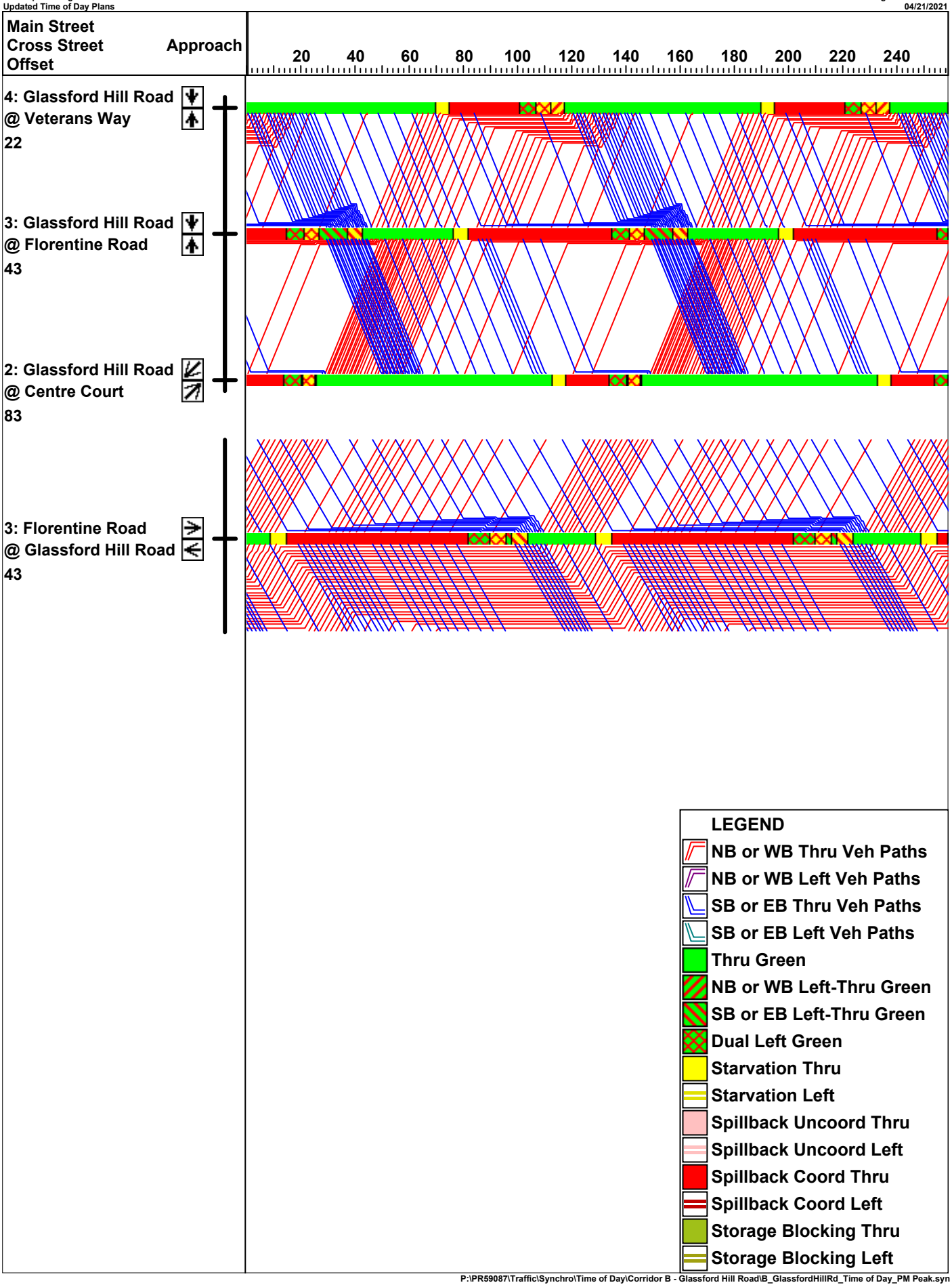
Timing Plan: Mid Peak
04/21/2021



P:\PR59087\Traffic\Synchro\Time of Day\Corridor B - Glassford Hill Road\B_GlassfordHillRd_Time of Day_MID Peak.syn

Time-Space Diagram - Glassford Hill Road & Sunset Lane/Florentine Road
Updated Time of Day Plans

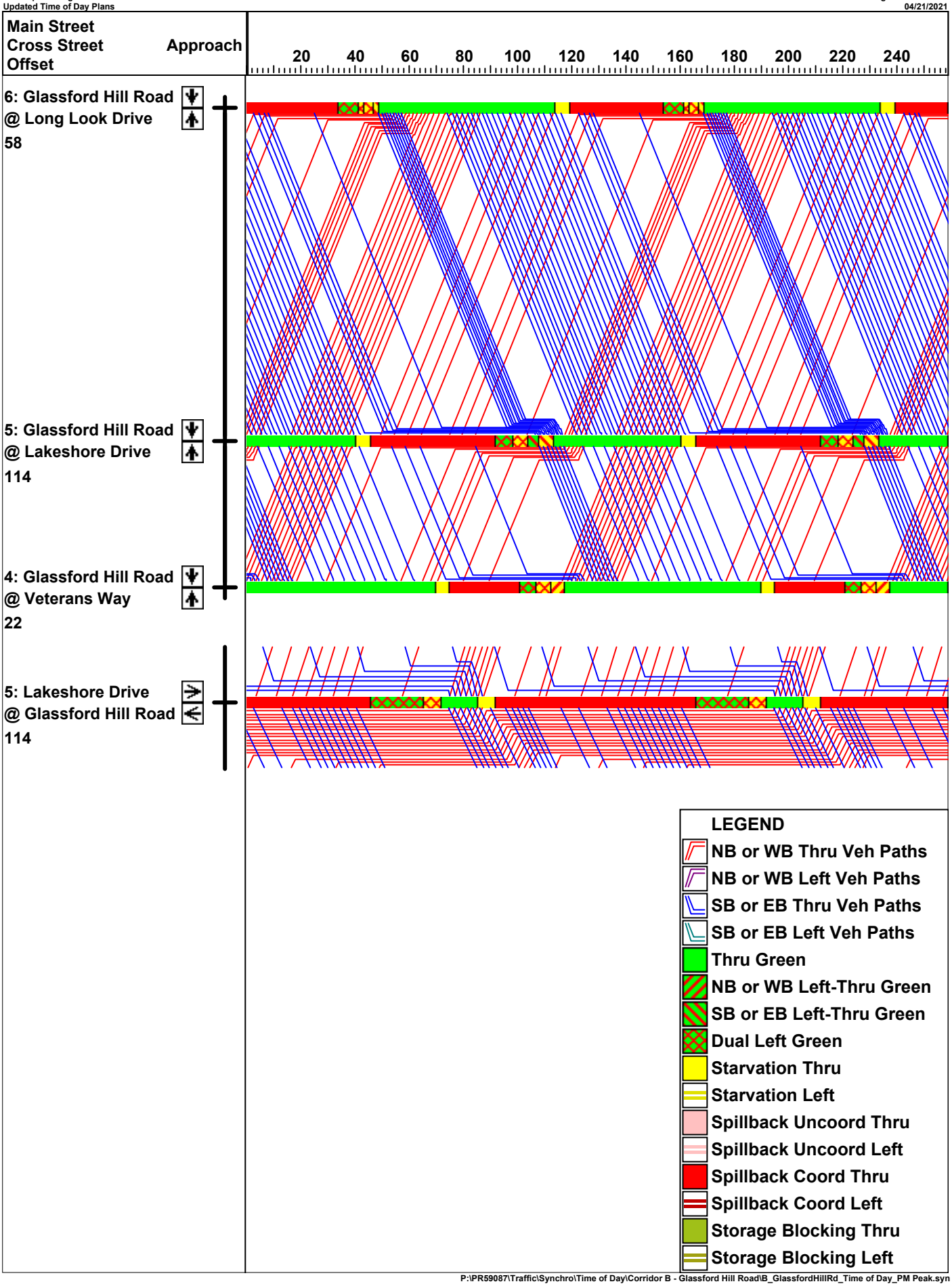
Timing Plan: PM Peak
04/21/2021



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Time-Space Diagram - Glassford Hill Road & Lakeshore Drive
Updated Time of Day Plans

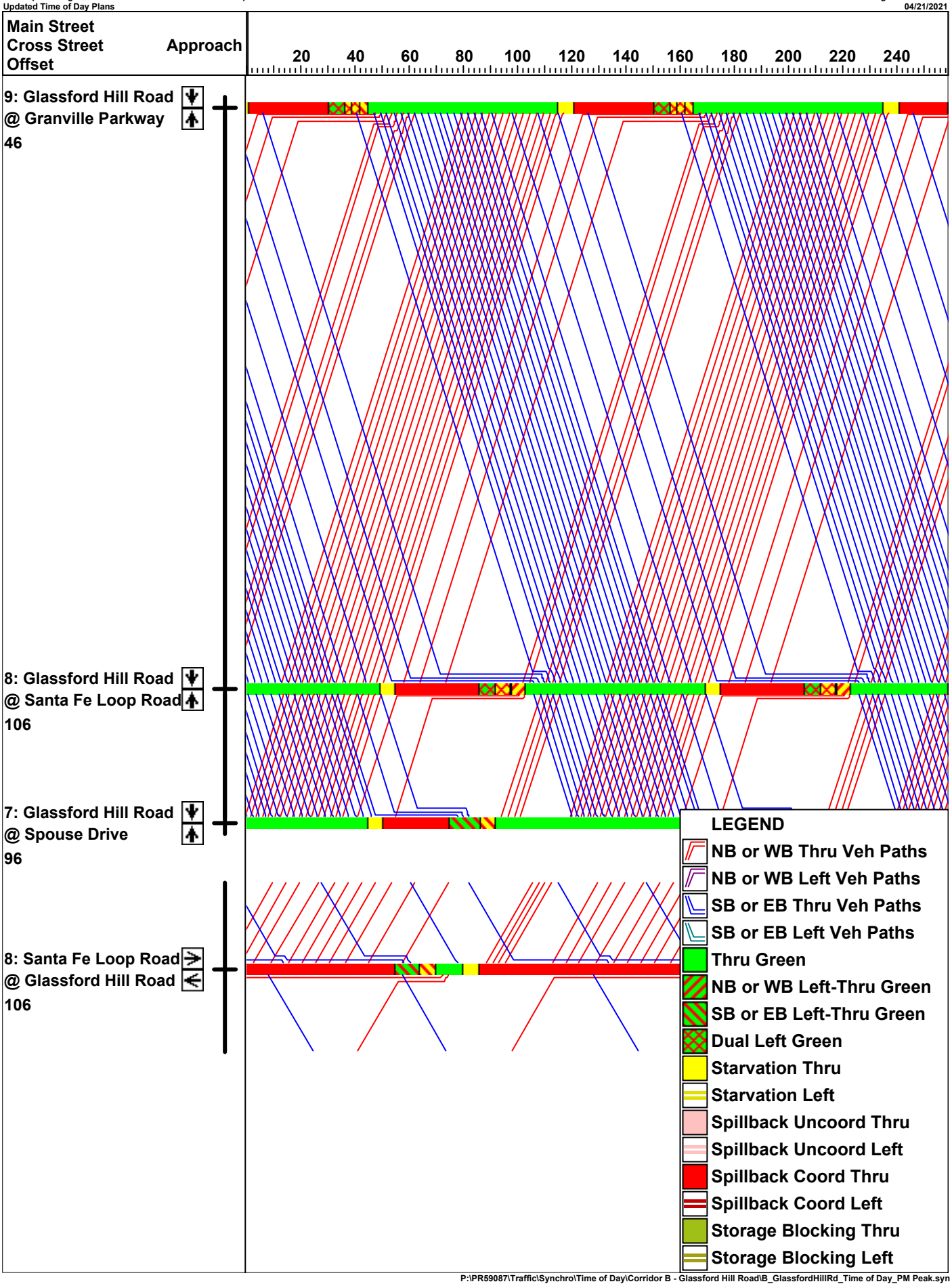
Timing Plan: PM Peak
04/21/2021



P:\PR59087\Traffic\Synchro\Time of Day\Corridor B - Glassford Hill Road\B_GlassfordHillRd_Time of Day_PM Peak.syn

Time-Space Diagram - Glassford Hill Road & Santa Fe Loop Road
Updated Time of Day Plans

Timing Plan: PM Peak
04/21/2021



P:\PR59087\Traffic\Synchro\Time of Day\Corridor B - Glassford Hill Road\B_GlassfordHillRd_Time of Day_PM Peak.syn

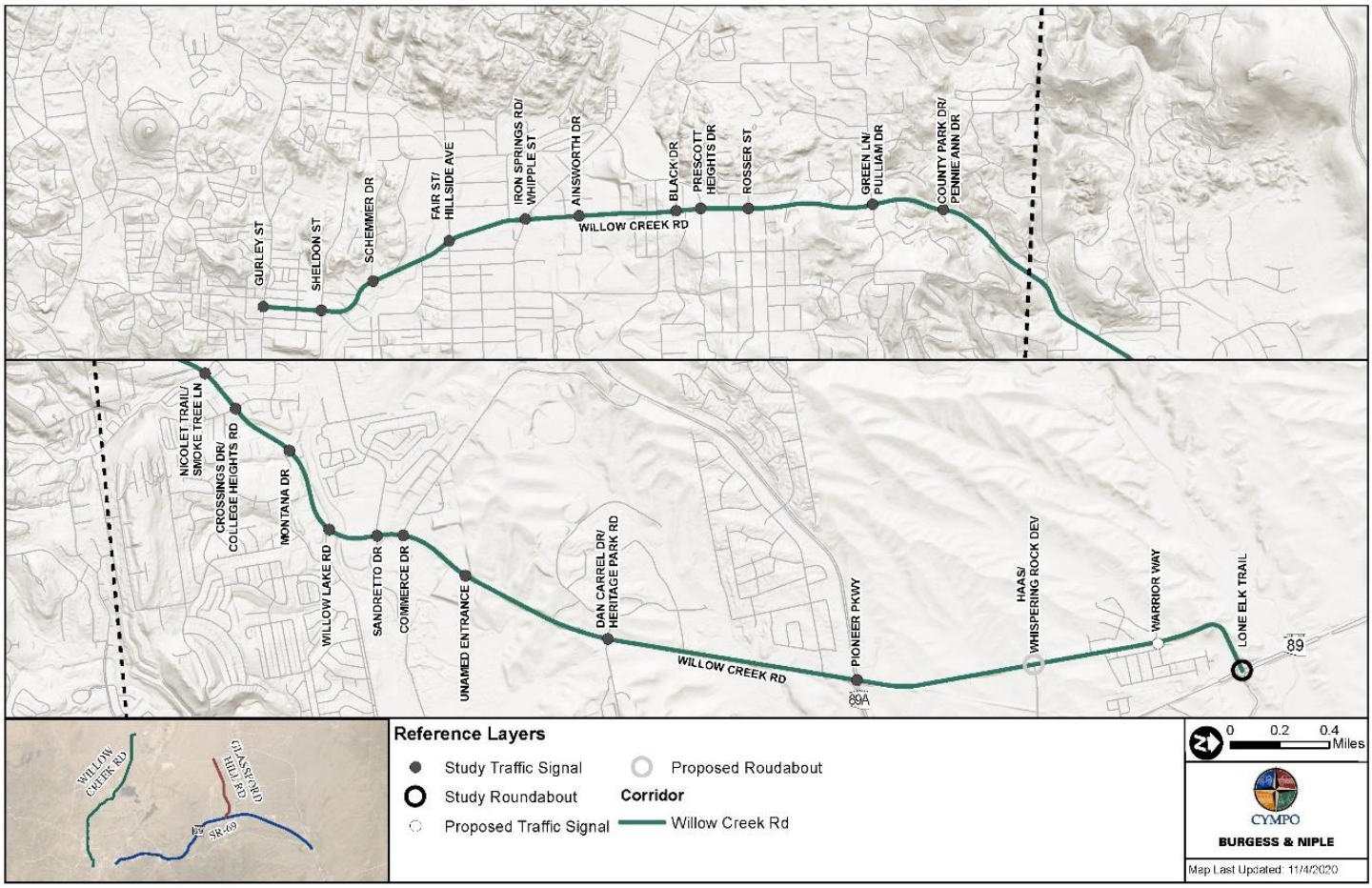
APPENDIX SS-15

Willow Creek Road Agency Information Request Responses

Adaptive Systems Inventory

Agency: City of Prescott

Study Corridor Map:



General Questions

1. Are your signals connected to a central system? (Yes/No)
   No

2. Brand and Type of Centrals System (Ex. KITS, MaxView, etc.)
   None

3. Type of Communications Infrastructure? (Ex. Fiber)
   Some Telephone

4. Is there any sort of existing regional communications linkage between the participating agencies? (Ex. RCN)
   Unknown

5. Describe your staffing for maintenance of traffic signals. How many staff are dedicated full-time? Part-time? Level of IMSA Certification?

   3 Full time

6. Is staff aware of ATSPM? Does staff have any experience in ATSPM? Would staff be open to the benefits of ATSPM, or is the existing situation limited by available staff time/knowledge?
   Not Aware, Open To it

7. Are your guidelines for ITS and signal installations published? If not, which standards do you use?

8. List relevant studies/projects (planning, implementation, construction) along this corridor
   a.
   b.
   c.

General Information:

- Traffic counts – intersection turning movement by time of day
- Traffic counts – segment level counts (24-hours)
- Existing signal control plans – as implemented in the field

- Additional data (GIS preferred)
  - Existing ITS inventory (including fiber)
  - Right-of-way
  - Utilities
  - Land use, existing and future
  - Development information

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Lone Elk Trail

Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	
Controller Make (Econolite, etc.)	
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	
Connected to Central System (Yes/No)	
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	
Foundation mounted (Yes/No)	
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

  _____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

  _____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

  _____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

  _____

- Approximate age of devices?

  _____

- Approximate percentage of currently failed devices?

  _____

Side Street: Lone Elk Trail

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

_____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

_____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

_____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

_____

- Approximate age of devices?

_____

- Approximate percentage of currently failed devices?

_____

1. Is there room in cabinet for expansion of detection (Yes/No)

_____

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

_____

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Warrior Way

Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	
Controller Make (Econolite, etc.)	
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	
Connected to Central System (Yes/No)	
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	
Foundation mounted (Yes/No)	
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

  _____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

  _____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

  _____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

  _____

- Approximate age of devices?

  _____

- Approximate percentage of currently failed devices?

  _____

Side Street: Warrior Way

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

_____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

_____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

_____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

_____

- Approximate age of devices?

_____

- Approximate percentage of currently failed devices?

_____

1. Is there room in cabinet for expansion of detection (Yes/No)

_____

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

_____

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Haas/Whispering Rock Development
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	Cobalt
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	Yes
Ethernet capable (Yes/No)	Yes
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	No
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	yes
Communications Capable as is (Yes/No)	Yes
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Radar

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Radar

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Radar

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  Less than 1 year

- Approximate percentage of currently failed devices?

Side Street: Haas/Whispering Rock Development

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

2. Approaches without mast arms (NB, SB, etc.)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

3. Approaches without street lighting (NB, SB, etc.)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Yes

Intersection Level: City of Prescott/Yavapai County

Intersection name: Willow Creek Road & Pioneer Parkway
Owning Agency: Yavapai County

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	Asc-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	No
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Video

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Video

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Video

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: Pioneer Parkway

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Dan Carrel Drive/Heritage Park Road
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	Un known
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	None
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Loops

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: Dan Carrel Drive/Heritage Park Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Unnamed Entrance
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-3
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	Yes
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	YES
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  5+ Years

- Approximate percentage of currently failed devices?

Side Street: Unnamed Entrance

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Commerce Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-3
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	Yes
Ethernet capable (Yes/No)	Yes
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  5+ Years

- Approximate percentage of currently failed devices?

Side Street: Commerce Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)
   None

   If Yes, Type (Opticom, Tomar, etc.)

8. Excessive Pedestrian use (Yes/No)
   No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)
   N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Sandretto Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  No south bound Detection

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: Sandretto Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Willow Lake Road
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone wire
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: Willow Lake Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

N/A

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Montana Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASc 2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Loops

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  6+ Years

- Approximate percentage of currently failed devices?

Side Street: Montana Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

_____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

_____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

_____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

_____

- Approximate age of devices?

_____

- Approximate percentage of currently failed devices?

_____

1. Is there room in cabinet for expansion of detection (Yes/No)

_____

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

_____

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Crossings Drive/College Heights Road
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	ASC-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  5+ Years

- Approximate percentage of currently failed devices?

Side Street: Crossings Drive/College Heights Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Nicolet Trail/ Smoke Tree Lane
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  none
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
  6+ Years
- Approximate percentage of currently failed devices?

Side Street: Nicolet Trail/ Smoke Tree Lane

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & County Park Drive/Pennie Ann Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: County Park Drive/Pennie Ann Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Green Lane/Pulliam Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  none
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

Side Street: Green Lane/Pulliam Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  none
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
  8+ Years
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

no

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Rosser Street
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	no
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	Ts-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  None

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?
  8+ Years

- Approximate percentage of currently failed devices?

Side Street: Rosser Street

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
  8+ years
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Prescott Heights Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

Side Street: Prescott Heights Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Black Drive

Owning Agency: City of Prescott

This is tied into Prescott heights Drive- They operate as one signal

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	
Controller Make (Econolite, etc.)	
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	
Connected to Central System (Yes/No)	
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	
Foundation mounted (Yes/No)	
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

  _____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

  _____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

  _____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

  _____

- Approximate age of devices?

  _____

- Approximate percentage of currently failed devices?

  _____

Side Street: Black Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

_____

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

_____

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

_____

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

_____

- Approximate age of devices?

_____

- Approximate percentage of currently failed devices?

_____

1. Is there room in cabinet for expansion of detection (Yes/No)

_____

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

_____

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Ainsworth Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-1
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	No

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  none
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  none
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

Side Street: Ainsworth Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  none
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   No
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

no

If Yes, Type (Opticom, Tomar, etc.)

8. Excessive Pedestrian use (Yes/No)

Yes

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Iron Springs Road/Whipple Street
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	Telephone
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

Side Street: Iron Springs Road/Whipple Street

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

YES!!!!!

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Fair Street/Hillside Avenue
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	ASC-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

  Loops

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

- Approximate age of devices?

- Approximate percentage of currently failed devices?

Side Street: Fair Street/Hillside Avenue

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  None
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   No
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?
   No Issues

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

Yes

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Schemmer Drive
Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-1
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	No

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  None
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

Side Street: Schemmer Drive

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  None
- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Loops
- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Loops
- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
- Approximate age of devices?
- Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   No
2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

2. Approaches without mast arms (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

Approach 1:
Approach 2:
Approach 3:
Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

Yes

If Yes, Type (Opticom, Tomar, etc.)

Opticom

8. Excessive Pedestrian use (Yes/No)

Yes

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Sheldon Street

Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	NW
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC-2
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	No
Ethernet capable (Yes/No)	No
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-1
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	No

Detection:

Main Street: Willow Creek Road

1. Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
   None

2. Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
   none

3. Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
   None

4. If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

5. Approximate age of devices?

6. Approximate percentage of currently failed devices?

Side Street: Sheldon Street

7. Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
   None

8. Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
   None

9. Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
   None

10. If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

11. Approximate age of devices?
    8+ Years

12. Approximate percentage of currently failed devices?

1. Is there room in cabinet for expansion of detection (Yes/No)
   No

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

2. Approaches without mast arms (NB, SB, etc.)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

3. Approaches without street lighting (NB, SB, etc.)
   Approach 1:
   Approach 2:
   Approach 3:
   Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

no

If Yes, Type (Opticom, Tomar, etc.)

8. Excessive Pedestrian use (Yes/No)

no

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

Intersection Level: City of Prescott

Intersection name: Willow Creek Road & Gurley Street

Owning Agency: City of Prescott

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	
Firmware Version (2.54, 200CA, etc.)	
NTCIP Capable (Yes/No)	
Ethernet capable (Yes/No)	
Connected to Central System (Yes/No)	
Communications Media (Fiber, Radio, etc.)	
If Radio, Make/Model (Firetide, etc.)	
Make/model of existing switch (iMPath 4000, etc.)	
Available Ports in Existing Switch (None, 1, 2, etc.)	
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	
Foundation mounted (Yes/No)	
Communications Capable as is (Yes/No)	
If No, what is lacking (Comm board, terminals, etc.)	
Power outlet available (Yes/No)	

Detection:

Main Street: Willow Creek Road

1. Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

   _____

2. Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

   _____

3. Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

   _____

4. If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

   _____

5. Approximate age of devices?

   _____

6. Approximate percentage of currently failed devices?

   _____

Side Street: Gurley Street

7. Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')

_____

8. Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)

_____

9. Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)

_____

10. If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)

_____

11. Approximate age of devices?

_____

12. Approximate percentage of currently failed devices?

_____

1. Is there room in cabinet for expansion of detection (Yes/No)

_____

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

_____

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

2. Approaches without mast arms (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

3. Approaches without street lighting (NB, SB, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

4. Existing Overhead Restrictions (NE, OHE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

5. Joint use/owned poles (NE, etc.)

Approach 1: _____
Approach 2: _____
Approach 3: _____
Approach 4: _____

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

_____

If Yes, Type (Opticom, Tomar, etc.)

_____

8. Excessive Pedestrian use (Yes/No)

_____

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

_____

Intersection Level: City of Prescott/Yavapai County

Intersection name: Willow Creek Road & Pioneer Parkway

Owning Agency: Yavapai County

Controller Cabinet:

Controller Corner (NW, NE, SE, etc.)	SE
Controller Make (Econolite, etc.)	Econolite
Controller Model (Cobalt, ASC/2, ASC/3, 170, etc.)	ASC/2S-2100 (Updated response)
Firmware Version (2.54, 200CA, etc.)	Unknown, field verification with City needed to obtain
NTCIP Capable (Yes/No)	Yes
Ethernet capable (Yes/No)	No (Updated response)
Connected to Central System (Yes/No)	No
Communications Media (Fiber, Radio, etc.)	None
If Radio, Make/Model (Firetide, etc.)	None
Make/model of existing switch (iMPath 4000, etc.)	Unknown, field verification with City needed to obtain
Available Ports in Existing Switch (None, 1, 2, etc.)	Unknown, field verification with City needed to obtain
Cabinet Type (ADOT Type IV TS-1, ADOT Type IV TS-2, etc.)	TS-2
Foundation mounted (Yes/No)	Yes
Communications Capable as is (Yes/No)	Unknown, field verification with City needed to obtain
If No, what is lacking (Comm board, terminals, etc.)	Unknown, field verification with City needed to obtain
Power outlet available (Yes/No)	Yes

Detection:

Main Street: Willow Creek Road

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Video (Zones established by COP)

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Video (Zones established by COP)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Video

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
  N/A

- Approximate age of devices?
  3 Years

- Approximate percentage of currently failed devices?
  0%

Side Street: Pioneer Parkway

- Thru Lanes Adv Detection (None, 6x6 Loops at 300', Video zone at 300', Radar at 300')
  Video (Zones established by COP)

- Thru Lanes Stop Line (None, 6x4 Loops each lane, video zones per lane, radar per lane)
  Video (Zones established by COP)

- Left Turn Lane (None, 6x7 Loop, Radar, Video, Thermal)
  Video

- If other than loops, location (SL arm, TS arm riser, pole shaft, back side of TS arm)
  N/A

- Approximate age of devices?
  3 Years

- Approximate percentage of currently failed devices?
  0%

1. Is there room in cabinet for expansion of detection (Yes/No)
   Yes

2. Are there any staff knowledge or technology issues we need to be aware of that may influence the suggestion of more or more sophisticated detection technology? If so, can that be resolved with training?

   Any detection technology must be compatible with COP training and staff. Signal is currently maintained under an agreement with the COP and any modifications should improve the integration with their system.

Other:

1. Left turn treatments, per approach (P, P/P, Perm, FlY/A, Split, P Lead/Lag)

   Approach 1: North Approach – Protected/Permitted

   Approach 2: South Approach – Protected/Permitted

   Approach 3: East Approach - Protected

   Approach 4: West Approach - Protected

2. Approaches without mast arms (NB, SB, etc.)

   Approach 1: None

   Approach 2:

   Approach 3:

   Approach 4:

3. Approaches without street lighting (NB, SB, etc.)

   Approach 1: None

   Approach 2:

   Approach 3:

   Approach 4:

4. Existing Overhead Restrictions (NE, OHE, etc.)

   Approach 1: North Approach – Electrical/Communication ~40' North of Stop Bar

   Approach 2: South Approach – No Conflict

   Approach 3: East Approach – Electrical/Communication ~60' East of Stop Bar

   Approach 4: West Approach – No Conflict

5. Joint use/owned poles (NE, etc.)

Approach 1: None

Approach 2:

Approach 3:

Approach 4:

6. Photos documenting exterior/interior of cabinet: ***CONSULTANT TO OBTAIN***
    a. Exterior (Two diagonal corners)
    b. Floor (Conduits and how full they are)
    c. Lt/Rt Walls (Wire terminals, power landings, surge protection)
    d. Face on (Show from ceiling to floor, in multiple straight-on shots)
    e. Rear (If rear door, open and repeat process)

7. Presence of EVP (Yes/No)

    No

    If Yes, Type (Opticom, Tomar, etc.)

8. Excessive Pedestrian use (Yes/No)

    No

9. As-Built Plans (Verified) – Will Provide (Yes/No/NA)

    No

APPENDIX SS-16

Willow Creek Road Traffic Signal Timing Plans

CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION #: 33

MAIN STREET: GURLEY

MINOR STREET: GROVE / PARK

INTERSECTION DIAGRAM

SEE ATTACHED

POSTED APPROACH SPEEDS:

MAIN STREET:	35
MINOR STREET:	30
YELLOW THR. CLR:	3
YELLOW LT CLR:	3
ALL-RED THR CLR:	1
ALL-RED LT CLR:	1

PED CLEARANCE:

WB:	16
SB:	16
NB:	16
EB:	16

ASC/25-2100
TURN ARROWS ON MAST ARMS ARE 5 SECTION HEADS
TURN ARROWS ON POLES ARE 4 SECTION HEADS

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase		2		4		6		3
Min. Green	5	25	15	20	5	25	5	5
Walk	0	6	6	6	0	6	0	6
Ped Clearance	0	16	16	16	0	16	0	16
Veh Extension	5	5	5	5	5	5	5	5
Max 1	35	35	35	35	35	35	35	35
Yellow	3	3	3	3	3	3	3	3
All-Red Clearance Left-Turn	1	1	1	1	1	1	1	1
	VEH RCL	X	X	X		X		

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

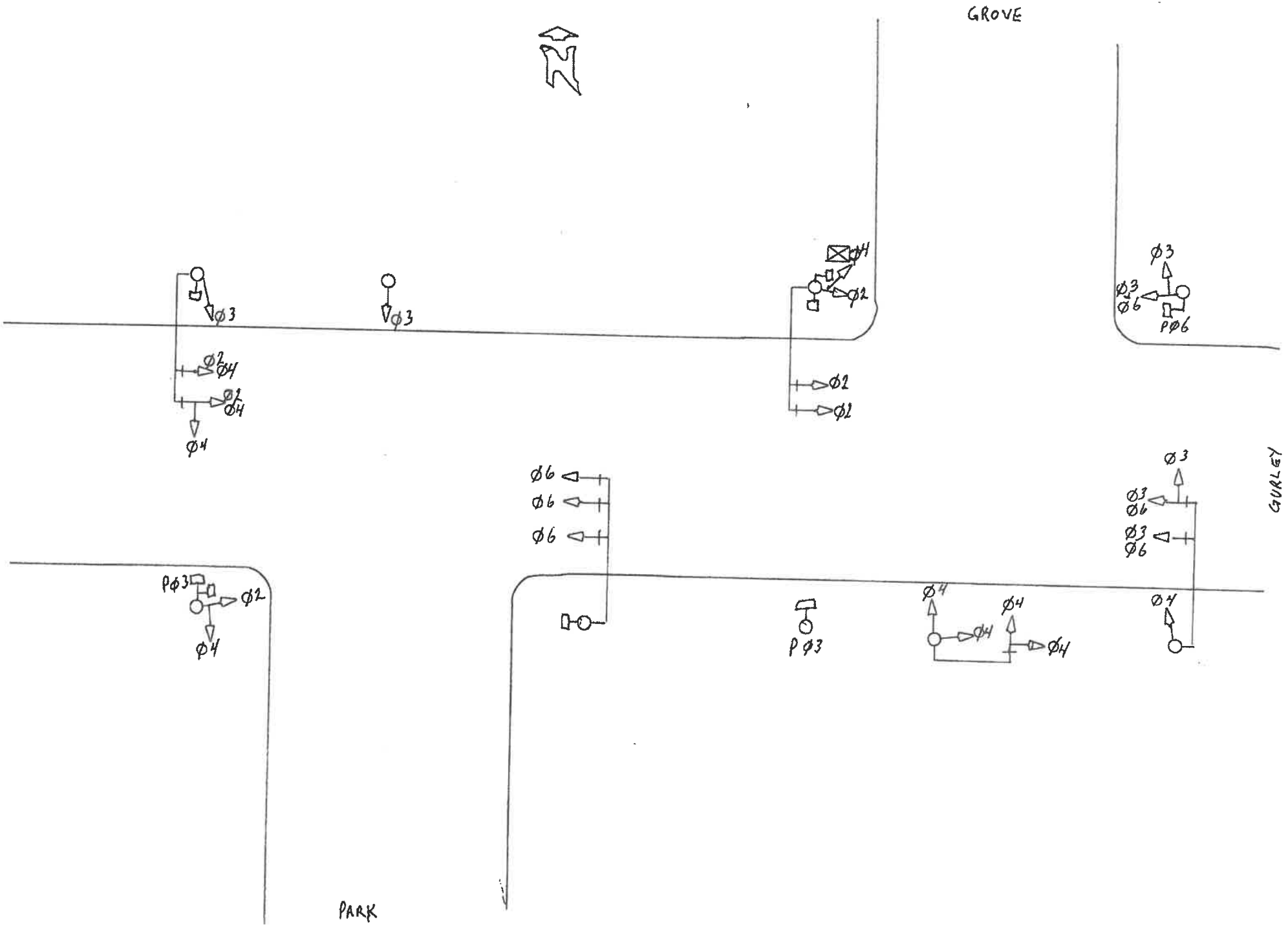
	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	42	10.5
SB Crosswalk	4	60	15
EB Crosswalk	4	56	14
NB Crosswalk	4	55	14

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds


GROVE
GURLEY
PARK
Ø3
Ø3
Ø4
Ø2
Ø2
Ø4
Ø1
Ø4
Ø4
Ø1
Ø1
Ø3
Ø3
Ø6
PØ6
Ø6
Ø6
Ø6
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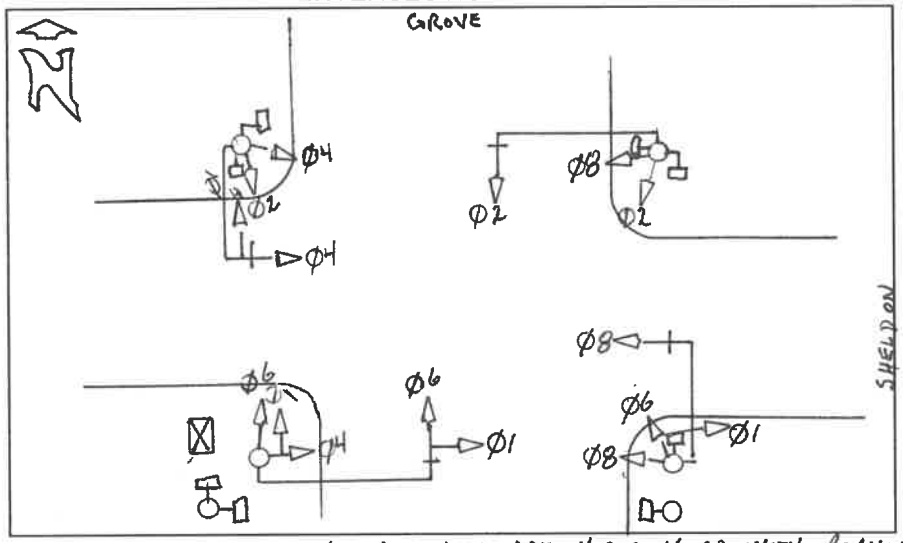
CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION #: 25

MAIN STREET: GROVE

MINOR STREET: SHELDON

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	30
MINOR STREET:	25
YELLOW THR. CLR:	3.5
YELLOW LT CLR:	3.5 & 4.0
ALL-RED THR CLR:	1.5
ALL-RED LT CLR:	1 & 1.5

PED CLEARANCE:

WB:	18
SB:	14
NB:	18
EB:	18

W/B S/W CORNER AND W/B MAST ARM ARE 4 SEC. HEAD WITH PERMISSIVE R/T GRN ARROW
S/B S/E CORNER AND S/B MAST ARM ARE 4 SECTION HEAD WITH PROTECTIVE/PERMISIVE L/T GRN ARROW

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	3	4	5	6	7	8	1	2
Min. Green	5	4	5	45	5	4	2	45
Walk	0	8	0	8	0	8	0	8
Ped Clearance	0	18	0	14	0	18	0	18
Veh Extension	0	4	0	4	0	4	2.5	4
Max 1	5	15	5	45	5	15	20	45
Yellow	4	3.5	4	3.5	4	3.5	3.5	3.5
All-Red Clearance Left-Turn	1	2.0	1	1.5	1	2.0	1.5	1.5
VEH RECALL				X				X
RED RVT	2	2	2	2	2	2	2	2

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	56	14
SB Crosswalk	4	24	6
EB Crosswalk	4	56	14
NB Crosswalk	4	34	8.5

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

ECONOLITE ASC/2 - 2100

CITY OF PRESCOTT

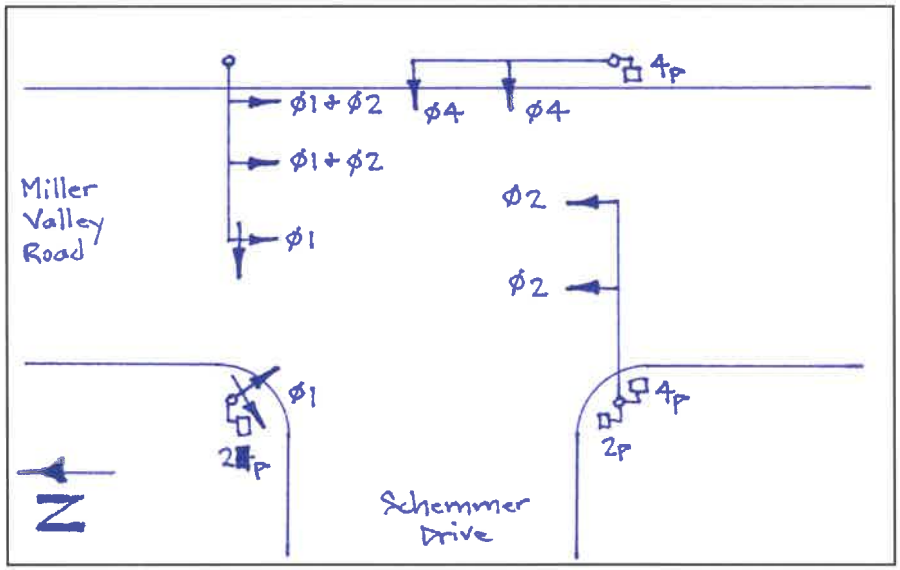
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 24

MAIN STREET: Miller Valley Road

MINOR STREET: Schemmer Drive

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	35 MPH
MINOR STREET:	25 MPH

YELLOW THR. CLR:	4.0
YELLOW LT CLR:	3.0
ALL-RED THR CLR:	1.0
ALL-RED LT CLR:	1.0

PED CLEARANCE:

WB:	14
SB:	10
NB:	10
EB:	14

Recall to max on phase: ϕ2

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	–	ϕ1	ϕ2	–	ϕ4	–	ϕ2+ϕ1
Min. Green			5	5		5		5
Walk			0	7 ~~10~~		7 ~~10~~		–
Ped Clearance			7	10		14 ~~10~~		–
Veh Extension			2.0	5		4		5
Max 1			25	~~45~~		30		~~45~~
Yellow			3.0	4.0		4.0		4.0
All-Red Clearance Left-Turn			1.0	1.0		1.0		1.0

24 Miller Valley Road
Schemmer Drive

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk			
SB Crosswalk			
EB Crosswalk			
NB Crosswalk			

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CITY OF PRESCOTT

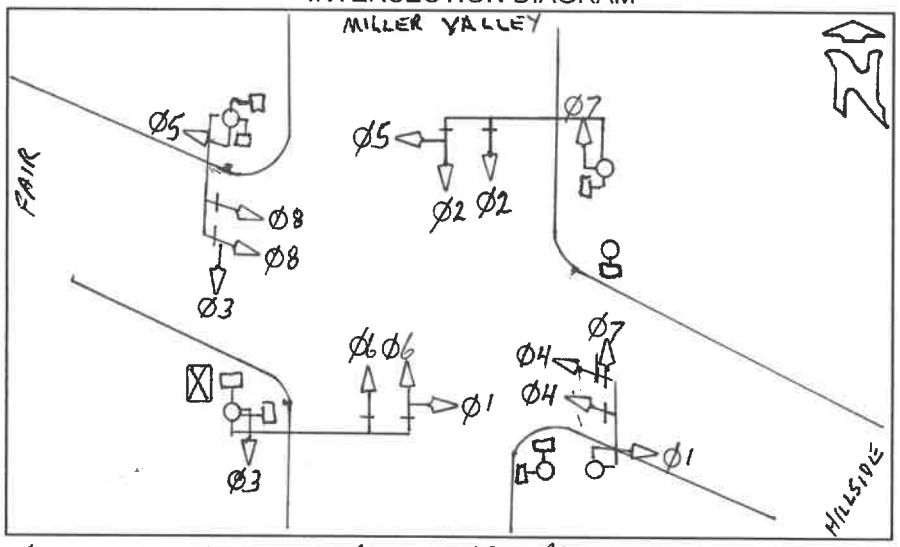
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 23

MAIN STREET: MILLER VALLEY RD.

MINOR STREET: FAIR ST

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	35
MINOR STREET:	25
YELLOW THR. CLR:	4
YELLOW LT CLR:	3+4
ALL-RED THR CLR:	1
ALL-RED LT CLR:	1

PED CLEARANCE:

WB:	15
SB:	13
NB:	11
EB:	19

Ø 1, 3, 5&7 ON CORNER POLES ARE PROTECTED LEFTS ON 2 SEC. HEADS

Ø 1, 3, 5, 7 ON END OF MAST ARMS ARE PROTECTED/PERMISSIVE ON 5 SEC. HEADS

RECALL Ø2 - Ø6

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	7	8	5	6	3	4	1	2
Min. Green	5	5	5	40	5	5	5	40
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	15	0	13	0	19	0	11
Veh Extension	2	2	2	2	2	2	2	2
Max 1	15	12	15	12	15	25	15	12
Yellow	3	4	3	4	3	4	4	4
All-Red Clearance Left-Turn	1	2	1	2	1	2	1	2
MAX 2	40	40	40	40	40	40	40	40
RED RVT	2	2	2	2	2	2	2	2

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	76	19
SB Crosswalk	4	51	12.75
EB Crosswalk	4	58	14.5
NB Crosswalk	4	42	10.5

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

ECONOLITE ASC/2-2100

CITY OF PRESCOTT

INTERSECTION SIGNAL TIMING SHEET:

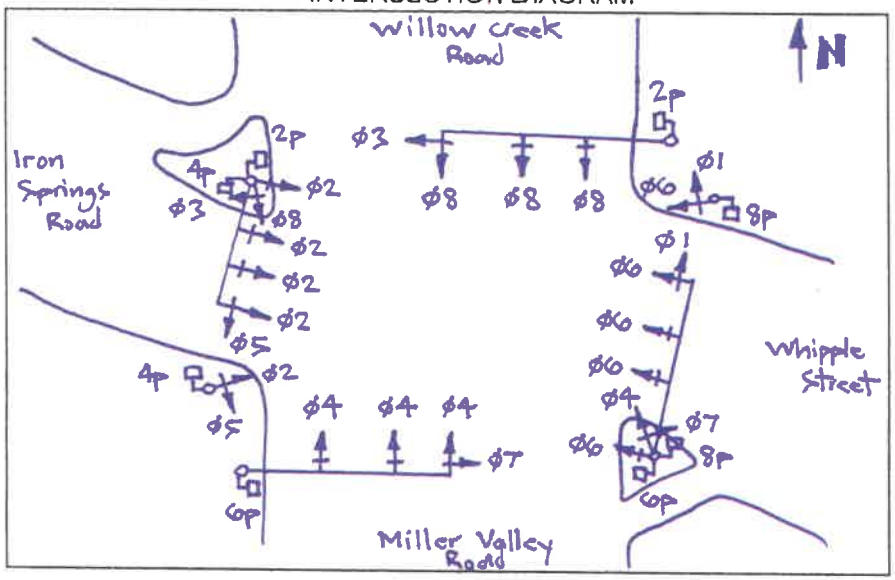
INTERSECTION # : 16

MAIN STREET: Willow Creek Road / Miller Valley Road

4-POINTS

MINOR STREET: Whipple Street / Iron Springs Road

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	35
MINOR STREET:	30

YELLOW THR. CLR:	4.0
YELLOW LT CLR:	3.0
ALL-RED THR CLR:	1.5/1.0
ALL-RED LT CLR:	1.5/1.0

PED CLEARANCE:

WB:	16
SB:	21
NB:	18
EB:	16

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
Min. Green	0	2	0	2	0	2	0	2
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	16	0	21	0	16	0	18
Veh Extension	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
Max 1	20	40	20	40	20	40	30	40
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Clearance/Left-Turn	1.5	1.0	1.5	1.5	1.0	1.5	1.0	1.5

φ4 to 4.0 from 2.5
Peal Entry? φ2 φ4 φ6 φ8
Simi Gap Group on | dual entry: on
4 detector φ4 Type Time
1→0 10→0
time of day

No. 16 4-POINTS

Willow Creek Road / Miller Valley Road

Whipple Street / Iron Springs Road

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4 Ft/sec.		16
SB Crosswalk	4 Ft/sec.		21
EB Crosswalk	4 Ft/sec.		16
NB Crosswalk	4 Ft/sec.		18

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CITY OF PRESCOTT

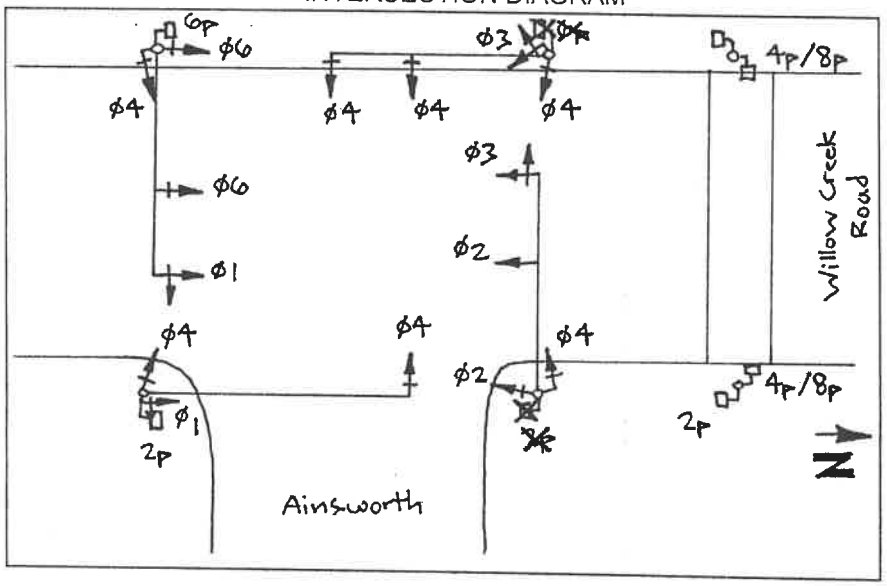
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 15

MAIN STREET: Willow Creek Road

MINOR STREET: Ainsworth

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	35 MPH
MINOR STREET:	25 MPH

YELLOW THR. CLR:	3.0
YELLOW LT CLR:	3.0
ALL-RED THR CLR:	2.0
ALL-RED LT CLR:	1.0

PED CLEARANCE:

WB:	22
SB:	16
NB:	16
EB:	22

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	Ø4	Ø3	Ø6	–	Ø8	Ø1	Ø2
Min. Green		5	5	40		10	5	40
Walk		0	0	7		7	0	7
Ped Clearance		7	0	16		15~~22~~	0	16
Veh Extension		2.5	2.0	4.0			2.0	4.0
Max 1		20	10	70			15	70
Yellow		3.0	3.0	4.0~~3.0~~			3.0	4.0~~3.0~~
All-Red Clearance Left-Turn		1.0~~2.0~~	1.0	2.0			1.0	1.5~~2.0~~

No. 15

Willow Creek Road

Ainsworth

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$

ALL-RED: 2.0 Thru

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4 Ft/sec	57'	15
SB Crosswalk	4 Ft/sec	62'	16
EB Crosswalk	4 Ft/sec	57'	15
NB Crosswalk	4 Ft/sec	34'	9 sec

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds (2.5 sec)
Through Lane Ext: ~~4 seconds~~

6-1-08

CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 48

MAIN STREET: WILLOW CREEK

MINOR STREET: GAIL GARDNER / BLACK

INTERSECTION DIAGRAM

SEE ATTACHED DIAGRAM

POSTED APPROACH SPEEDS:

MAIN STREET:	35
MINOR STREET:	25
YELLOW THR. CLR:	3.0 & 3.5
YELLOW LT CLR:	3
ALL-RED THR CLR:	2
ALL-RED LT CLR:	1

PED CLEARANCE:

WB:	18
SB:	14
NB:	14
EB:	18

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	7	8	5	6		4	1	2
Min. Green	2	2	0	60	0	2	0	60
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	18	0	14	0	18	0	14
Veh Extension	2	4	2	14	5	4	2	14
Max 1	15	10	10	30	0	20	10	30
Yellow	3	3	3	3.5	3	3	3	3.5
All-Red Clearance Left-Turn	1	2	1	2	1	2	1	2
VEH RCL		X				X		
RED RVT	2	2	2	2	2	2	2	2

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	72	18
SB Crosswalk	4	56	14
EB Crosswalk	4	72	18
NB Crosswalk	4	56	14

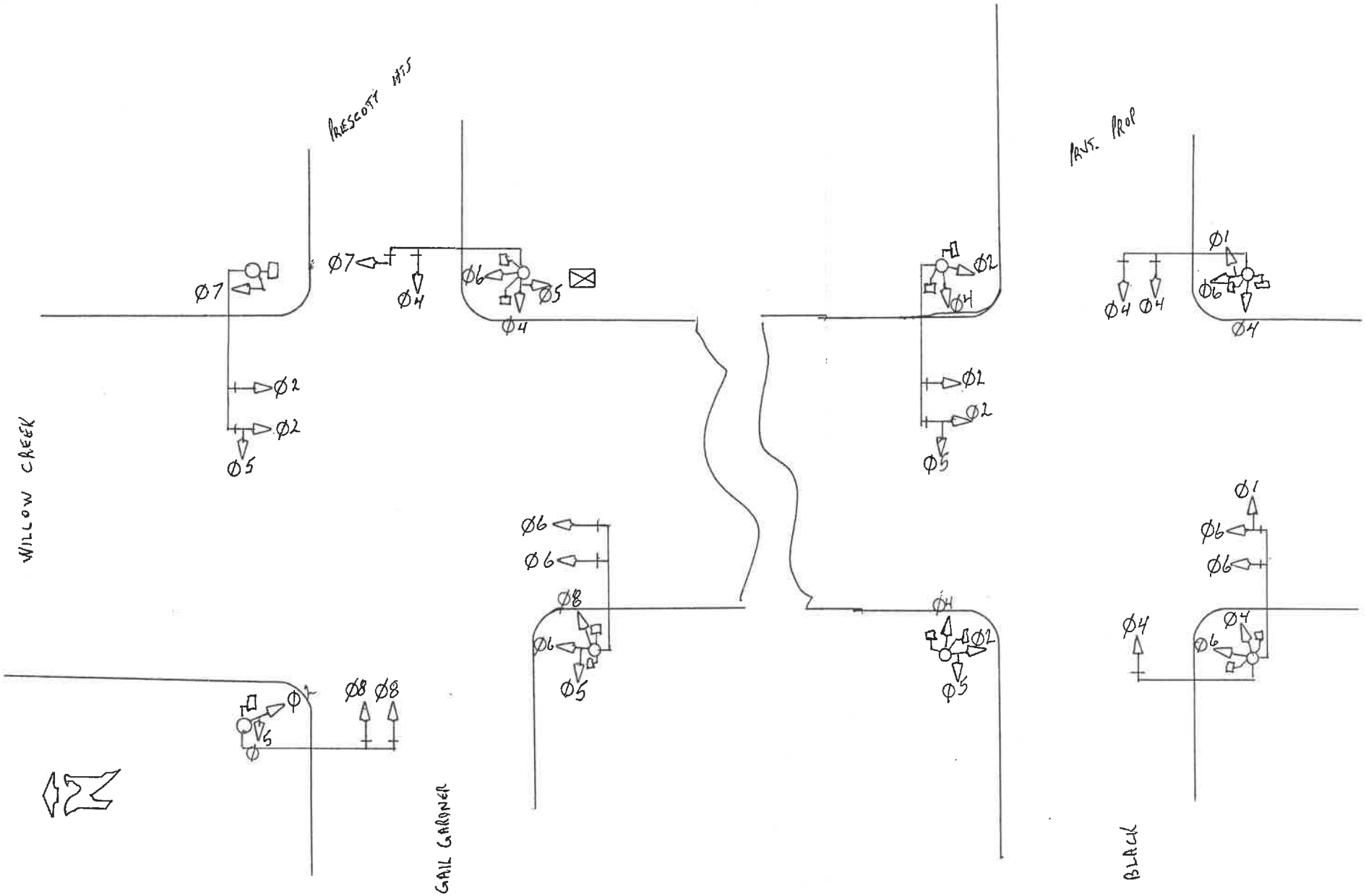
MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

6-1-06



ALL TURN ARROWS AT G.G. ARE 4 SECTION HEADS
EXCEPT Ø 7 WHICH ARE THREE SECT. HEADS

ASC/2-2100

N/B TURN ARROW AT BLACK ON MAST ARM
IS A FIVE SECTION HEAD AS IS THE
TURN HEAD ON THE N/W POLE
ALL OTHERS ARE 4 SECTION HEADS

~~575-06~~
11-18-09

CITY OF PRESCOTT

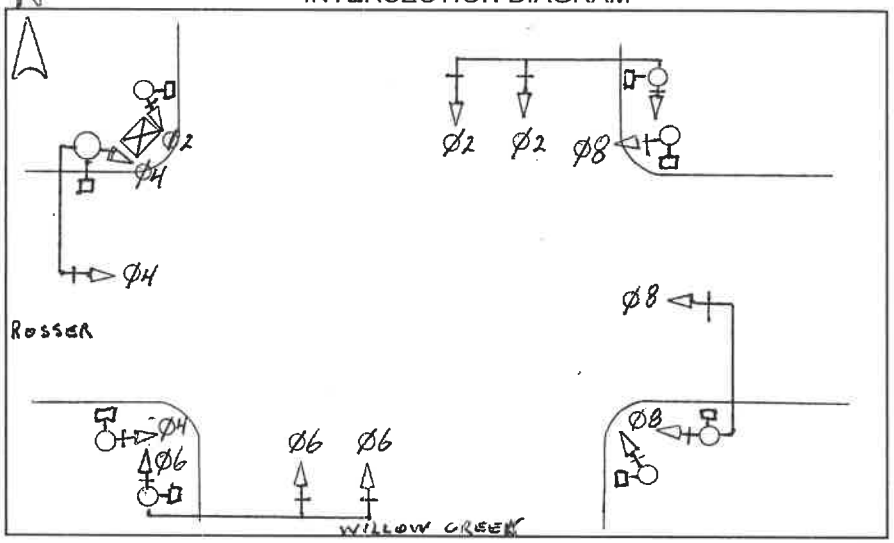
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION #: 11

MAIN STREET: WILLOW CREEK RD

MINOR STREET: ROSSER

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	35
MINOR STREET:	25
YELLOW THR. CLR:	3-4
YELLOW LT CLR:	—
ALL-RED THR CLR:	2
ALL-RED LT CLR:	—

PED CLEARANCE:

WB:	18
SB:	15
NB:	15
EB:	18

NO LEFT TURN ARROWS
TRACONE X

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	3	4	5	6	7	8	1	2
Min. Green	5	5	5	50	5	5	5	50
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	14	0	7	0	14	0	7
Veh Extension		4		4		4		4
Max 1	30	30	30	60	30	15	30	60
Yellow	3	4	3	4	3	4	3	4
All-Red Clearance Left-Turn	.5	2.0	.5	2.0	.5	2.0	.5	2.0
PASS GAP	0	2.0	0	2.5	0	2.0	0	2.5
MAX GRN 2	40	25	40	40	40	20	40	40
RED OVRT	2	2	2	2	2	2	2	2

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	55'	13.75 (14)
SB Crosswalk	4	28'	7
EB Crosswalk	4	55'	13.75 (14)
NB Crosswalk	4	28'	7

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CONTROLLER - TRACONEX

CITY OF PRESCOTT

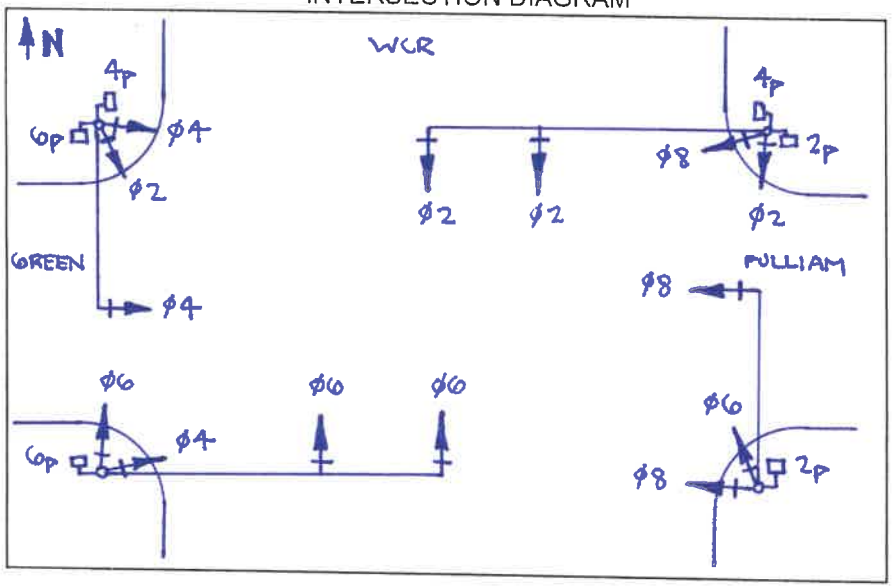
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 8

MAIN STREET: WILLOW CREEK ROAD

MINOR STREET: GREEN / PULLIAM

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	25 MPH

YELLOW THR. CLR:	3/4
YELLOW LT CLR:	N/A
ALL-RED THR CLR:	2.0/1.5
ALL-RED LT CLR:	N/A

PED CLEARANCE:

WB:	13
SB:	7
NB:	7
EB:	13

Recall on phase:

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	Ø4	–	Ø6	–	Ø8	–	Ø2
Min. Green		5		50		5		50
Walk	0	7	0	7	0	7	0	7
Ped Clearance		13		7		13		7
Veh Extension		4.0		4.0		4.0		4.0
Max 1		20		35		20		35
Yellow	3	3	3	4	3	3	3	4
All-Red Clearance	2	2	2	1.5	2	2	2	1.5

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4.0	50/60	13
SB Crosswalk	4.0	28/38	7
EB Crosswalk	4.0	50/60	13
NB Crosswalk	4.0	25/30	7

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CITY OF PRESCOTT

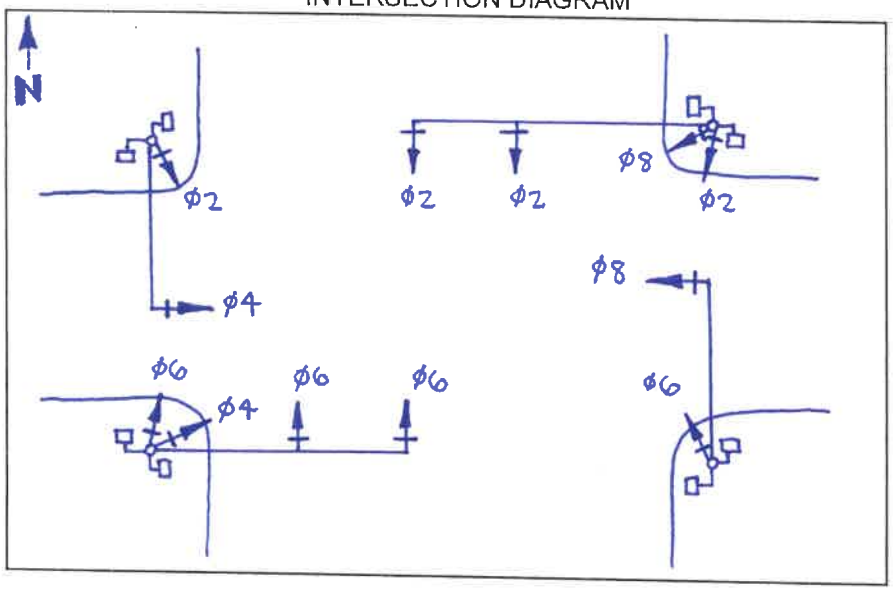
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 7

MAIN STREET: WILLOW CREEK ROAD

MINOR STREET: COUNTRY PARK DRIVE

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	25
YELLOW THR. CLR:	4.0
YELLOW LT CLR:	N/A
ALL-RED THR CLR:	1.5
ALL-RED LT CLR:	N/A

PED CLEARANCE:

WB:	16/17
SB:	8
NB:	8
EB:	16/17

Econolite ASC/2S-2100

Recall: ϕ2 & ϕ6

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	ϕ4	–	ϕ6	–	ϕ8	–	ϕ2
Min. Green		4		4		4		4
Walk		7		7		7		7
Ped Clearance		16		8		16		8
Veh Extension		4.0		4.0		4.0		4.0
Max 1		25		60		25		30
Yellow		4.0		4.0		4.0		4.0
All-Red Clearance		1.5		1.5		1.5		1.5

Willow Creek Road & Country Park

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	66'	16/17
SB Crosswalk	4	30'	8
EB Crosswalk	4	66'	16
NB Crosswalk	4	30'	18

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CITY OF PRESCOTT

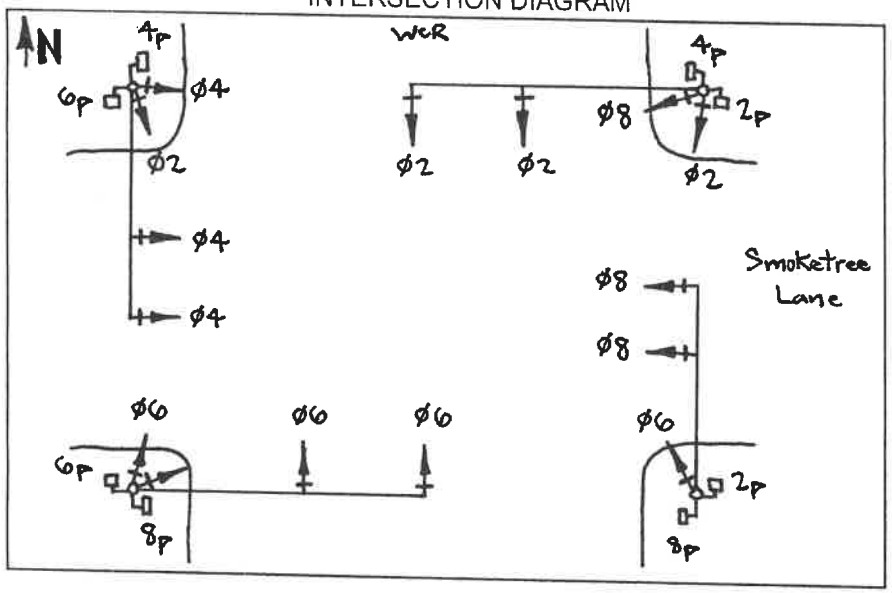
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 6

MAIN STREET: Willow Creek Road

MINOR STREET: Smoketree Lane

INTERSECTION DIAGRAM



Econolite ASC/2-2100

POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	25 MPH
YELLOW THR. CLR:	4.0
YELLOW LT CLR:	N/A
ALL-RED THR CLR:	2.5 / 1.5
ALL-RED LT CLR:	N/A

PED CLEARANCE:

WB:	16
SB:	10
NB:	10
EB:	16

Redall on phase: Ø2 & Ø6

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	Ø4	–	Ø6	–	Ø8	–	Ø2
Min. Green		5		25		5		25
Walk		7		7		7		7
Ped Clearance		16		10		16		10
Veh Extension		4.0		5.0		4.0		5.0
Max 1		25		20		25		20
Yellow		4.0		4.0		4.0		4.0
All-Red Clearance		2.5		1.5		2.5		1.5

6 Willow Creek Road
Smoketree Lane

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	64	16
SB Crosswalk	4	40	10
EB Crosswalk	4	62	16
NB Crosswalk	4	40	10

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

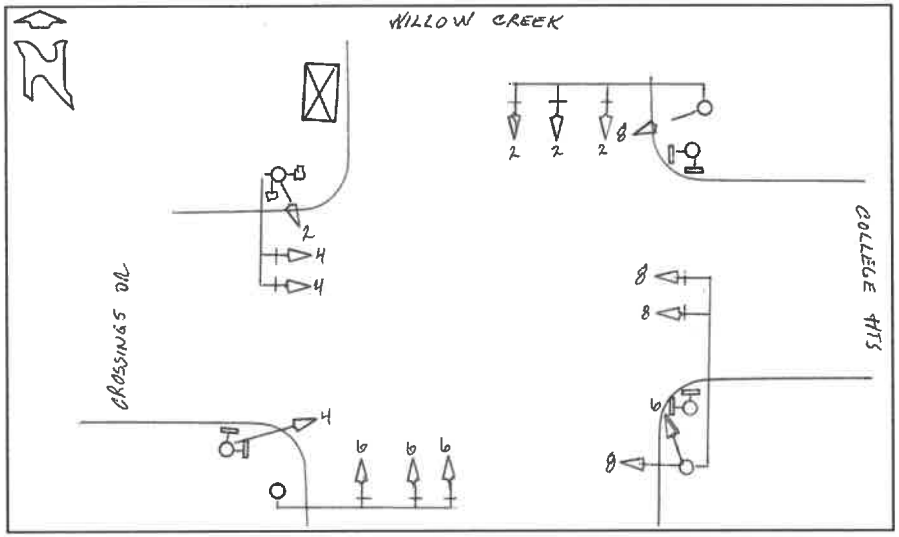
CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 49

MAIN STREET: WILLOW CREEK RD

MINOR STREET: CROSSINGS DR.

INTERSECTION DIAGRAM



ECONOLITE ASC/2S-2100
NO LEFT ARROWS

POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	25 MPH
YELLOW THR. CLR:	3.0/4.0
YELLOW LT CLR:	
ALL-RED THR CLR:	2.5
ALL-RED LT CLR:	

PED CLEARANCE:

WB:	16
SB:	25
NB:	8
EB:	16

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase		4		6		8		2
Min. Green		6		45		6		~~45~~
Walk		7		7		7		7
Ped Clearance		16		25		16		8
Veh Extension		4.0		5.0		4.0		5.0
Max 1				25				25
Yellow		3.0		4.0		3.0		4.0
All-Red Clearance		2.5		2.5		2.5		2.5

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	64/72	16
SB Crosswalk	4	103/118	25
EB Crosswalk	4	64/72	16
NB Crosswalk	4	30/38	8

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

1-10-08

CITY OF PRESCOTT

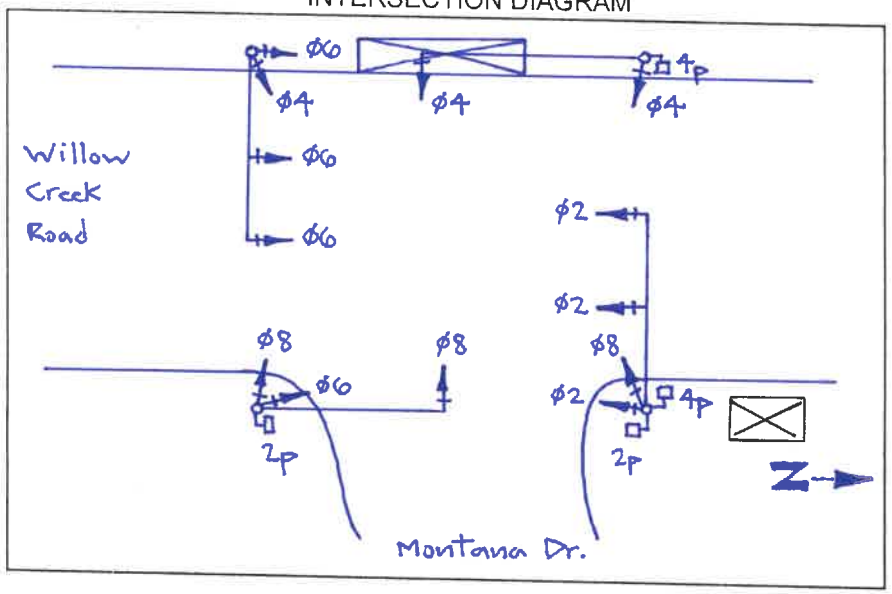
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 5

MAIN STREET: Willow Creek Road

MINOR STREET: Montana Drive

INTERSECTION DIAGRAM



Econolite ASC/2S-2100

POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	25 MPH

YELLOW THR. CLR:	4.0 ~~3.0~~
YELLOW LT CLR:	N/A
ALL-RED THR CLR:	2.0/ 1.5
ALL-RED LT CLR:	N/A

PED CLEARANCE:

WB:	16
SB:	10
NB:	10
EB:	16

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	Ø4	–	Ø6	–	Ø8	–	Ø2
Min. Green		5		25		5		25
Walk		7		7/10		7/10		7
Ped Clearance		16		10		16		10
Veh Extension		2.5		5.0		2.5		5.0
Max 1		25		60		25		60
Yellow		4.0 ~~3.0~~		4.0 ~~3.0~~		4.0 ~~3.0~~		4.0 ~~3.0~~
All-Red Clearance		2.0 ~~2.0~~		1.5		2.0 ~~2.0~~		1.5

No. 5

Willow Creek Road

Montana Drive

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	64'	16
SB Crosswalk	4	62'	10
EB Crosswalk	4	64'	16
NB Crosswalk	4	62'	10

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds / 2.5
Through Lane Ext: 4 seconds

HO-08

CITY OF PRESCOTT

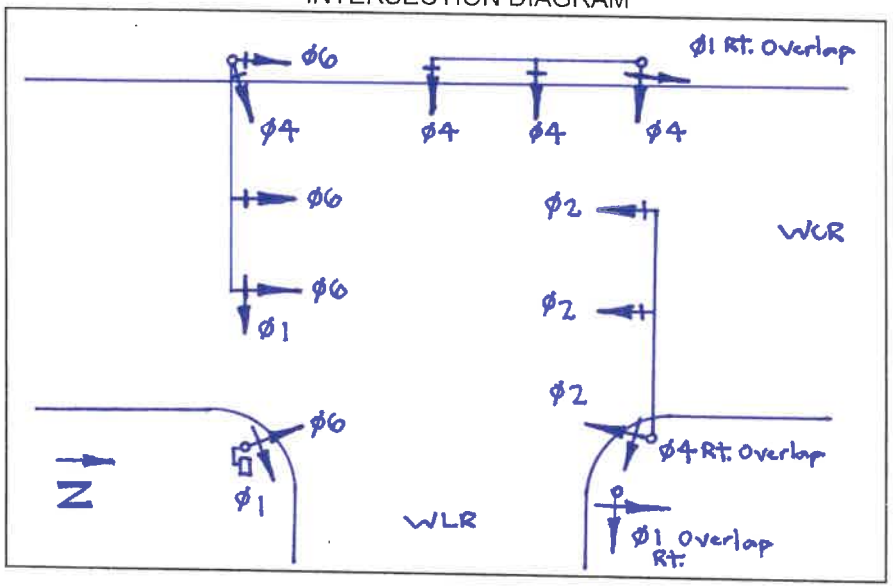
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : 4

MAIN STREET: Willow Creek Road

MINOR STREET: Willow Lake Road

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	40 MPH
MINOR STREET:	40 MPH
YELLOW THR. CLR:	4.0
YELLOW LT CLR:	3.0
ALL-RED THR CLR:	1.5
ALL-RED LT CLR:	1.0

PED CLEARANCE:

WB:	12.5
SB:	17
NB:	12.5
EB:	17

ASC/2S-2100

Recall on phase: ϕ2 + ϕ6

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	–	ϕ4	–	ϕ6	–	–	ϕ1	ϕ2
Min. Green		5		35			1	35
Walk		7		7			0	7
Ped Clearance		12.5		17			0	17
Veh Extension				5.0			2.0	5.0
Max 1		25		60			10	60
Yellow		4.0		4.0			3.0	4.0
All-Red Clearance		1.5		1.5			1.0	1.5

4 Willow Creek Road
Willow Lake Road

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk		50	12.5
SB Crosswalk		68	17
EB Crosswalk		50	12.5
NB Crosswalk		68	17

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

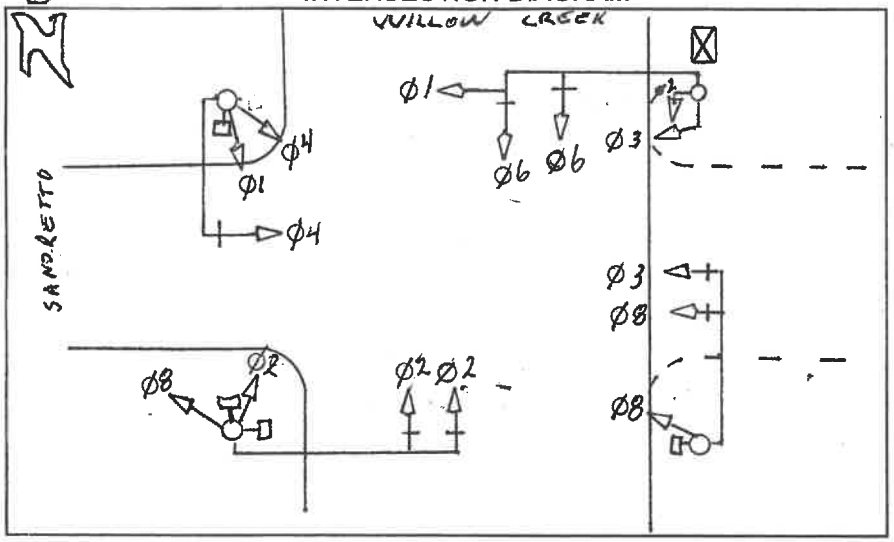
CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION #: 3

MAIN STREET: WILLOW CREEK RD

MINOR STREET: SANDRETTO DR

INTERSECTION DIAGRAM



N/W CORNER ϕ1 IS 4 SECTION HEAD
OVERHEAD N/B ϕ1 IS 5 SECTION HEAD

POSTED APPROACH SPEEDS:

MAIN STREET:	40
MINOR STREET:	25
YELLOW THR. CLR:	4 / 3
YELLOW LT CLR:	3
ALL-RED THR CLR:	2.0 / 1.0
ALL-RED LT CLR:	2.0/1.0
PED CLEARANCE:	
WB:	14
SB:	12
NB:	12
EB:	14

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase ϕ1	3	4	1	2	5	8	7	6
Min. Green	2	4	0	25	0	4	0	25
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	14	0	12	0	14	0	12
Veh Extension	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0
Max 1	20	10	10	65	15	12	35	65
Yellow	3.0 ~~3.0~~	4.0	3.0	4.0	3.0	3.0	3.0	4.0
All-Red Clearance/Left-Turn	2.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
MAX 2	40	40	40	40	40	40	40	40

Recall on ϕ2 & ϕ6

Ped. Recall on ϕ2 from 7:00 AM to 9:00 PM

Recall ϕ2 & ϕ6

	1	2	3	4	5	6	7	8
Min Green	9	50	2	7	9	50	0	4
Walk	0	7	0	7	0	7	0	7
Ped clr	0	12	0	20	0	12	0	14
Veh. ext.	2	5	5	10	5	5	5	5
Max 1	0	65	20	20	0	65	35	12
Max 2	40	35	40	0	40	35	40	40
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clr.	1	2	2	2	1	2	1	2

TOD Step 2

		ϕ2	ϕ6
Step 1	7:00 AM		
	Veh. Recall	X	X
	Max Recall	X	X
	Ped Recall	X	
Step 2	9:00 AM	ϕ2	ϕ6
	Ped Recall	X	
Step 3	15:00 PM	ϕ2	ϕ6
	Veh. Recall	X	X
	Max Recall	X	X
	Ped Recall	X	
Step 4	17:00 PM	ϕ2	ϕ6
	Veh Recall	X	X
	Ped Recall	X	

Step 5	19:00 PM	ϕ2	ϕ6
	Max 2 enable	X	X
	Veh. Recall	X	X

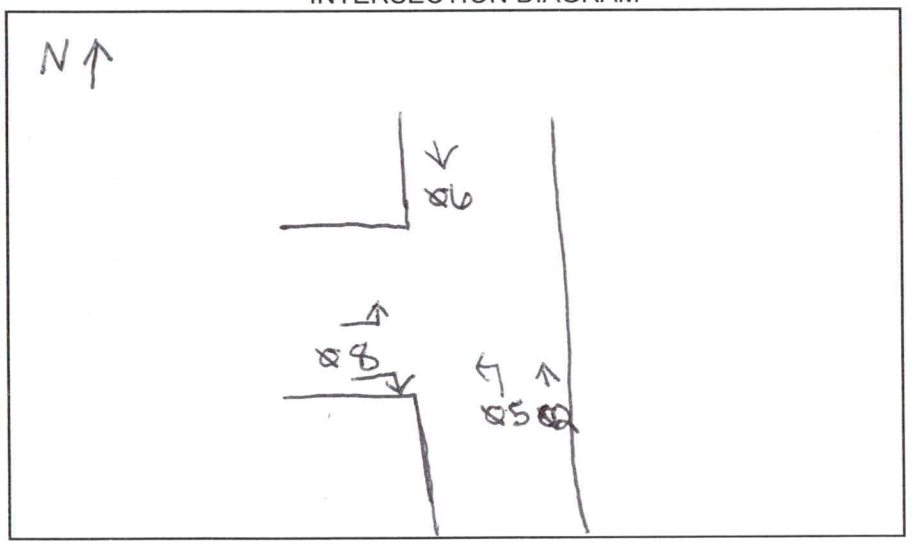
N/A.

CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : _____ MAIN STREET: Willow Creek

MINOR STREET: Commerce Drive

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:	
MAIN STREET:	40
MINOR STREET:	
YELLOW THR. CLR:	4.0
YELLOW LT CLR:	4.0
ALL-RED THR CLR:	2.0
ALL-RED LT CLR:	
PED CLEARANCE:	
WB:	
SB:	
NB:	
EB:	

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase			Ø5	Ø6		Ø8		Ø2
Min. Green			2	50		4		50
Walk				14		7		
Ped Clearance				14		19		
Veh Extension			3.5	4.0		4.0		4.0
Max 1			20	60		25		60
Yellow			4.0	4.0		4.0		4.0
All-Red Clearance Left-Turn								

CITY OF PRESCOTT

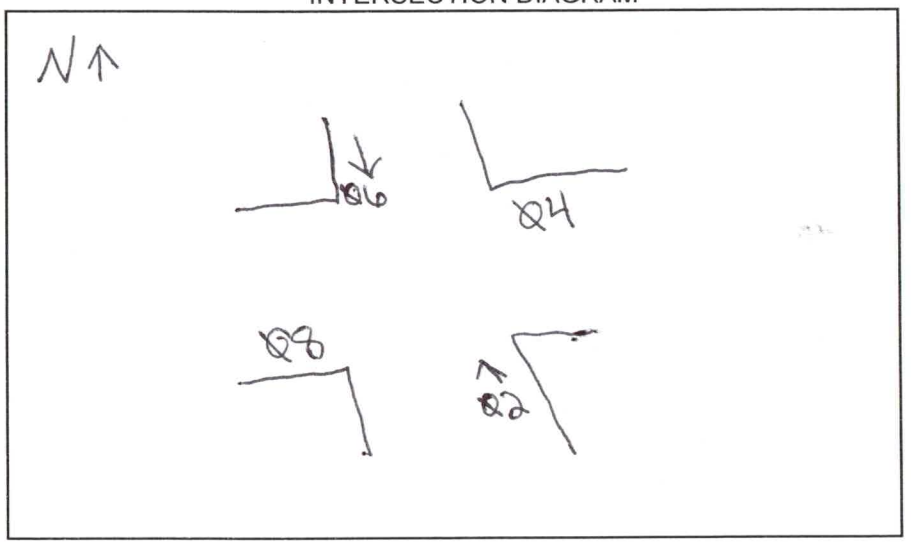
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : _____

MAIN STREET: Willow Creek

MINOR STREET: Honda

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	45
MINOR STREET:	N/A
YELLOW THR. CLR:	
YELLOW LT CLR:	
ALL-RED THR CLR:	2.0
ALL-RED LT CLR:	

PED CLEARANCE:

WB:	
SB:	
NB:	
EB:	

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase		Ø4		Ø6		Ø8		Ø2
Min. Green		5		5		5		5
Walk		7		7		7		7
Ped Clearance		16		16		16		16
Veh Extension		4.0		5.0		4.0		5.0
Max 1		15		60		15		60
Yellow		4.0		4.0		4.0		4.0
All-Red Clearance Left-Turn								

5-20-06

CITY OF PRESCOTT

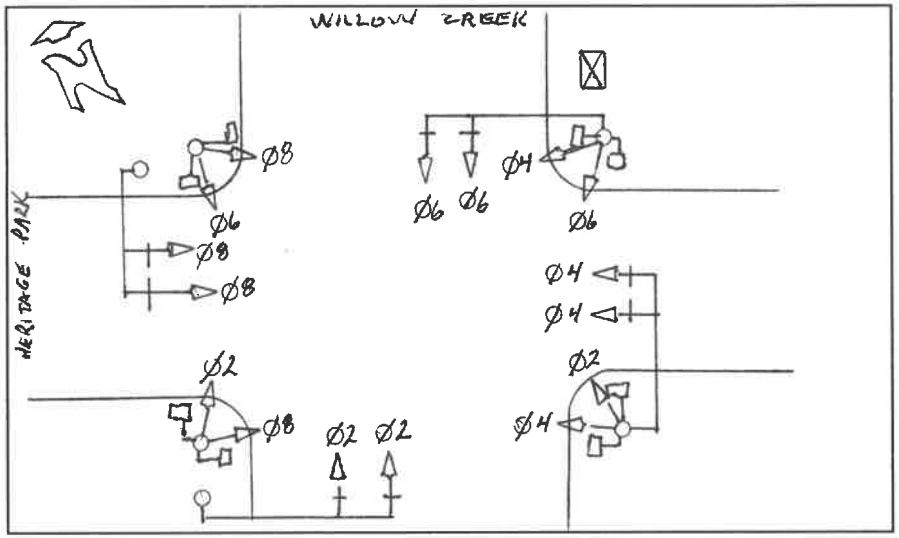
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION #: 47

MAIN STREET: WILLOW CREEK

MINOR STREET: HERITAGE PARK

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	45
MINOR STREET:	25
YELLOW THR. CLR:	3 TO 4.5
YELLOW LT CLR:	—
ALL-RED THR CLR:	1
ALL-RED LT CLR:	—

PED CLEARANCE:

WB:	16
SB:	16
NB:	16
EB:	16

NO TURN ARROWS

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase		8		2		4		6
Min. Green	0	2	0	70	0	2	0	70
Walk	0	7	0	7	0	7	0	7
Ped Clearance	0	16	0	16	0	16	0	16
Veh Extension	0	4	0	6	0	4	0	6
Max 1	0	7	0	40	20	15	0	70
Yellow	3	3.5	3	4.5	3	3	3	4.5
All-Red Clearance Left-Turn	0	1	0	1	0	1	0	1
RED RVT	2	2	2	2	2	2	2	2

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V=
W=

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	60	15
SB Crosswalk	4	77	19.25
EB Crosswalk	4	48	12
NB Crosswalk	4	44	12.25

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds
Through Min Green: 2 seconds

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

CONTROLLER - ECONOLITE
ASC/2S-2100

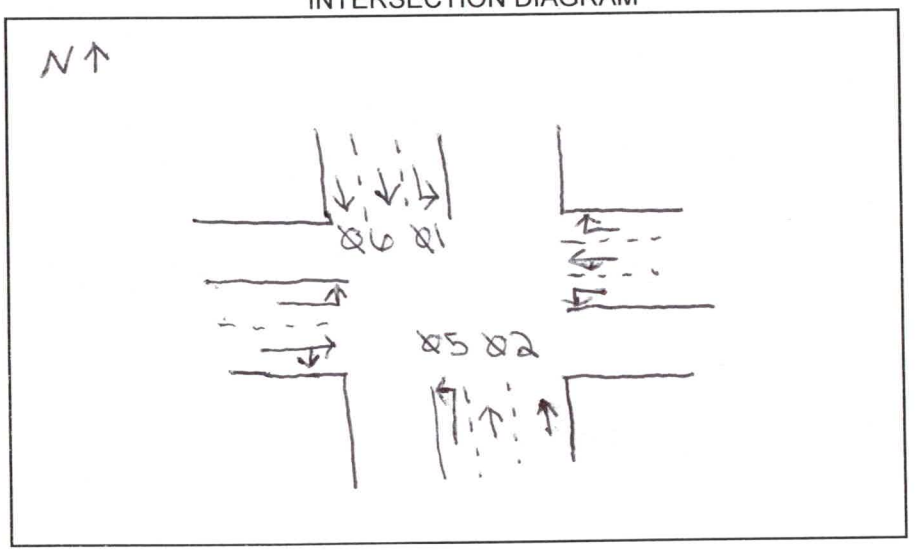
CITY OF PRESCOTT
INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : _____

MAIN STREET: Willow Creek

MINOR STREET: Haas/Whispering Rock

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	45
MINOR STREET:	25
YELLOW THR. CLR:	4.5
YELLOW LT CLR:	3.0-3.5
ALL-RED THR CLR:	2.0
ALL-RED LT CLR:	1.5

PED CLEARANCE:

WB:	
SB:	
NB:	18
EB:	18

Interval	EB LT	WB	NB LT	SB	WB LT	EB	SB LT	NB
Phase	Ø7	Ø8	Ø5	Ø6	Ø3	Ø4	Ø1	Ø2
Min. Green	3	5	3	12	3	5	3	12
Walk						7		7
Ped Clearance						18		18
Veh Extension	3.0	3.5	3.0	7.5	3.0	3.5	3.0	7.5
Max 1	20	30	20	80	20	30	20	80
Yellow	3.0	3.5	3.0	4.5	3.0	3.5	3.0	4.5
All-Red Clearance Left-Turn								

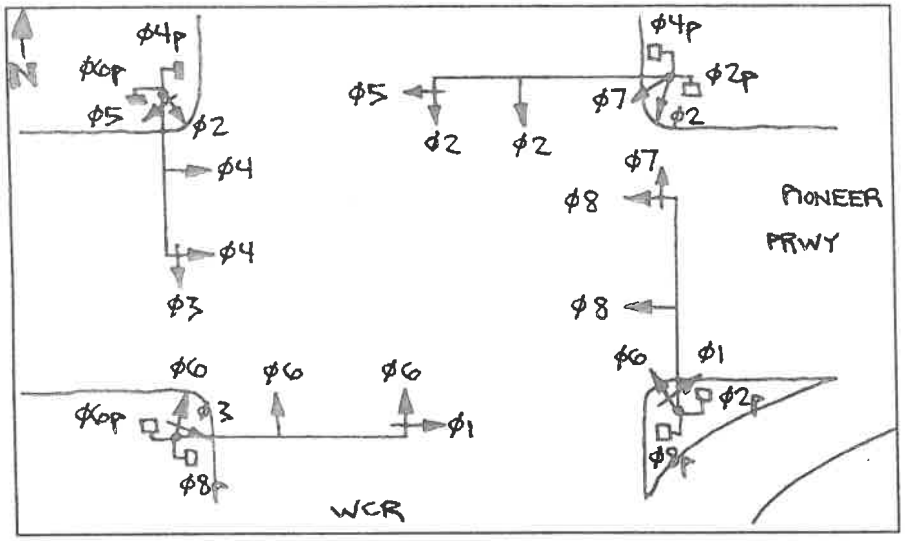
CITY OF PRESCOTT

INTERSECTION SIGNAL TIMING SHEET:

INTERSECTION # : CNTY #1 MAIN STREET: WILLOW CREEK ROAD

MINOR STREET: PIONEER PARKWAY

INTERSECTION DIAGRAM



POSTED APPROACH SPEEDS:

MAIN STREET:	45 MPH
MINOR STREET:	45 MPH

YELLOW THR. CLR:	4.3
YELLOW LT CLR:	3
ALL-RED THR CLR:	1.5
ALL-RED LT CLR:	2

PED CLEARANCE:

WB:	16
SB:	20
NB:	29
EB:	26

RECALL ON PHASE: 2 & 6

Interval	SB LT	NB	WB LT	WB	NB LT	SB	WB LT	EB
Phase	1	2	3	4	5	6	7	8
Min. Green	2	4	2	4	2	4	2	4
Walk	N/A	7	7	7	N/A	7	N/A	7
Ped Clearance	N/A	29	N/A	16	N/A	20	N/A	26
Veh Extension	2	4	2	4	2	4	2	4
Max 1	15	35	35	25	15	35	15	25
Yellow	3	4.3	3	4.3	3	4.3	3	4.3
All-Red Clearance Left-Turn	2	1.5	2	1.5	2	1.5	2	1.5

YELLOW VEHICLE CLEARANCE INTERVALS

Posted Approach Speed	Minimum Yellow Interval (sec)	Yellow Interval (sec) Used for Timing
25	3	3
30	3.2	3.5
35	3.6	4
40	3.9	4
45	4.3	4.5
50	4.7	5
55	5	5

ALL-RED CLEARANCE INTERVAL

All Through Phases - 1.0 Seconds Minimum
All Left Turn Phases - 1.0 Seconds Minimum

V= 45
W= measured

or RED Clearance Interval = $\frac{W + L}{1.47\ V}$ ALL-RED:

Where: V = Posted Approach Speed (Through) or 25 (Lefts)
L = 20 feet
W = Distance, in feet, that vehicle travels within a conflict area

PEDESTRIAN INTERVALS

Walk Interval: 7 Seconds
Don't Walk Interval: 4 feet per second

Pedestrian Clearance Calculations

	Walking Speed	Distance from curb to center of far lane	Pedestrian Clearance Interval (sec.)
WB Crosswalk	4	64'	16
SB Crosswalk	4	80'	20
EB Crosswalk	4	104'	26
NB Crosswalk	4	116'	29

MINIMUM GREEN TIME

Left Turn Min Green: 0 seconds 2 used
Through Min Green: 2 seconds 4 used

VEHICLE EXTENSION TIME

Left Turn Lane Ext : 2 seconds
Through Lane Ext: 4 seconds

12/26/2018

DATA FROM CABINET

From the Desk of...

IAN MATTINGLY
Transportation Division

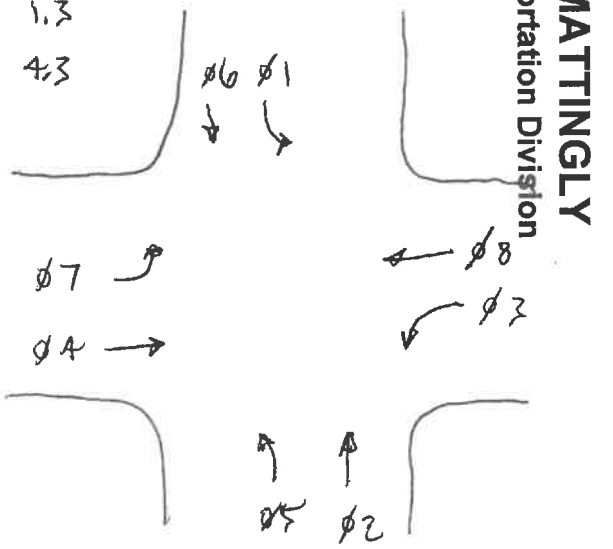
	∅1	2	3	4	5	6	7	8
MinGrn	2	4	4	4	4	4	4	4
Walk	0	4	0	4	0	4	0	4
Ped Clr.	0	29	14	26	0	20	0	26
Veh. Ext.	2.0	4.0	3.0	4.0	2.0	3.0	2.0	4.0
Max 1	15	45	35	35	20	45	20	35
Max 2	15	45	55	35	20	45	20	35
Red	2.0	1.5	1.5	1.3	1.0	1.5	1.0	1.3
Yell.	3	4.3	3	4.3	3	4.3	3	4.3

Recall ∅2 + ∅6

TOD 1: 7:00AM

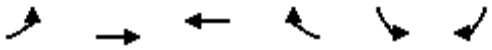
Max 2 Enable ∅3

2: 8:30AM No loop delay.



APPENDIX SS-17

Willow Creek Road Existing Delay and Capacity Analysis Results



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6
Lane Configurations							
Traffic Volume (vph)	450	200	136	218	350	232	
Future Volume (vph)	450	200	136	218	350	232	
Turn Type	custom	NA	NA	pm+ov	Prot	Perm	
Protected Phases	3	3 6	2	4	4		6
Permitted Phases	6			2		4	
Detector Phase	3	3 6	2	4	4	4	
Switch Phase							
Minimum Initial (s)	5.0		25.0	20.0	20.0	20.0	25.0
Minimum Split (s)	9.0		29.0	24.0	24.0	24.0	29.0
Total Split (s)	35.0		35.0	35.0	35.0	35.0	35.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%	33%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	
Recall Mode	Max		Max	Max	Max	Max	Max
Act Effct Green (s)		62.0	31.0	66.0	31.0	31.0	
Actuated g/C Ratio		0.59	0.30	0.63	0.30	0.30	
v/c Ratio		0.40	0.14	0.22	0.38	0.39	
Control Delay		11.1	27.7	1.5	30.7	5.5	
Queue Delay		0.0	0.0	0.0	0.0	0.0	
Total Delay		11.1	27.7	1.5	30.7	5.5	
LOS		B	C	A	C	A	
Approach Delay		11.1	11.6		20.6		
Approach LOS		B	B		C		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	10	18	4	118	14	619	206	540
Future Volume (vph)	20	10	18	4	118	14	619	206	540
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	45.0	45.0	20.0	65.0
Total Split (%)	18.8%	18.8%	18.8%	18.8%	18.8%	56.3%	56.3%	25.0%	81.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)		9.5		9.5	9.5	40.0	40.0	60.0	60.0
Actuated g/C Ratio		0.12		0.12	0.12	0.50	0.50	0.75	0.75
v/c Ratio		0.24		0.15	0.43	0.04	0.40	0.35	0.23
Control Delay		29.3		34.1	11.4	10.6	13.2	4.4	3.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		29.3		34.1	11.4	10.6	13.2	4.4	3.2
LOS		C		C	B	B	B	A	A
Approach Delay		29.3		15.0			13.1		3.5
Approach LOS		C		B			B		A

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 20 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	10	21	57	710	800
Future Volume (vph)	10	21	57	710	800
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	30.0	30.0	25.0		45.0
Total Split (%)	30.0%	30.0%	25.0%		45.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None		Max
Act Effct Green (s)	7.1	7.1	56.0	62.2	45.1
Actuated g/C Ratio	0.10	0.10	0.82	0.91	0.66
v/c Ratio	0.06	0.12	0.10	0.24	0.38
Control Delay	30.4	15.4	1.9	1.6	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	15.4	1.9	1.6	7.8
LOS	C	B	A	A	A
Approach Delay	20.2			1.6	7.8
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 68.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 42.5%	ICU Level of Service A
Analysis Period (min) 15	

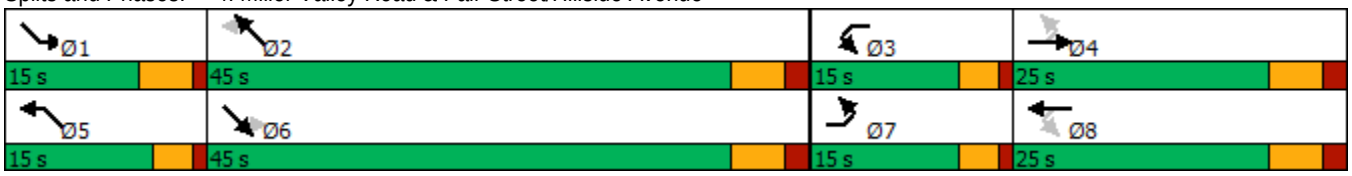
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	48	209	49	66	106	829	23	622
Future Volume (vph)	48	209	49	66	106	829	23	622
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	15.0	25.0	15.0	25.0	15.0	45.0	15.0	45.0
Total Split (%)	15.0%	25.0%	15.0%	25.0%	15.0%	45.0%	15.0%	45.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	23.3	16.1	24.1	18.0	50.5	46.2	46.2	40.1
Actuated g/C Ratio	0.27	0.19	0.28	0.21	0.59	0.54	0.54	0.46
v/c Ratio	0.14	0.78	0.21	0.40	0.27	0.54	0.08	0.42
Control Delay	22.5	50.9	23.6	24.9	11.0	16.4	9.7	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	50.9	23.6	24.9	11.0	16.4	9.7	18.9
LOS	C	D	C	C	B	B	A	B
Approach Delay		46.4		24.6		15.8		18.6
Approach LOS		D		C		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 86.3	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

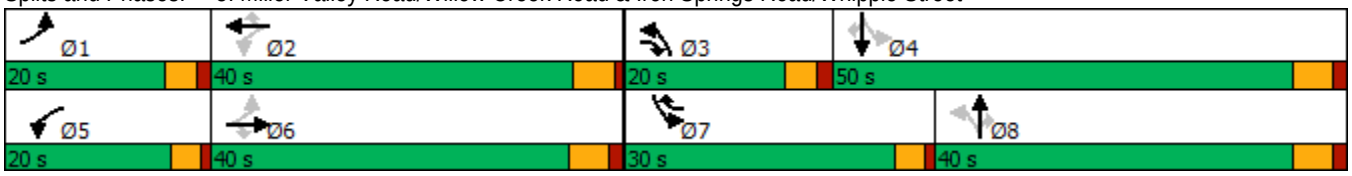
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	517	350	193	444	516	208	416	87	328	572	83
Future Volume (vph)	95	517	350	193	444	516	208	416	87	328	572	83
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	20.0	40.0	20.0	20.0	40.0	30.0	20.0	40.0	40.0	30.0	50.0	50.0
Total Split (%)	15.4%	30.8%	15.4%	15.4%	30.8%	23.1%	15.4%	30.8%	30.8%	23.1%	38.5%	38.5%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	32.4	23.2	40.6	41.3	28.0	52.2	32.9	20.3	20.3	45.0	27.1	27.1
Actuated g/C Ratio	0.34	0.24	0.43	0.43	0.29	0.55	0.35	0.21	0.21	0.47	0.28	0.28
v/c Ratio	0.29	0.65	0.50	0.56	0.47	0.57	0.62	0.60	0.22	0.71	0.62	0.17
Control Delay	20.9	37.9	15.5	24.8	30.6	9.4	25.3	39.1	3.8	26.0	33.4	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	37.9	15.5	24.8	30.6	9.4	25.3	39.1	3.8	26.0	33.4	6.3
LOS	C	D	B	C	C	A	C	D	A	C	C	A
Approach Delay		28.1			20.2			30.7			28.7	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 95.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

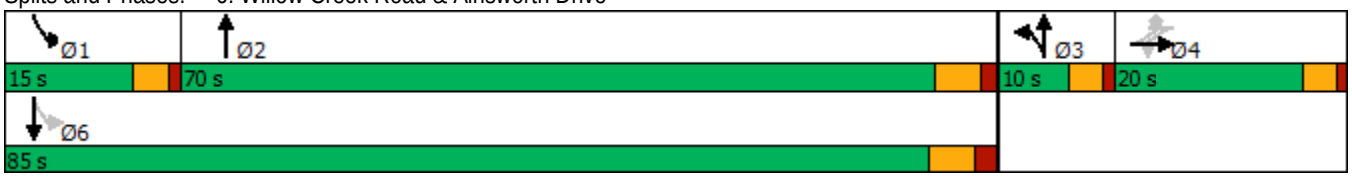
Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	10	21	5	36	743	130	1047	
Future Volume (vph)	10	21	5	36	743	130	1047	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	20.0	20.0	20.0	10.0		15.0	85.0	70.0
Total Split (%)	17.4%	17.4%	17.4%	8.7%		13.0%	73.9%	61%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	None	None	None		None	None	None
Act Effct Green (s)	6.3	6.3	6.3	6.1	50.4	52.4	50.3	
Actuated g/C Ratio	0.09	0.09	0.09	0.08	0.69	0.72	0.69	
v/c Ratio	0.10	0.14	0.02	0.27	0.37	0.30	0.48	
Control Delay	31.1	34.8	0.2	38.8	5.9	5.7	6.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	31.1	34.8	0.2	38.8	5.9	5.7	6.7	
LOS	C	C	A	D	A	A	A	
Approach Delay	31.1				7.3		6.6	
Approach LOS	C				A		A	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 72.7	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	8	22	4	5	29	649	18	1240
Future Volume (vph)	8	22	4	5	29	649	18	1240
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	20.0	20.0	20.0	20.0	10.0	30.0	10.0	30.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%	16.7%	50.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	15.1	15.1	15.1	15.1	29.0	26.4	28.1	24.7
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.54	0.49	0.52	0.46
v/c Ratio	0.02	0.34	0.01	0.01	0.11	0.45	0.05	0.85
Control Delay	16.5	6.6	16.5	16.4	6.0	10.2	5.5	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	6.6	16.5	16.4	6.0	10.2	5.5	21.6
LOS	B	A	B	B	A	B	A	C
Approach Delay		7.0		16.4		10.0		21.3
Approach LOS		A		B		B		C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

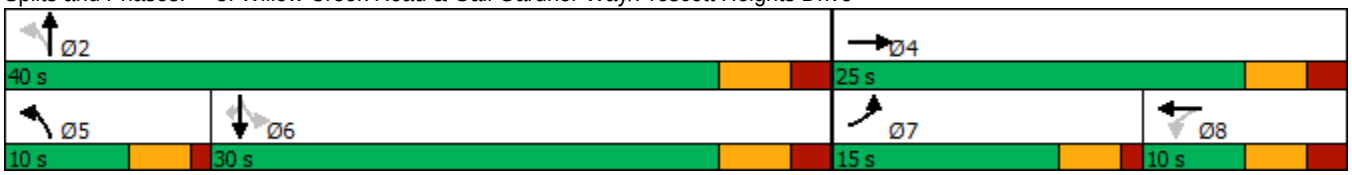
Splits and Phases: 7: Willow Creek Road & Black Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	276	10	7	7	25	617	11	1269	230
Future Volume (vph)	276	10	7	7	25	617	11	1269	230
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	15.0	25.0	10.0	10.0	10.0	40.0	30.0	30.0	30.0
Total Split (%)	23.1%	38.5%	15.4%	15.4%	15.4%	61.5%	46.2%	46.2%	46.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None	None	None
Act Effct Green (s)	9.5	20.0	6.5	6.5	36.0	34.5	30.7	30.7	30.7
Actuated g/C Ratio	0.15	0.31	0.10	0.10	0.55	0.53	0.47	0.47	0.47
v/c Ratio	0.60	0.08	0.06	0.07	0.11	0.37	0.04	0.83	0.30
Control Delay	30.9	8.8	28.9	24.7	7.6	9.5	12.4	23.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	8.8	28.9	24.7	7.6	9.5	12.4	23.1	5.8
LOS	C	A	C	C	A	A	B	C	A
Approach Delay		28.3		26.4		9.4		20.4	
Approach LOS		C		C		A		C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Natural Cycle: 85	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	1	205	9	12	790	222	1366
Future Volume (vph)	5	1	205	9	12	790	222	1366
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	13.0	18.6	18.6	53.4	53.4	53.4	53.4
Actuated g/C Ratio	0.15	0.15	0.22	0.22	0.63	0.63	0.63	0.63
v/c Ratio	0.02	0.06	0.72	0.15	0.10	0.44	0.78	0.68
Control Delay	26.4	13.3	44.5	10.8	9.8	8.8	33.9	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	13.3	44.5	10.8	9.8	8.8	33.9	12.5
LOS	C	B	D	B	A	A	C	B
Approach Delay		16.6		37.4		8.8		15.5
Approach LOS		B		D		A		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 84.1	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

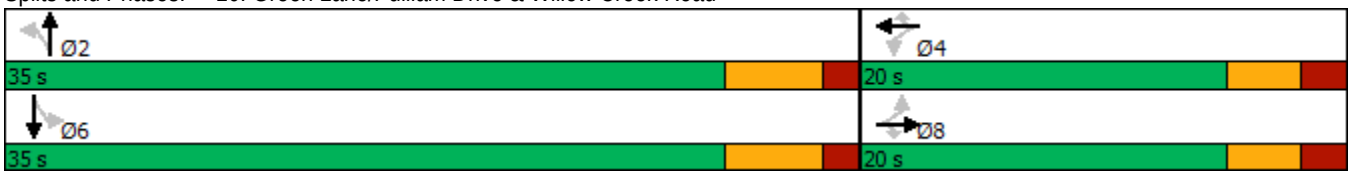
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	10	11	51	10	66	41	721	108	1603
Future Volume (vph)	10	10	11	51	10	66	41	721	108	1603
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	35.0	35.0	35.0	35.0
Total Split (%)	36.4%	36.4%	36.4%	36.4%	36.4%	36.4%	63.6%	63.6%	63.6%	63.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		8.2	8.2		8.7	8.7	31.5	31.5	31.5	31.5
Actuated g/C Ratio		0.18	0.18		0.19	0.19	0.68	0.68	0.68	0.68
v/c Ratio		0.08	0.04		0.25	0.20	0.27	0.34	0.27	0.75
Control Delay		17.2	0.2		19.7	6.9	10.7	5.2	7.3	10.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.2	0.2		19.7	6.9	10.7	5.2	7.3	10.9
LOS		B	A		B	A	B	A	A	B
Approach Delay		11.2			13.1			5.5		10.7
Approach LOS		B			B			A		B

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 46.4	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

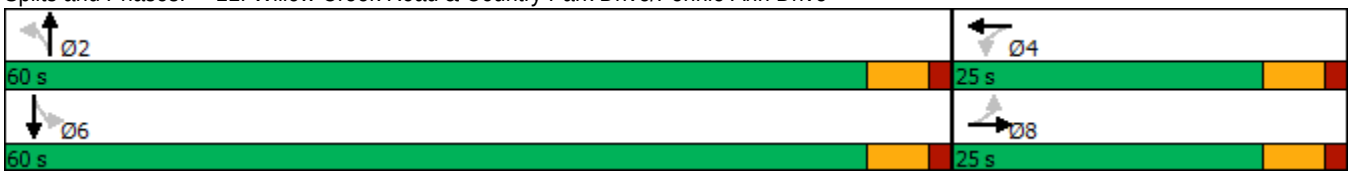
Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	91	2	2	0	33	758	16	1639
Future Volume (vph)	91	2	2	0	33	758	16	1639
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	25.0	25.0	25.0	25.0	60.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		15.7		9.0	54.6	54.6	54.6	54.6
Actuated g/C Ratio		0.19		0.11	0.67	0.67	0.67	0.67
v/c Ratio		0.71		0.02	0.40	0.35	0.04	0.76
Control Delay		40.2		0.0	23.2	6.7	5.9	12.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		40.2		0.0	23.2	6.7	5.9	12.3
LOS		D		A	C	A	A	B
Approach Delay		40.2				7.3		12.2
Approach LOS		D				A		B

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 81.3	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

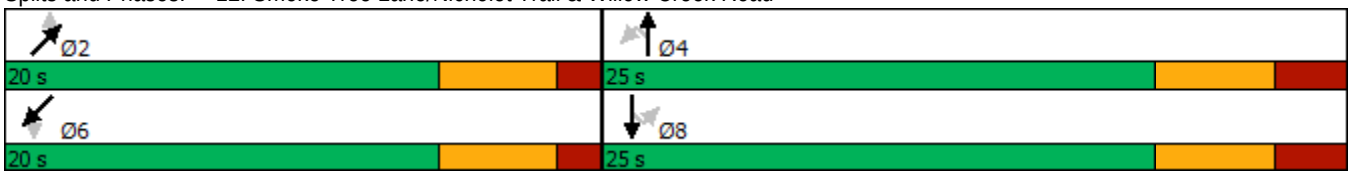
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	77	0	2	2	6	743	73	1587
Future Volume (vph)	77	0	2	2	6	743	73	1587
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	8.8	8.8	7.8	7.8	18.7	18.7	18.7	18.7
Actuated g/C Ratio	0.25	0.25	0.22	0.22	0.52	0.52	0.52	0.52
v/c Ratio	0.24	0.35	0.01	0.04	0.03	0.48	0.27	0.93
Control Delay	12.3	9.5	10.0	10.2	8.0	8.9	11.5	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	9.5	10.0	10.2	8.0	8.9	11.5	29.0
LOS	B	A	A	B	A	A	B	C
Approach Delay		10.5		10.2		8.9		28.2
Approach LOS		B		B		A		C

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 35.8	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

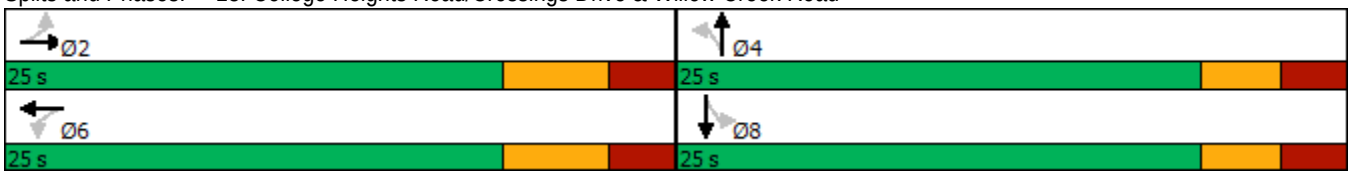
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	50	776	25	1475	80	50	30	10
Future Volume (vph)	50	776	25	1475	80	50	30	10
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.2	21.2	21.2	21.2	9.6	9.6	9.6	9.6
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.25	0.25	0.25	0.25
v/c Ratio	0.25	0.46	0.08	0.81	0.27	0.18	0.10	0.32
Control Delay	12.0	8.5	8.1	17.7	14.7	9.3	12.3	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	8.5	8.1	17.7	14.7	9.3	12.3	14.6
LOS	B	A	A	B	B	A	B	B
Approach Delay		8.7		17.6		12.0		14.1
Approach LOS		A		B		B		B

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 37.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

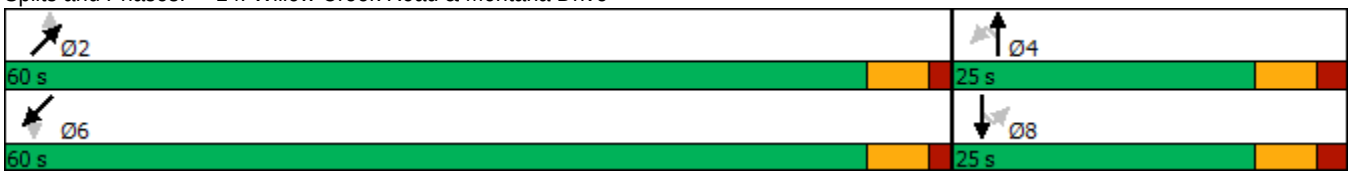
Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	101	6	10	10	24	679	38	1364
Future Volume (vph)	101	6	10	10	24	679	38	1364
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	60.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.0	11.0		10.0	48.7	48.7	48.7	48.7
Actuated g/C Ratio	0.17	0.17		0.15	0.74	0.74	0.74	0.74
v/c Ratio	0.48	0.08		0.15	0.14	0.31	0.09	0.57
Control Delay	36.7	17.0		20.9	7.0	4.8	5.0	7.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	17.0		20.9	7.0	4.8	5.0	7.1
LOS	D	B		C	A	A	A	A
Approach Delay		33.3		20.9		4.9		7.1
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 65.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

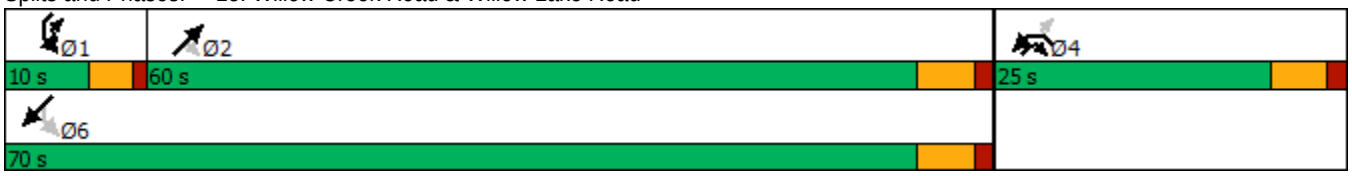
Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	184	232	601	96	236	1250
Future Volume (vph)	184	232	601	96	236	1250
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	25.0	10.0	60.0	25.0	10.0	70.0
Total Split (%)	26.3%	10.5%	63.2%	26.3%	10.5%	73.7%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Max	None	None	Max
Act Effct Green (s)	12.5	24.0	54.5	72.5	66.0	64.5
Actuated g/C Ratio	0.14	0.27	0.62	0.82	0.75	0.73
v/c Ratio	0.41	0.41	0.30	0.08	0.45	0.52
Control Delay	36.9	5.8	8.5	0.4	6.1	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	5.8	8.5	0.4	6.1	6.2
LOS	D	A	A	A	A	A
Approach Delay	19.6		7.4			6.2
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 88	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

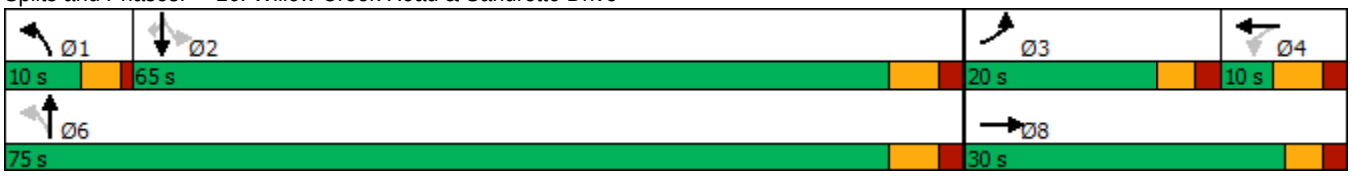
Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	57	10	5	2	147	738	4	1612	175
Future Volume (vph)	57	10	5	2	147	738	4	1612	175
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	3	8		4	1	6		2	
Permitted Phases			4		6		2		2
Detector Phase	3	8	4	4	1	6	2	2	2
Switch Phase									
Minimum Initial (s)	2.0	4.0	4.0	4.0	1.0	25.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	10.0	5.0	31.0	31.0	31.0	31.0
Total Split (s)	20.0	30.0	10.0	10.0	10.0	75.0	65.0	65.0	65.0
Total Split (%)	19.0%	28.6%	9.5%	9.5%	9.5%	71.4%	61.9%	61.9%	61.9%
Yellow Time (s)	3.0	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0		6.0	4.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Ped	Ped	Ped
Act Effct Green (s)	9.0	10.8		4.0	71.7	71.1	59.6	59.6	59.6
Actuated g/C Ratio	0.10	0.12		0.05	0.81	0.80	0.67	0.67	0.67
v/c Ratio	0.18	0.28		0.14	0.77	0.28	0.01	0.74	0.17
Control Delay	39.7	15.5		39.3	42.1	3.8	7.2	13.6	3.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.9	0.0
Total Delay	39.7	15.5		39.3	42.1	3.8	7.2	14.5	3.3
LOS	D	B		D	D	A	A	B	A
Approach Delay		27.0		39.3		10.2		13.4	
Approach LOS		C		D		B		B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 88.6	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 13.1	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

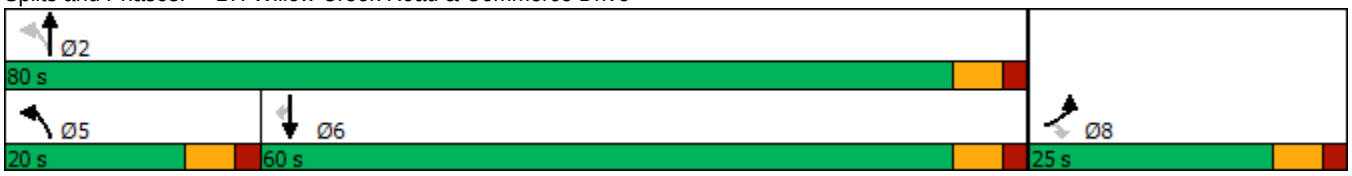
Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	175	117	683	1616	197
Future Volume (vph)	16	175	117	683	1616	197
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	25.0	25.0	20.0	80.0	60.0	60.0
Total Split (%)	23.8%	23.8%	19.0%	76.2%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	8.5	8.5	69.4	69.4	53.7	53.7
Actuated g/C Ratio	0.09	0.09	0.77	0.77	0.60	0.60
v/c Ratio	0.10	0.59	0.47	0.27	0.83	0.22
Control Delay	39.2	14.2	16.0	3.4	20.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	14.2	16.0	3.4	20.0	6.2
LOS	D	B	B	A	C	A
Approach Delay	16.3			5.2	18.5	
Approach LOS	B			A	B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 89.9	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 69.5%	ICU Level of Service C
Analysis Period (min) 15	

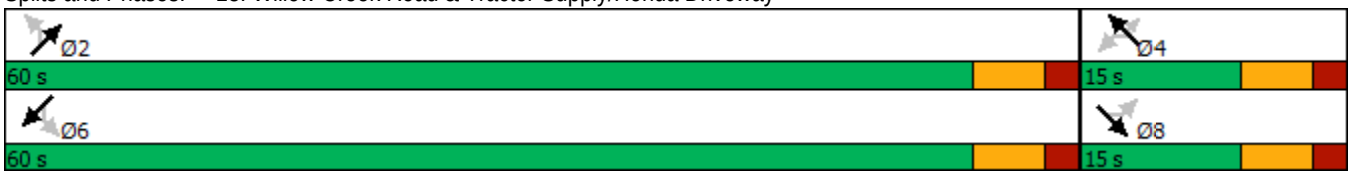
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	7	10	5	1	5	2	656	5	1813
Future Volume (vph)	7	10	5	1	5	2	656	5	1813
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	60.0	60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	80.0%	80.0%	80.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		7.5		7.3	7.3	56.5	56.5	56.5	56.5
Actuated g/C Ratio		0.12		0.11	0.11	0.89	0.89	0.89	0.89
v/c Ratio		0.15		0.03	0.02	0.02	0.23	0.01	0.63
Control Delay		23.6		29.3	0.2	3.0	2.1	2.6	4.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		23.6		29.3	0.2	3.0	2.1	2.6	4.7
LOS		C		C	A	A	A	A	A
Approach Delay		23.6		16.1			2.1		4.7
Approach LOS		C		B			A		A

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 63.5	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

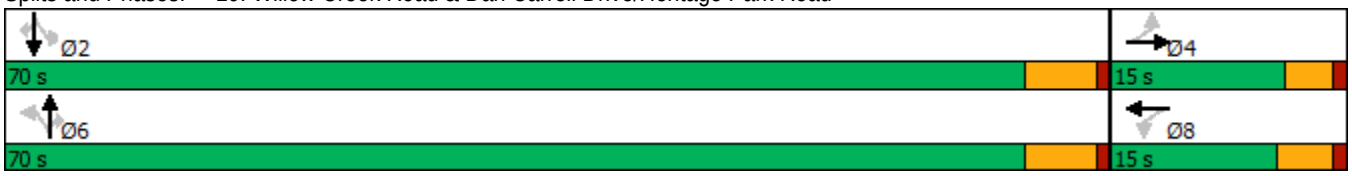
Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	33	2	10	11	133	519	16	10	1917	72
Future Volume (vph)	33	2	10	11	133	519	16	10	1917	72
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	15.0	15.0	15.0	15.0	70.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	17.6%	17.6%	17.6%	17.6%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	8.5	7.9	7.9	67.4	67.4	67.4	67.4	67.4	67.4
Actuated g/C Ratio	0.11	0.11	0.10	0.10	0.86	0.86	0.86	0.86	0.86	0.86
v/c Ratio	0.24	0.10	0.07	0.11	1.31	0.18	0.01	0.02	0.68	0.06
Control Delay	37.5	17.7	34.7	27.0	210.5	2.1	1.1	2.4	5.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	17.7	34.7	27.0	210.5	2.1	1.1	2.4	5.5	0.8
LOS	D	B	C	C	F	A	A	A	A	A
Approach Delay		30.4		29.7		43.7			5.3	
Approach LOS		C		C		D			A	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 78.2	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 132.9%	ICU Level of Service H
Analysis Period (min) 15	

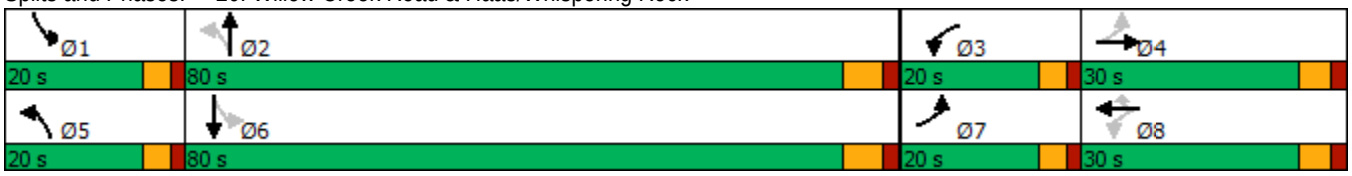
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	28	1	1	1	1	70	488	1	1977
Future Volume (vph)	28	1	1	1	1	70	488	1	1977
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	20.0	30.0	20.0	30.0	30.0	20.0	80.0	20.0	80.0
Total Split (%)	13.3%	20.0%	13.3%	20.0%	20.0%	13.3%	53.3%	13.3%	53.3%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	6.9	6.9	6.2	6.2	88.1	87.5	81.4	76.7
Actuated g/C Ratio	0.09	0.07	0.07	0.06	0.06	0.87	0.86	0.80	0.75
v/c Ratio	0.19	0.18	0.01	0.01	0.01	0.33	0.17	0.00	0.88
Control Delay	47.8	23.8	45.0	53.0	0.0	13.4	3.4	3.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	23.8	45.0	53.0	0.0	13.4	3.4	3.0	19.5
LOS	D	C	D	D	A	B	A	A	B
Approach Delay		37.1		32.7			4.6		19.5
Approach LOS		D		C			A		B

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 101.6	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

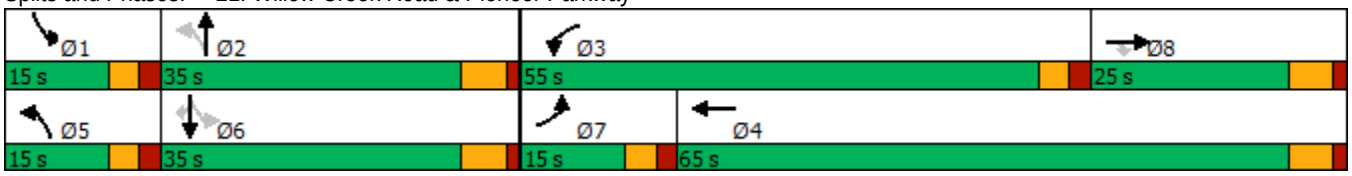
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock

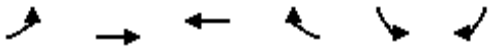


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	229	118	1397	245	24	145	325	30	588	70
Future Volume (vph)	27	229	118	1397	245	24	145	325	30	588	70
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	15.0	25.0	25.0	55.0	65.0	15.0	35.0		15.0	35.0	35.0
Total Split (%)	11.5%	19.2%	19.2%	42.3%	50.0%	11.5%	26.9%		11.5%	26.9%	26.9%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max		None	Max	Max
Act Effct Green (s)	6.5	14.7	14.7	50.3	62.9	33.9	29.4	117.9	34.4	29.6	29.6
Actuated g/C Ratio	0.06	0.12	0.12	0.43	0.53	0.29	0.25	1.00	0.29	0.25	0.25
v/c Ratio	0.30	0.56	0.39	1.04	0.15	0.15	0.18	0.22	0.09	0.72	0.15
Control Delay	63.9	54.3	8.6	67.8	16.0	30.4	37.3	0.3	29.1	46.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	54.3	8.6	67.8	16.0	30.4	37.3	0.3	29.1	46.8	0.6
LOS	E	D	A	E	B	C	D	A	C	D	A
Approach Delay		40.6			59.9		12.7			41.3	
Approach LOS		D			E		B			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 117.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 83.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Willow Creek Road & Pioneer Parkway





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6
Lane Configurations							
Traffic Volume (vph)	256	286	323	252	336	322	
Future Volume (vph)	256	286	323	252	336	322	
Turn Type	custom	NA	NA	pm+ov	Prot	Perm	
Protected Phases	3	3 6	2	4	4		6
Permitted Phases	6			2		4	
Detector Phase	3	3 6	2	4	4	4	
Switch Phase							
Minimum Initial (s)	5.0		25.0	20.0	20.0	20.0	25.0
Minimum Split (s)	9.0		29.0	24.0	24.0	24.0	29.0
Total Split (s)	35.0		35.0	35.0	35.0	35.0	35.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%	33%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	
Recall Mode	Max		Max	Max	Max	Max	Max
Act Effct Green (s)		62.0	31.0	66.0	31.0	31.0	
Actuated g/C Ratio		0.59	0.30	0.63	0.30	0.30	
v/c Ratio		0.35	0.34	0.25	0.36	0.49	
Control Delay		10.7	30.1	1.5	30.4	5.7	
Queue Delay		0.0	0.0	0.0	0.0	0.0	
Total Delay		10.7	30.1	1.5	30.4	5.7	
LOS		B	C	A	C	A	
Approach Delay		10.7	17.6		18.3		
Approach LOS		B	B		B		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	9	29	13	219	8	477	180	637
Future Volume (vph)	8	9	29	13	219	8	477	180	637
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	45.0	45.0	20.0	65.0
Total Split (%)	18.8%	18.8%	18.8%	18.8%	18.8%	56.3%	56.3%	25.0%	81.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)		9.5		9.5	9.5	40.0	40.0	60.0	60.0
Actuated g/C Ratio		0.12		0.12	0.12	0.50	0.50	0.75	0.75
v/c Ratio		0.19		0.27	0.60	0.03	0.31	0.27	0.27
Control Delay		22.4		36.7	11.9	10.5	12.2	3.8	3.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		22.4		36.7	11.9	10.5	12.2	3.8	3.4
LOS		C		D	B	B	B	A	A
Approach Delay		22.4		15.9			12.2		3.5
Approach LOS		C		B			B		A

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 20 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 96.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	37	59	69	657	820
Future Volume (vph)	37	59	69	657	820
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	30.0	30.0	25.0		45.0
Total Split (%)	30.0%	30.0%	25.0%		45.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None		Max
Act Effct Green (s)	8.2	8.2	54.4	58.4	43.3
Actuated g/C Ratio	0.11	0.11	0.74	0.80	0.59
v/c Ratio	0.20	0.27	0.14	0.25	0.46
Control Delay	32.6	12.2	3.1	2.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	12.2	3.1	2.9	10.9
LOS	C	B	A	A	B
Approach Delay	20.0			2.9	10.9
Approach LOS	C			A	B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 73.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

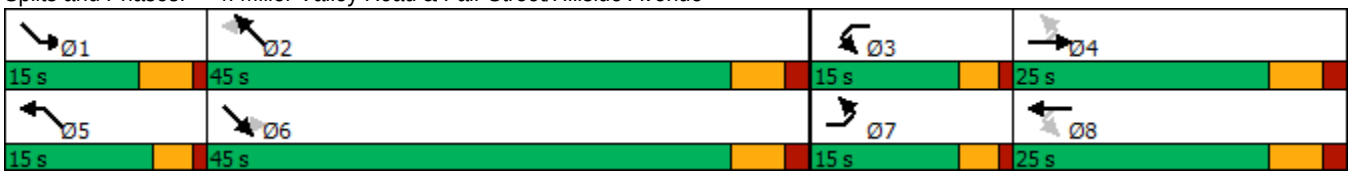
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	57	95	39	81	48	800	93	576
Future Volume (vph)	57	95	39	81	48	800	93	576
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	15.0	25.0	15.0	25.0	15.0	45.0	15.0	45.0
Total Split (%)	15.0%	25.0%	15.0%	25.0%	15.0%	45.0%	15.0%	45.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	19.3	13.0	17.2	10.4	45.6	40.2	48.6	42.4
Actuated g/C Ratio	0.24	0.16	0.22	0.13	0.57	0.50	0.61	0.53
v/c Ratio	0.20	0.57	0.14	0.60	0.11	0.52	0.27	0.35
Control Delay	23.7	34.6	22.9	37.6	8.5	17.2	9.4	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	34.6	22.9	37.6	8.5	17.2	9.4	14.1
LOS	C	C	C	D	A	B	A	B
Approach Delay		31.8		34.5		16.8		13.5
Approach LOS		C		C		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 79.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

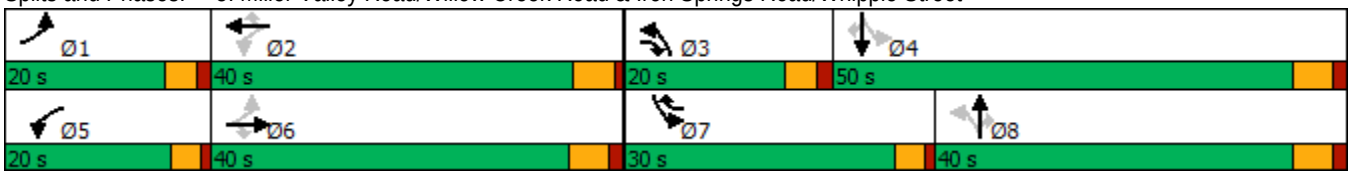
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	459	300	139	566	462	267	397	91	327	500	42
Future Volume (vph)	81	459	300	139	566	462	267	397	91	327	500	42
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	20.0	40.0	20.0	20.0	40.0	30.0	20.0	40.0	40.0	30.0	50.0	50.0
Total Split (%)	15.4%	30.8%	15.4%	15.4%	30.8%	23.1%	15.4%	30.8%	30.8%	23.1%	38.5%	38.5%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.8	20.2	38.6	35.2	25.8	49.2	32.5	18.9	18.9	42.4	24.0	24.0
Actuated g/C Ratio	0.33	0.23	0.44	0.40	0.29	0.56	0.37	0.22	0.22	0.48	0.27	0.27
v/c Ratio	0.30	0.61	0.40	0.42	0.59	0.49	0.68	0.57	0.22	0.67	0.56	0.09
Control Delay	21.2	35.2	8.1	21.8	31.6	7.3	25.1	35.5	4.3	22.0	30.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	35.2	8.1	21.8	31.6	7.3	25.1	35.5	4.3	22.0	30.5	0.4
LOS	C	D	A	C	C	A	C	D	A	C	C	A
Approach Delay		24.1			20.8			28.1			25.9	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 87.6	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	5	11	31	30	706	32	654	
Future Volume (vph)	5	11	31	30	706	32	654	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	20.0	20.0	20.0	10.0		15.0	85.0	70.0
Total Split (%)	17.4%	17.4%	17.4%	8.7%		13.0%	73.9%	61%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	None	None	None		None	None	None
Act Effct Green (s)	6.6	6.6	6.6	6.0	52.3	47.5	45.5	
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.75	0.68	0.65	
v/c Ratio	0.25	0.07	0.14	0.22	0.31	0.07	0.31	
Control Delay	32.8	32.5	1.2	36.7	5.0	4.8	6.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.8	32.5	1.2	36.7	5.0	4.8	6.3	
LOS	C	C	A	D	A	A	A	
Approach Delay	32.8				6.2		6.2	
Approach LOS	C				A		A	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 70	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	1	8	5	13	938	12	933
Future Volume (vph)	29	1	8	5	13	938	12	933
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	20.0	20.0	20.0	20.0	10.0	30.0	10.0	30.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%	16.7%	50.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	15.1	15.1	15.1	15.1	27.0	24.6	27.0	24.6
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.52	0.47	0.52	0.47
v/c Ratio	0.08	0.11	0.02	0.02	0.04	0.62	0.04	0.61
Control Delay	15.4	6.4	15.0	11.5	5.8	12.7	5.7	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	6.4	15.0	11.5	5.8	12.7	5.7	12.6
LOS	B	A	B	B	A	B	A	B
Approach Delay		9.8		13.0		12.6		12.5
Approach LOS		A		B		B		B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 51.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

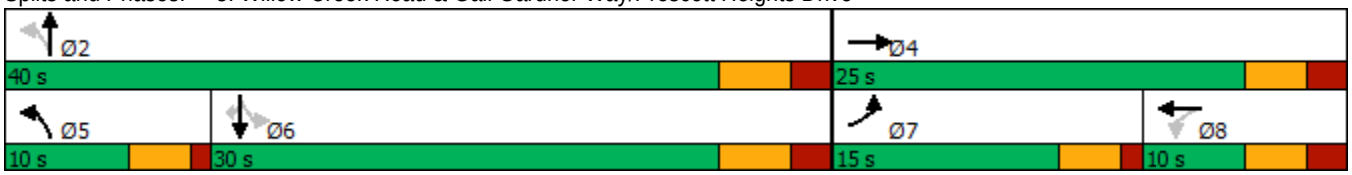
Splits and Phases: 7: Willow Creek Road & Black Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	430	11	5	14	56	844	7	863	249
Future Volume (vph)	430	11	5	14	56	844	7	863	249
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	15.0	25.0	10.0	10.0	10.0	40.0	30.0	30.0	30.0
Total Split (%)	23.1%	38.5%	15.4%	15.4%	15.4%	61.5%	46.2%	46.2%	46.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None	None	None
Act Effct Green (s)	10.7	20.0	5.3	5.3	36.0	34.5	28.6	28.6	28.6
Actuated g/C Ratio	0.16	0.31	0.08	0.08	0.55	0.53	0.44	0.44	0.44
v/c Ratio	0.83	0.13	0.04	0.17	0.20	0.49	0.03	0.60	0.32
Control Delay	40.4	7.2	28.8	24.1	8.3	10.8	13.4	17.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	7.2	28.8	24.1	8.3	10.8	13.4	17.0	3.3
LOS	D	A	C	C	A	B	B	B	A
Approach Delay		36.1		24.9		10.6		13.9	
Approach LOS		D		C		B		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Natural Cycle: 85	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 77.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	4	139	8	21	1098	35	945
Future Volume (vph)	5	4	139	8	21	1098	35	945
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.5	9.5	14.7	14.7	51.0	51.0	51.0	51.0
Actuated g/C Ratio	0.12	0.12	0.19	0.19	0.66	0.66	0.66	0.66
v/c Ratio	0.03	0.03	0.57	0.22	0.08	0.60	0.21	0.45
Control Delay	28.8	23.5	37.5	10.0	7.0	9.4	10.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	23.5	37.5	10.0	7.0	9.4	10.2	7.9
LOS	C	C	D	B	A	A	B	A
Approach Delay		25.7		27.9		9.4		7.9
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.7	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

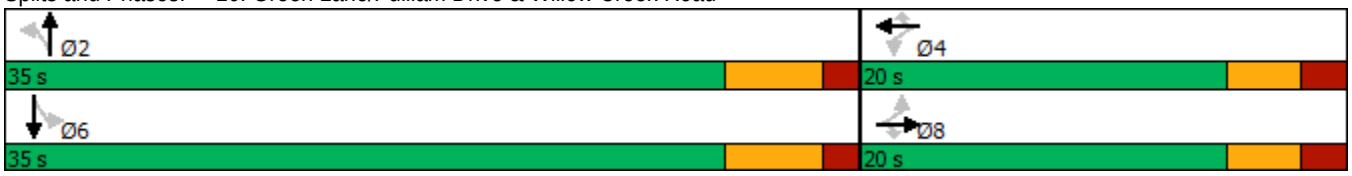
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	10	27	34	0	38	43	1089	41	875
Future Volume (vph)	10	10	27	34	0	38	43	1089	41	875
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	35.0	35.0	35.0	35.0
Total Split (%)	36.4%	36.4%	36.4%	36.4%	36.4%	36.4%	63.6%	63.6%	63.6%	63.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		7.7	7.7		7.9	7.9	33.0	33.0	33.0	33.0
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.76	0.76	0.76	0.76
v/c Ratio		0.08	0.09		0.13	0.12	0.12	0.45	0.15	0.37
Control Delay		17.6	4.5		17.9	6.6	5.1	5.0	6.0	4.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.6	4.5		17.9	6.6	5.1	5.0	6.0	4.4
LOS		B	A		B	A	A	A	A	A
Approach Delay		10.1			12.0			5.0		4.5
Approach LOS		B			B			A		A

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 43.2	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

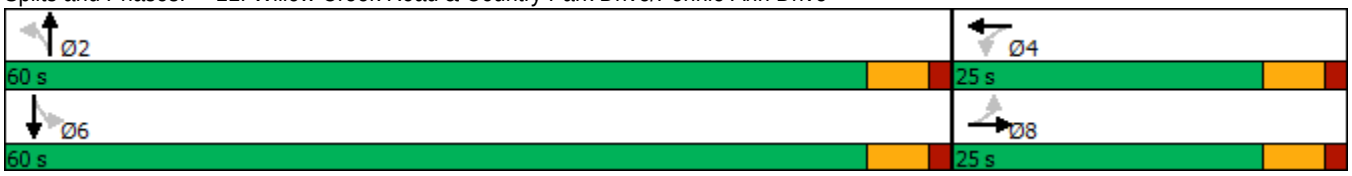
Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Configurations						
Traffic Volume (vph)	23	0	0	55	1111	920
Future Volume (vph)	23	0	0	55	1111	920
Turn Type	Perm	NA	NA	Perm	NA	NA
Protected Phases		8	4		2	6
Permitted Phases	8			2		
Detector Phase	8	8	4	2	2	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	25.0	25.0	25.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	Max	Max	Max
Act Effct Green (s)		8.0	7.3	62.7	62.7	62.7
Actuated g/C Ratio		0.11	0.10	0.84	0.84	0.84
v/c Ratio		0.31	0.00	0.14	0.41	0.34
Control Delay		21.3	0.0	3.8	3.4	3.1
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		21.3	0.0	3.8	3.4	3.1
LOS		C	A	A	A	A
Approach Delay		21.3			3.4	3.1
Approach LOS		C			A	A

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 74.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 3.7	Intersection LOS: A
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

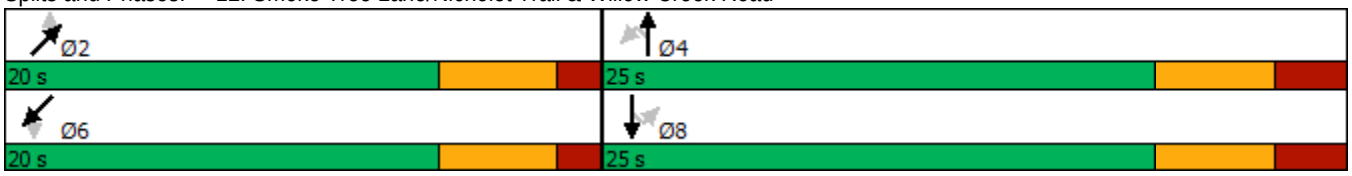
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	81	3	2	6	15	993	70	871
Future Volume (vph)	81	3	2	6	15	993	70	871
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	8.9	8.9	7.7	7.7	18.8	18.8	18.8	18.8
Actuated g/C Ratio	0.25	0.25	0.21	0.21	0.52	0.52	0.52	0.52
v/c Ratio	0.25	0.30	0.01	0.03	0.06	0.64	0.34	0.52
Control Delay	12.4	11.8	10.0	8.8	8.4	12.6	17.0	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	11.8	10.0	8.8	8.4	12.6	17.0	9.6
LOS	B	B	A	A	A	B	B	A
Approach Delay		12.0		9.0		12.5		10.2
Approach LOS		B		A		B		B

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 35.9	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

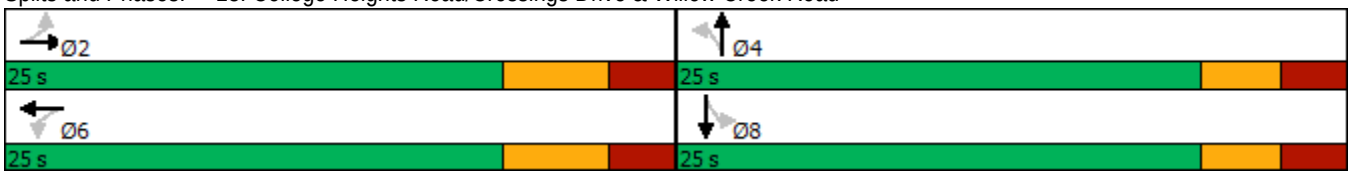
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	3	1034	12	864	5	0	86	1
Future Volume (vph)	3	1034	12	864	5	0	86	1
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.1	21.1	21.1	21.1	7.8	7.8	9.0	9.0
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.21	0.21	0.24	0.24
v/c Ratio	0.01	0.57	0.06	0.47	0.02	0.02	0.27	0.17
Control Delay	6.7	9.3	7.7	8.3	12.4	0.1	14.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	9.3	7.7	8.3	12.4	0.1	14.7	8.6
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.3		8.3		4.5		12.1
Approach LOS		A		A		A		B

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 37.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

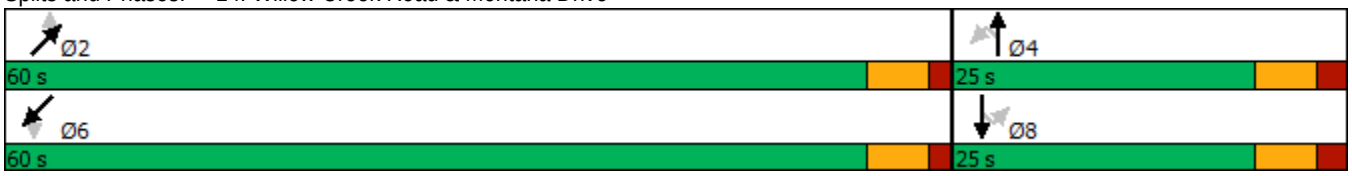
Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	45	0	14	5	20	1056	26	888
Future Volume (vph)	45	0	14	5	20	1056	26	888
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	60.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.6	7.6		7.1	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.15	0.15		0.14	0.80	0.80	0.80	0.80
v/c Ratio	0.18	0.09		0.18	0.05	0.43	0.09	0.35
Control Delay	25.7	0.5		18.3	3.9	4.2	4.4	3.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	0.5		18.3	3.9	4.2	4.4	3.8
LOS	C	A		B	A	A	A	A
Approach Delay		16.1		18.3		4.2		3.8
Approach LOS		B		B		A		A

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 49.2	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 4.7	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

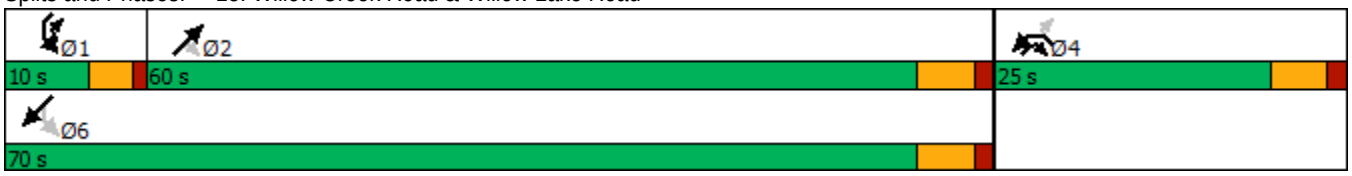
Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	224	372	980	198	290	800
Future Volume (vph)	224	372	980	198	290	800
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	25.0	10.0	60.0	25.0	10.0	70.0
Total Split (%)	26.3%	10.5%	63.2%	26.3%	10.5%	73.7%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Max	None	None	Max
Act Effct Green (s)	14.0	25.5	54.6	74.1	66.1	64.6
Actuated g/C Ratio	0.16	0.28	0.61	0.83	0.74	0.72
v/c Ratio	0.45	0.78	0.49	0.16	0.85	0.34
Control Delay	36.9	34.0	11.1	0.9	29.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	34.0	11.1	0.9	29.0	5.3
LOS	D	C	B	A	C	A
Approach Delay	35.1		9.4			11.6
Approach LOS	D		A			B

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 89.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

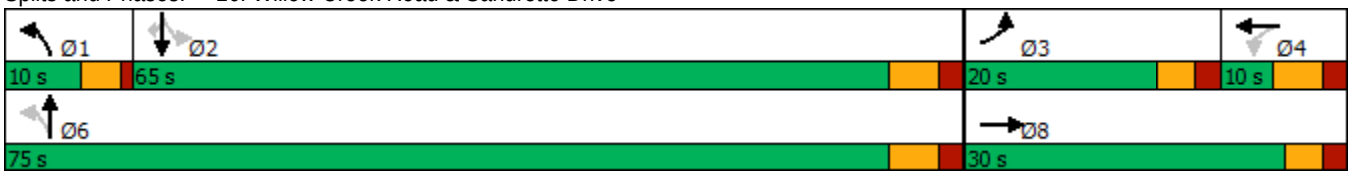
Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	93	0	0	98	926	808	79
Future Volume (vph)	93	0	0	98	926	808	79
Turn Type	Prot	NA	NA	pm+pt	NA	NA	Perm
Protected Phases	3	8	4	1	6	2	
Permitted Phases				6			2
Detector Phase	3	8	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	2.0	4.0	4.0	1.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	5.0	31.0	31.0	31.0
Total Split (s)	20.0	30.0	10.0	10.0	75.0	65.0	65.0
Total Split (%)	19.0%	28.6%	9.5%	9.5%	71.4%	61.9%	61.9%
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	Ped	Ped
Act Effct Green (s)	9.7	11.0	4.3	42.2	41.9	34.5	34.5
Actuated g/C Ratio	0.16	0.19	0.07	0.72	0.71	0.58	0.58
v/c Ratio	0.18	0.19	0.02	0.24	0.40	0.42	0.09
Control Delay	26.6	0.9	0.2	5.5	6.1	11.2	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	0.9	0.2	5.5	6.1	11.2	1.2
LOS	C	A	A	A	A	B	A
Approach Delay		14.4	0.2		6.0	10.3	
Approach LOS		B	A		A	B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 59	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

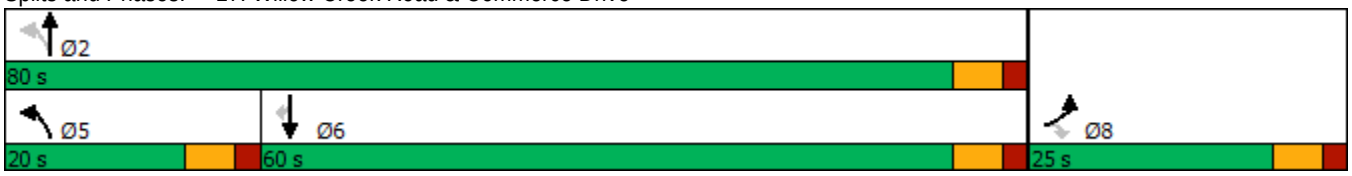
Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	165	154	845	700	74
Future Volume (vph)	64	165	154	845	700	74
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	25.0	25.0	20.0	80.0	60.0	60.0
Total Split (%)	23.8%	23.8%	19.0%	76.2%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	9.8	9.8	66.1	66.1	50.1	50.1
Actuated g/C Ratio	0.11	0.11	0.75	0.75	0.57	0.57
v/c Ratio	0.36	0.54	0.30	0.34	0.38	0.09
Control Delay	41.9	12.4	4.7	4.2	11.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	12.4	4.7	4.2	11.6	3.4
LOS	D	B	A	A	B	A
Approach Delay	20.7			4.3	10.8	
Approach LOS	C			A	B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 87.9	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

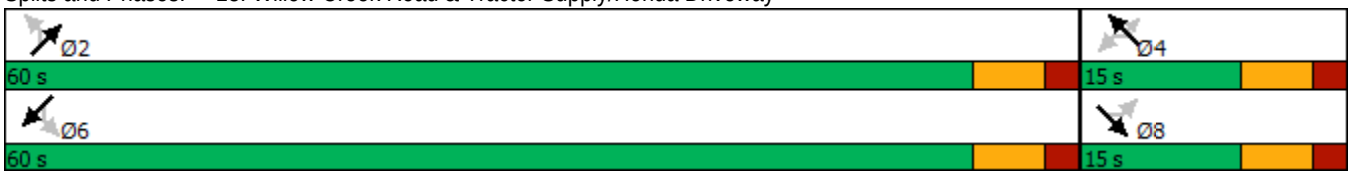
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	7	2	10	5	20	2	921	15	723
Future Volume (vph)	7	2	10	5	20	2	921	15	723
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	60.0	60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	80.0%	80.0%	80.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		8.0		8.1	8.1	30.1	30.1	30.1	30.1
Actuated g/C Ratio		0.23		0.23	0.23	0.85	0.85	0.85	0.85
v/c Ratio		0.03		0.04	0.06	0.00	0.33	0.04	0.27
Control Delay		17.5		18.5	4.3	3.5	3.2	3.6	2.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.5		18.5	4.3	3.5	3.2	3.6	2.9
LOS		B		B	A	A	A	A	A
Approach Delay		17.5		10.3			3.2		2.9
Approach LOS		B		B			A		A

Intersection Summary			
Cycle Length: 75			
Actuated Cycle Length: 35.5			
Natural Cycle: 40			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

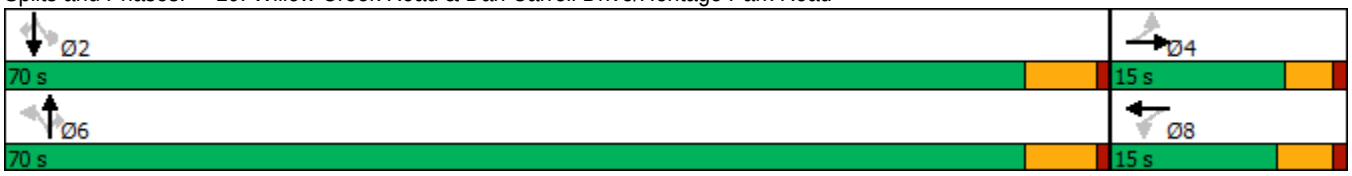
Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	31	2	12	6	75	768	15	14	620	18
Future Volume (vph)	31	2	12	6	75	768	15	14	620	18
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	15.0	15.0	15.0	15.0	70.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	17.6%	17.6%	17.6%	17.6%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	8.5	8.1	8.1	66.0	66.0	66.0	66.0	66.0	66.0
Actuated g/C Ratio	0.11	0.11	0.10	0.10	0.82	0.82	0.82	0.82	0.82	0.82
v/c Ratio	0.23	0.25	0.10	0.13	0.14	0.29	0.01	0.03	0.23	0.02
Control Delay	37.9	14.1	35.2	21.3	3.1	2.7	1.1	2.5	2.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	14.1	35.2	21.3	3.1	2.7	1.1	2.5	2.5	1.1
LOS	D	B	D	C	A	A	A	A	A	A
Approach Delay		23.5		26.3		2.7			2.5	
Approach LOS		C		C		A			A	

Intersection Summary			
Cycle Length: 85			
Actuated Cycle Length: 80.4			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 4.1		Intersection LOS: A	
Intersection Capacity Utilization 132.9%		ICU Level of Service H	
Analysis Period (min) 15			

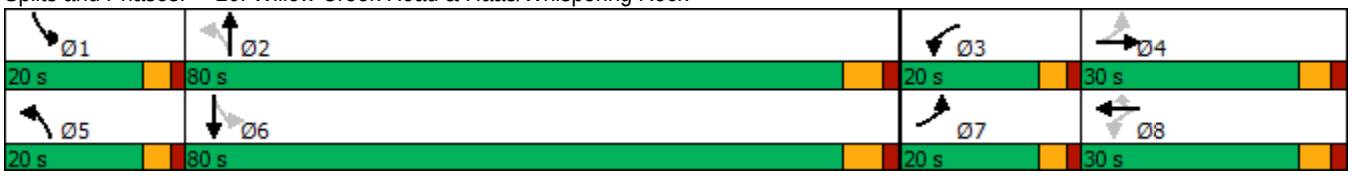
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	52	5	5	5	5	63	760	5	598
Future Volume (vph)	52	5	5	5	5	63	760	5	598
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	20.0	30.0	20.0	30.0	30.0	20.0	80.0	20.0	80.0
Total Split (%)	13.3%	20.0%	13.3%	20.0%	20.0%	13.3%	53.3%	13.3%	53.3%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	8.4	7.8	7.6	7.6	37.0	38.3	33.9	33.5
Actuated g/C Ratio	0.20	0.17	0.15	0.15	0.15	0.73	0.76	0.67	0.66
v/c Ratio	0.16	0.21	0.02	0.02	0.02	0.11	0.31	0.01	0.31
Control Delay	23.5	12.5	24.6	31.6	0.0	4.3	6.4	4.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	12.5	24.6	31.6	0.0	4.3	6.4	4.8	9.9
LOS	C	B	C	C	A	A	A	A	A
Approach Delay		17.6		18.7			6.2		9.9
Approach LOS		B		B			A		A

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 50.6	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 47.8%	ICU Level of Service A
Analysis Period (min) 15	

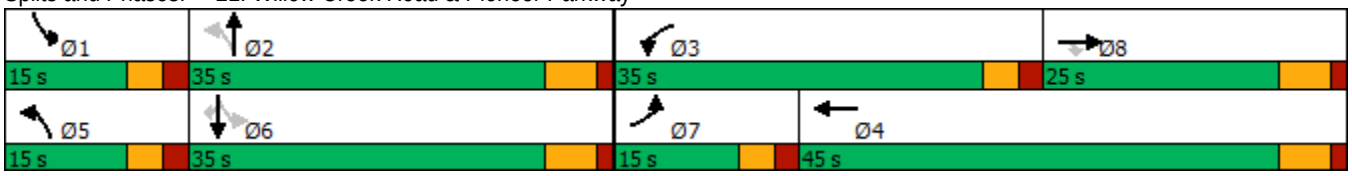
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock

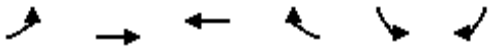


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	15	183	44	410	172	39	222	531	19	187	21
Future Volume (vph)	15	183	44	410	172	39	222	531	19	187	21
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	15.0	25.0	25.0	35.0	45.0	15.0	35.0		15.0	35.0	35.0
Total Split (%)	13.6%	22.7%	22.7%	31.8%	40.9%	13.6%	31.8%		13.6%	31.8%	31.8%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max		None	Max	Max
Act Effct Green (s)	5.4	10.9	10.9	14.7	28.7	35.5	32.3	78.6	33.6	29.8	29.8
Actuated g/C Ratio	0.07	0.14	0.14	0.19	0.37	0.45	0.41	1.00	0.43	0.38	0.38
v/c Ratio	0.13	0.41	0.13	0.69	0.15	0.08	0.17	0.36	0.04	0.15	0.03
Control Delay	41.6	35.3	0.7	36.9	18.3	13.2	17.5	0.7	13.2	19.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	35.3	0.7	36.9	18.3	13.2	17.5	0.7	13.2	19.3	0.1
LOS	D	D	A	D	B	B	B	A	B	B	A
Approach Delay		29.4			31.2		6.0			17.0	
Approach LOS		C			C		A			B	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 78.6	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: Willow Creek Road & Pioneer Parkway





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6
Lane Configurations							
Traffic Volume (vph)	289	292	306	215	276	442	
Future Volume (vph)	289	292	306	215	276	442	
Turn Type	custom	NA	NA	pm+ov	Prot	Perm	
Protected Phases	3	3 6	2	4	4		6
Permitted Phases	6			2		4	
Detector Phase	3	3 6	2	4	4	4	
Switch Phase							
Minimum Initial (s)	5.0		25.0	20.0	20.0	20.0	25.0
Minimum Split (s)	9.0		29.0	24.0	24.0	24.0	29.0
Total Split (s)	35.0		35.0	35.0	35.0	35.0	35.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%	33%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	
Recall Mode	Max		Max	Max	Max	Max	Max
Act Effct Green (s)		62.0	31.0	66.0	31.0	31.0	
Actuated g/C Ratio		0.59	0.30	0.63	0.30	0.30	
v/c Ratio		0.37	0.32	0.22	0.30	0.60	
Control Delay		11.0	29.8	1.5	29.6	6.1	
Queue Delay		0.0	0.0	0.0	0.0	0.0	
Total Delay		11.0	29.8	1.5	29.6	6.1	
LOS		B	C	A	C	A	
Approach Delay		11.0	18.2		15.1		
Approach LOS		B	B		B		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 64.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	41	30	12	41	213	11	451	239	622
Future Volume (vph)	41	30	12	41	213	11	451	239	622
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	45.0	45.0	20.0	65.0
Total Split (%)	18.8%	18.8%	18.8%	18.8%	18.8%	56.3%	56.3%	25.0%	81.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)		9.5		9.5	9.5	40.0	40.0	60.0	60.0
Actuated g/C Ratio		0.12		0.12	0.12	0.50	0.50	0.75	0.75
v/c Ratio		0.48		0.28	0.59	0.03	0.30	0.35	0.27
Control Delay		40.3		36.2	11.8	10.6	12.0	4.3	3.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		40.3		36.2	11.8	10.6	12.0	4.3	3.3
LOS		D		D	B	B	B	A	A
Approach Delay		40.3		16.7			12.0		3.6
Approach LOS		D		B			B		A

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 20 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	53	123	65	700	826
Future Volume (vph)	53	123	65	700	826
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	30.0	30.0	25.0		45.0
Total Split (%)	30.0%	30.0%	25.0%		45.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None		Max
Act Effct Green (s)	8.9	8.9	52.5	55.5	40.1
Actuated g/C Ratio	0.12	0.12	0.70	0.74	0.54
v/c Ratio	0.27	0.44	0.14	0.29	0.51
Control Delay	34.0	11.1	3.2	3.5	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	11.1	3.2	3.5	12.7
LOS	C	B	A	A	B
Approach Delay	18.1			3.5	12.7
Approach LOS	B			A	B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 74.5	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

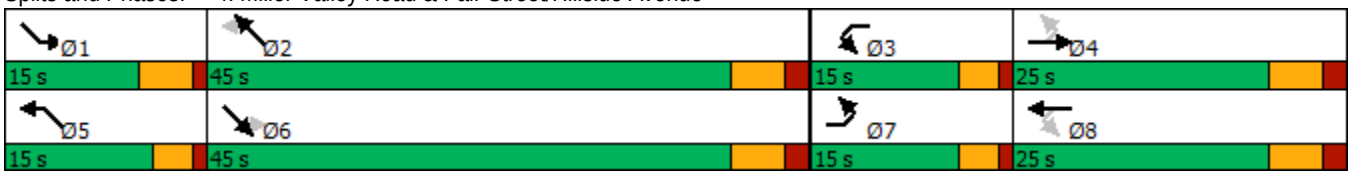
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	39	113	43	145	107	810	114	742
Future Volume (vph)	39	113	43	145	107	810	114	742
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	15.0	25.0	15.0	25.0	15.0	45.0	15.0	45.0
Total Split (%)	15.0%	25.0%	15.0%	25.0%	15.0%	45.0%	15.0%	45.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	21.5	15.7	21.7	15.8	48.4	40.3	50.0	41.9
Actuated g/C Ratio	0.25	0.18	0.25	0.18	0.57	0.47	0.58	0.49
v/c Ratio	0.18	0.64	0.17	0.80	0.30	0.58	0.36	0.49
Control Delay	23.6	37.2	23.3	48.7	11.0	19.9	11.5	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	37.2	23.3	48.7	11.0	19.9	11.5	18.7
LOS	C	D	C	D	B	B	B	B
Approach Delay		35.0		45.1		19.0		17.8
Approach LOS		D		D		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 85.6	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

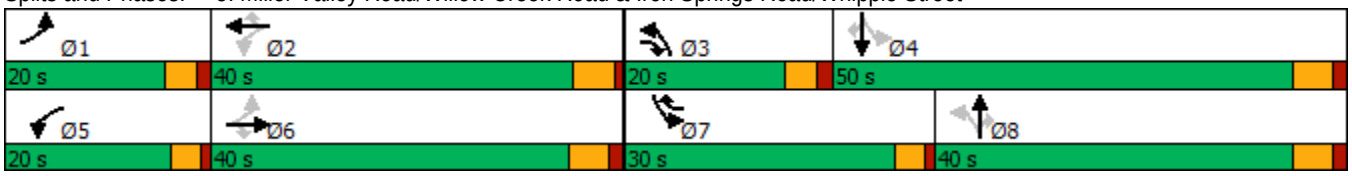
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	617	384	190	582	404	358	518	144	420	494	59
Future Volume (vph)	72	617	384	190	582	404	358	518	144	420	494	59
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	20.0	40.0	20.0	20.0	40.0	30.0	20.0	40.0	40.0	30.0	50.0	50.0
Total Split (%)	15.4%	30.8%	15.4%	15.4%	30.8%	23.1%	15.4%	30.8%	30.8%	23.1%	38.5%	38.5%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	37.1	28.5	49.6	47.7	37.0	67.4	42.8	26.2	26.2	57.1	35.4	35.4
Actuated g/C Ratio	0.33	0.25	0.44	0.42	0.33	0.60	0.38	0.23	0.23	0.51	0.31	0.31
v/c Ratio	0.28	0.75	0.53	0.66	0.55	0.42	0.87	0.69	0.34	0.90	0.48	0.11
Control Delay	24.4	45.9	17.2	33.0	35.0	7.0	45.1	45.1	11.8	47.4	33.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.4	45.9	17.2	33.0	35.0	7.0	45.1	45.1	11.8	47.4	33.5	2.4
LOS	C	D	B	C	D	A	D	D	B	D	C	A
Approach Delay		34.2			25.1			40.4			37.6	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 113	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 33.9	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	0	28	49	2	898	25	876	
Future Volume (vph)	0	28	49	2	898	25	876	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	20.0	20.0	20.0	10.0		15.0	85.0	70.0
Total Split (%)	17.4%	17.4%	17.4%	8.7%		13.0%	73.9%	61%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	None	None	None		None	None	None
Act Effct Green (s)	6.6	6.6	6.6	6.1	52.4	45.7	43.7	
Actuated g/C Ratio	0.10	0.10	0.10	0.09	0.77	0.67	0.64	
v/c Ratio	0.07	0.23	0.22	0.01	0.37	0.07	0.42	
Control Delay	0.5	35.1	3.5	32.5	4.8	4.9	7.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	0.5	35.1	3.5	32.5	4.8	4.9	7.3	
LOS	A	D	A	C	A	A	A	
Approach Delay	0.5				4.8		7.2	
Approach LOS	A				A		A	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 68.4	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	6	14	0	27	1024	15	973
Future Volume (vph)	17	6	14	0	27	1024	15	973
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	20.0	20.0	20.0	20.0	10.0	30.0	10.0	30.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%	16.7%	50.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	15.1	15.1	15.1	15.1	29.0	26.5	28.0	24.7
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.54	0.49	0.52	0.46
v/c Ratio	0.05	0.12	0.04	0.02	0.10	0.65	0.05	0.66
Control Delay	16.7	7.6	16.7	0.1	5.9	12.9	5.6	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	7.6	16.7	0.1	5.9	12.9	5.6	14.6
LOS	B	A	B	A	A	B	A	B
Approach Delay		9.8		8.4		12.7		14.5
Approach LOS		A		A		B		B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

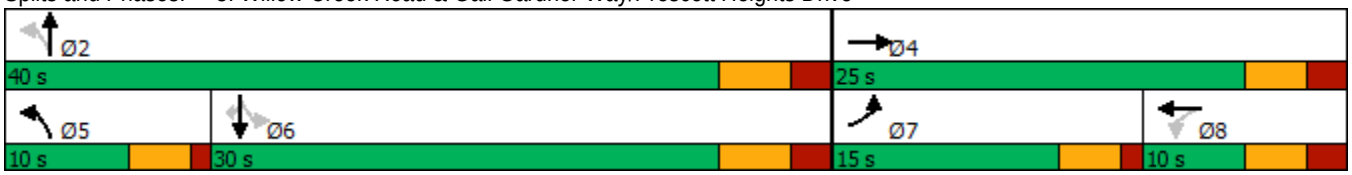
Splits and Phases: 7: Willow Creek Road & Black Drive

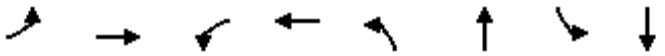


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	494	25	10	11	64	976	15	970	300
Future Volume (vph)	494	25	10	11	64	976	15	970	300
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	15.0	25.0	10.0	10.0	10.0	40.0	30.0	30.0	30.0
Total Split (%)	23.1%	38.5%	15.4%	15.4%	15.4%	61.5%	46.2%	46.2%	46.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None	None	None
Act Effct Green (s)	11.0	20.0	5.0	5.0	36.0	34.5	28.6	28.6	28.6
Actuated g/C Ratio	0.17	0.31	0.08	0.08	0.55	0.53	0.44	0.44	0.44
v/c Ratio	0.93	0.14	0.10	0.14	0.26	0.58	0.08	0.68	0.38
Control Delay	52.2	8.9	30.0	24.2	9.1	11.8	14.5	18.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	8.9	30.0	24.2	9.1	11.8	14.5	18.6	4.3
LOS	D	A	C	C	A	B	B	B	A
Approach Delay		46.7		26.3		11.7		15.2	
Approach LOS		D		C		B		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive

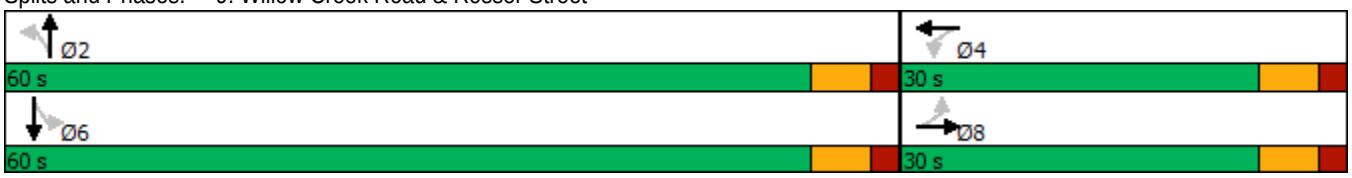




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	21	173	5	22	1290	46	1111
Future Volume (vph)	14	21	173	5	22	1290	46	1111
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.5	14.5	16.9	16.9	52.6	52.6	52.6	52.6
Actuated g/C Ratio	0.18	0.18	0.21	0.21	0.64	0.64	0.64	0.64
v/c Ratio	0.07	0.08	0.66	0.27	0.11	0.72	0.44	0.54
Control Delay	26.1	23.4	41.3	17.8	8.5	12.5	24.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	23.4	41.3	17.8	8.5	12.5	24.5	9.7
LOS	C	C	D	B	A	B	C	A
Approach Delay		24.4		33.1		12.5		10.2
Approach LOS		C		C		B		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.6	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

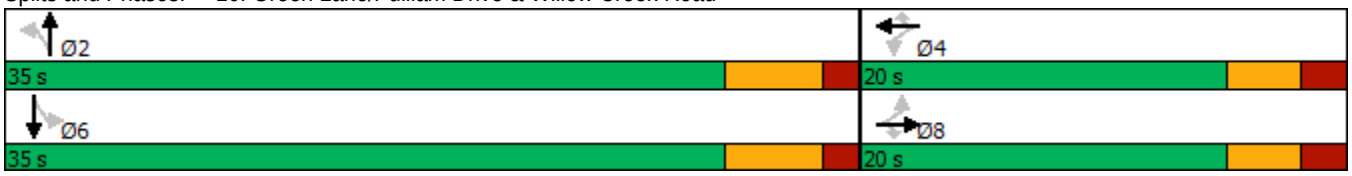
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	19	7	17	35	0	65	35	1225	69	1070
Future Volume (vph)	19	7	17	35	0	65	35	1225	69	1070
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	35.0	35.0	35.0	35.0
Total Split (%)	36.4%	36.4%	36.4%	36.4%	36.4%	36.4%	63.6%	63.6%	63.6%	63.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		7.8	7.8		7.9	7.9	33.0	33.0	33.0	33.0
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.76	0.76	0.76	0.76
v/c Ratio		0.11	0.06		0.13	0.22	0.13	0.51	0.32	0.45
Control Delay		18.0	2.2		17.9	10.4	5.7	5.5	10.1	5.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		18.0	2.2		17.9	10.4	5.7	5.5	10.1	5.0
LOS		B	A		B	B	A	A	B	A
Approach Delay		12.0			13.0			5.5		5.3
Approach LOS		B			B			A		A

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 43.2	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 74.7%	ICU Level of Service D
Analysis Period (min) 15	

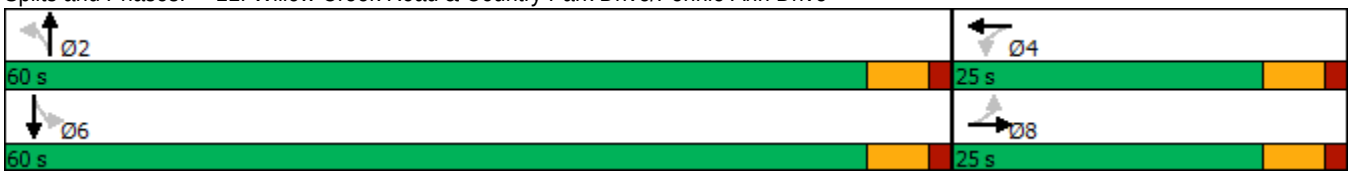
Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	28	0	1	0	39	1273	10	1119
Future Volume (vph)	28	0	1	0	39	1273	10	1119
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	25.0	25.0	25.0	25.0	60.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.4		7.5	58.6	58.6	58.6	58.6
Actuated g/C Ratio		0.11		0.10	0.79	0.79	0.79	0.79
v/c Ratio		0.41		0.03	0.14	0.50	0.04	0.46
Control Delay		19.0		0.2	4.8	4.8	3.7	4.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		19.0		0.2	4.8	4.8	3.7	4.4
LOS		B		A	A	A	A	A
Approach Delay		19.0		0.2		4.8		4.4
Approach LOS		B		A		A		A

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 74.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

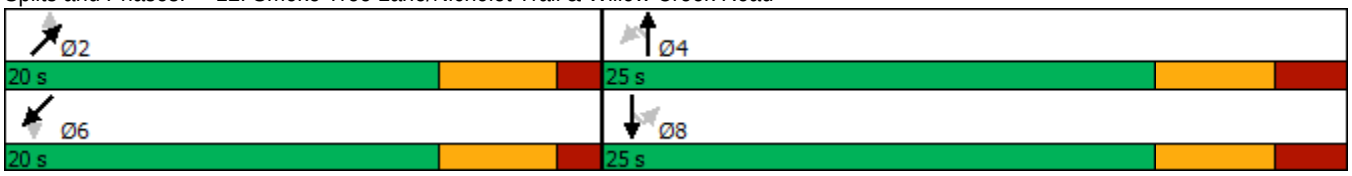
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	46	0	3	0	15	1159	114	1095
Future Volume (vph)	46	0	3	0	15	1159	114	1095
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	8.0	8.0	7.3	7.3	22.5	22.5	22.5	22.5
Actuated g/C Ratio	0.23	0.23	0.21	0.21	0.65	0.65	0.65	0.65
v/c Ratio	0.15	0.29	0.01	0.01	0.07	0.60	0.52	0.53
Control Delay	11.5	8.3	10.3	0.0	8.1	11.9	28.3	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	8.3	10.3	0.0	8.1	11.9	28.3	9.8
LOS	B	A	B	A	A	B	C	A
Approach Delay		9.3		3.9		11.8		11.6
Approach LOS		A		A		B		B

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 34.8	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

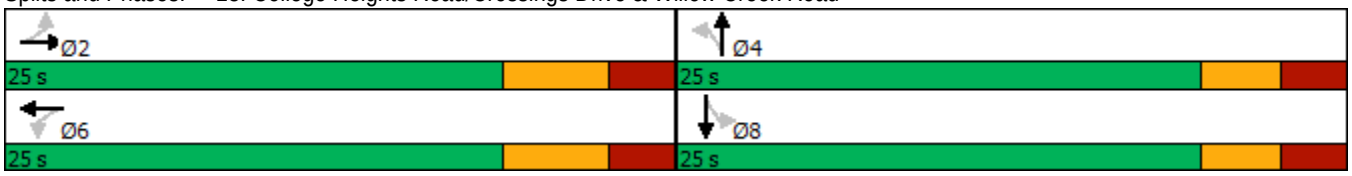
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	1157	14	1076	17	0	104	0
Future Volume (vph)	14	1157	14	1076	17	0	104	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.2	21.2	21.2	21.2	8.3	8.3	9.6	9.6
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.22	0.22	0.25	0.25
v/c Ratio	0.07	0.65	0.07	0.59	0.06	0.01	0.31	0.22
Control Delay	8.5	12.3	8.5	10.9	12.8	0.0	14.9	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	12.3	8.5	10.9	12.8	0.0	14.9	6.4
LOS	A	B	A	B	B	A	B	A
Approach Delay		12.2		10.9		10.5		10.9
Approach LOS		B		B		B		B

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 37.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 59.9%	ICU Level of Service B
Analysis Period (min) 15	

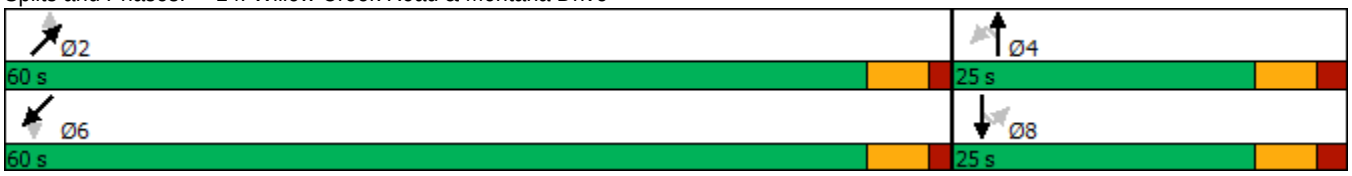
Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	57	0	7	5	16	1080	38	1000
Future Volume (vph)	57	0	7	5	16	1080	38	1000
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	25.0	25.0	25.0	25.0	60.0	60.0	60.0	60.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	70.6%	70.6%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.1	8.1		6.8	41.0	41.0	41.0	41.0
Actuated g/C Ratio	0.15	0.15		0.12	0.73	0.73	0.73	0.73
v/c Ratio	0.31	0.14		0.11	0.05	0.51	0.16	0.42
Control Delay	30.6	1.4		23.5	4.1	5.5	5.8	4.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	1.4		23.5	4.1	5.5	5.8	4.9
LOS	C	A		C	A	A	A	A
Approach Delay		18.7		23.5		5.4		4.9
Approach LOS		B		C		A		A

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 55.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

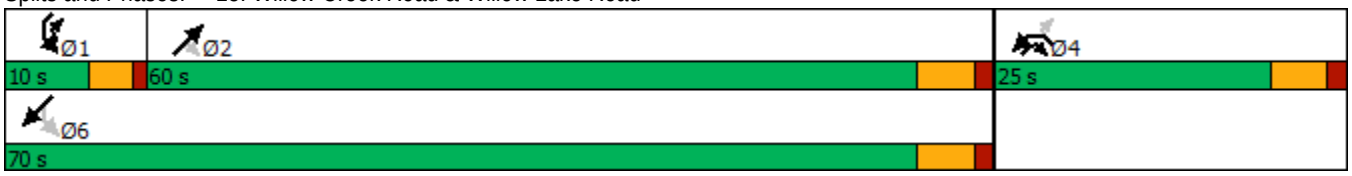
Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	217	412	912	250	310	844
Future Volume (vph)	217	412	912	250	310	844
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	25.0	10.0	60.0	25.0	10.0	70.0
Total Split (%)	26.3%	10.5%	63.2%	26.3%	10.5%	73.7%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Max	None	None	Max
Act Effct Green (s)	14.0	25.5	54.6	74.1	66.1	64.6
Actuated g/C Ratio	0.16	0.28	0.61	0.83	0.74	0.72
v/c Ratio	0.44	0.85	0.46	0.20	0.84	0.36
Control Delay	36.7	38.5	10.7	1.1	27.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	38.5	10.7	1.1	27.2	5.5
LOS	D	D	B	A	C	A
Approach Delay	37.9		8.6			11.3
Approach LOS	D		A			B

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 89.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

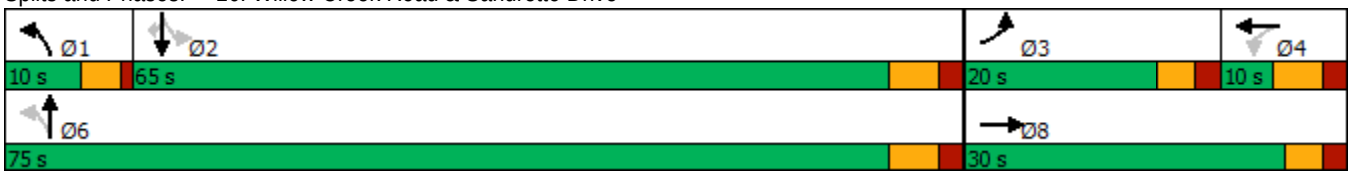
Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	142	0	0	196	1122	1044	60
Future Volume (vph)	142	0	0	196	1122	1044	60
Turn Type	Prot	NA	NA	pm+pt	NA	NA	Perm
Protected Phases	3	8	4	1	6	2	
Permitted Phases				6			2
Detector Phase	3	8	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	2.0	4.0	4.0	1.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	5.0	31.0	31.0	31.0
Total Split (s)	20.0	30.0	10.0	10.0	75.0	65.0	65.0
Total Split (%)	19.0%	28.6%	9.5%	9.5%	71.4%	61.9%	61.9%
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	Max	Ped	Ped
Act Effct Green (s)	11.4	12.9	4.0	71.3	69.3	59.2	59.2
Actuated g/C Ratio	0.12	0.14	0.04	0.76	0.74	0.63	0.63
v/c Ratio	0.37	0.27	0.04	0.61	0.47	0.51	0.06
Control Delay	40.8	2.1	0.4	12.6	6.1	11.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	40.8	2.1	0.4	12.6	6.1	11.2	0.1
LOS	D	A	A	B	A	B	A
Approach Delay		25.7	0.4		7.1	10.6	
Approach LOS		C	A		A	B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 93.5	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

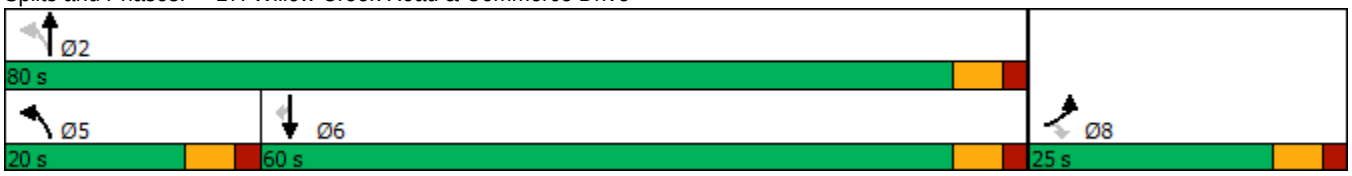
Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	83	233	208	1043	858	81
Future Volume (vph)	83	233	208	1043	858	81
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	25.0	25.0	20.0	80.0	60.0	60.0
Total Split (%)	23.8%	23.8%	19.0%	76.2%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	10.8	10.8	67.6	67.6	50.1	50.1
Actuated g/C Ratio	0.12	0.12	0.75	0.75	0.55	0.55
v/c Ratio	0.43	0.61	0.47	0.43	0.48	0.10
Control Delay	43.8	12.0	6.9	5.0	13.9	4.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	43.8	12.0	6.9	5.2	13.9	4.6
LOS	D	B	A	A	B	A
Approach Delay	20.4			5.5	13.1	
Approach LOS	C			A	B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 90.5	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

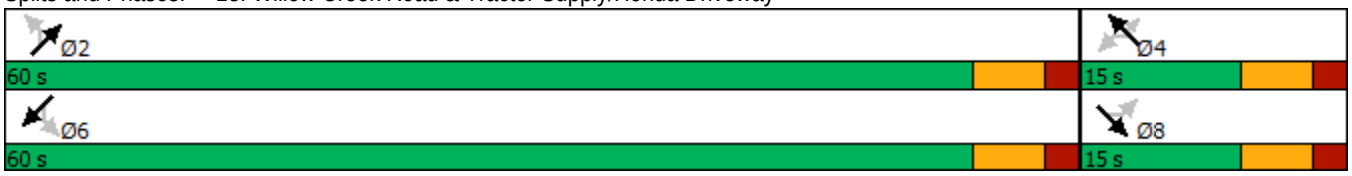
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	6	0	10	10	10	2	1092	10	874
Future Volume (vph)	6	0	10	10	10	2	1092	10	874
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0	60.0	60.0	60.0	60.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	80.0%	80.0%	80.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		8.2		8.5	8.5	36.4	36.4	36.4	36.4
Actuated g/C Ratio		0.20		0.20	0.20	0.87	0.87	0.87	0.87
v/c Ratio		0.02		0.06	0.03	0.00	0.38	0.03	0.31
Control Delay		0.1		23.1	0.2	3.0	3.0	3.2	2.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.1		23.1	0.2	3.0	3.0	3.2	2.7
LOS		A		C	A	A	A	A	A
Approach Delay		0.1		15.5			3.0		2.7
Approach LOS		A		B			A		A

Intersection Summary			
Cycle Length: 75			
Actuated Cycle Length: 41.7			
Natural Cycle: 40			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 3.0		Intersection LOS: A	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

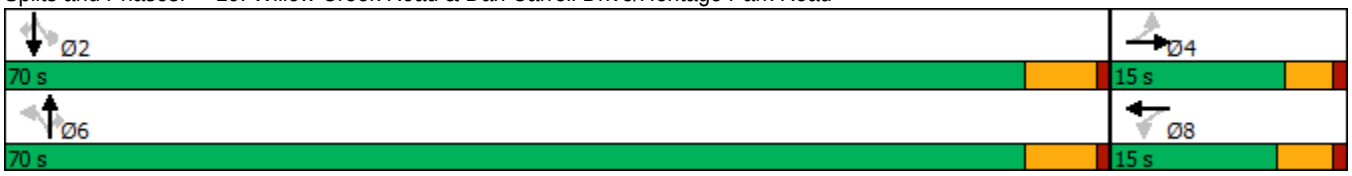
Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	32	0	30	0	37	1011	23	12	721	18
Future Volume (vph)	32	0	30	0	37	1011	23	12	721	18
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	15.0	15.0	15.0	15.0	70.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	17.6%	17.6%	17.6%	17.6%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.7	8.7	8.4	8.4	67.5	67.5	67.5	67.5	67.5	67.5
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.86	0.86	0.86	0.86	0.86	0.86
v/c Ratio	0.23	0.08	0.22	0.01	0.07	0.36	0.02	0.03	0.26	0.01
Control Delay	37.0	0.4	37.5	0.0	2.6	2.7	1.0	2.7	2.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	0.4	37.5	0.0	2.6	2.7	1.0	2.7	2.3	1.1
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		18.9		35.3		2.7			2.3	
Approach LOS		B		D		A			A	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 78.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 3.6	Intersection LOS: A
Intersection Capacity Utilization 132.9%	ICU Level of Service H
Analysis Period (min) 15	

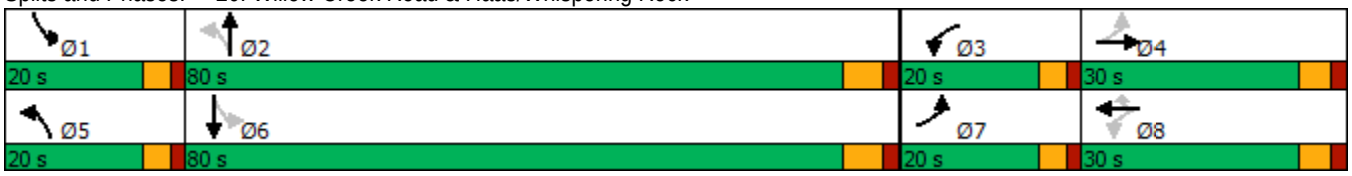
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	3	8	3	8	20	1040	8	720
Future Volume (vph)	42	3	8	3	8	20	1040	8	720
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	20.0	30.0	20.0	30.0	30.0	20.0	80.0	20.0	80.0
Total Split (%)	13.3%	20.0%	13.3%	20.0%	20.0%	13.3%	53.3%	13.3%	53.3%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.9	8.2	7.9	7.3	7.3	55.4	56.8	54.4	54.9
Actuated g/C Ratio	0.14	0.12	0.11	0.11	0.11	0.80	0.82	0.78	0.79
v/c Ratio	0.18	0.18	0.04	0.02	0.04	0.04	0.39	0.02	0.29
Control Delay	35.5	18.8	36.5	44.3	0.2	3.4	5.5	3.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	18.8	36.5	44.3	0.2	3.4	5.5	3.5	5.9
LOS	D	B	D	D	A	A	A	A	A
Approach Delay		27.9		22.1			5.5		5.9
Approach LOS		C		C			A		A

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 69.3	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 50.3%	ICU Level of Service A
Analysis Period (min) 15	

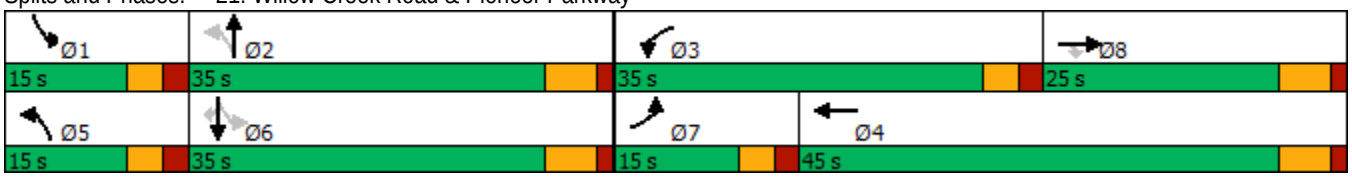
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	325	39	526	224	51	274	691	28	157	23
Future Volume (vph)	37	325	39	526	224	51	274	691	28	157	23
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	15.0	25.0	25.0	35.0	45.0	15.0	35.0		15.0	35.0	35.0
Total Split (%)	13.6%	22.7%	22.7%	31.8%	40.9%	13.6%	31.8%		13.6%	31.8%	31.8%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max		None	Max	Max
Act Effct Green (s)	6.6	15.3	15.3	19.5	32.9	37.6	32.7	90.6	35.0	29.8	29.8
Actuated g/C Ratio	0.07	0.17	0.17	0.22	0.36	0.42	0.36	1.00	0.39	0.33	0.33
v/c Ratio	0.31	0.59	0.10	0.77	0.22	0.11	0.23	0.47	0.07	0.15	0.04
Control Delay	49.8	40.5	0.5	42.0	21.0	17.5	23.8	1.0	17.5	25.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	40.5	0.5	42.0	21.0	17.5	23.8	1.0	17.5	25.1	0.1
LOS	D	D	A	D	C	B	C	A	B	C	A
Approach Delay		37.5			35.0		8.0			21.3	
Approach LOS		D			D		A			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 90.6	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: Willow Creek Road & Pioneer Parkway



APPENDIX SS-18

Willow Creek Road Optimized Plans Delay and Capacity Analysis Results

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	Ø6
Lane Configurations								
Traffic Volume (vph)	450	200	136	218	350	232		
Future Volume (vph)	450	200	136	218	350	232		
Turn Type	Perm	NA	NA	pm+ov	Prot	Perm		
Protected Phases		3 6	2	4	4		3	6
Permitted Phases	3 6			2		4		
Detector Phase	3 6	3 6	2	4	4	4		
Switch Phase								
Minimum Initial (s)			25.0	20.0	20.0	20.0	5.0	25.0
Minimum Split (s)			29.0	24.0	24.0	24.0	9.0	29.0
Total Split (s)			34.0	35.0	35.0	35.0	31.0	34.0
Total Split (%)			34.0%	35.0%	35.0%	35.0%	31%	34%
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			4.0	4.0	4.0	4.0		
Lead/Lag				Lag	Lag	Lag	Lead	
Lead-Lag Optimize?								
Recall Mode			C-Max	None	None	None	None	C-Max
Act Effct Green (s)		68.9	51.2	78.3	23.1	23.1		
Actuated g/C Ratio		0.69	0.51	0.78	0.23	0.23		
v/c Ratio		0.42	0.08	0.18	0.48	0.45		
Control Delay		8.2	14.3	0.8	22.4	3.9		
Queue Delay		0.0	0.0	0.0	0.0	0.0		
Total Delay		8.2	14.3	0.8	22.4	3.9		
LOS		A	B	A	C	A		
Approach Delay		8.2	6.0		15.0			
Approach LOS		A	A		B			

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 92 (92%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

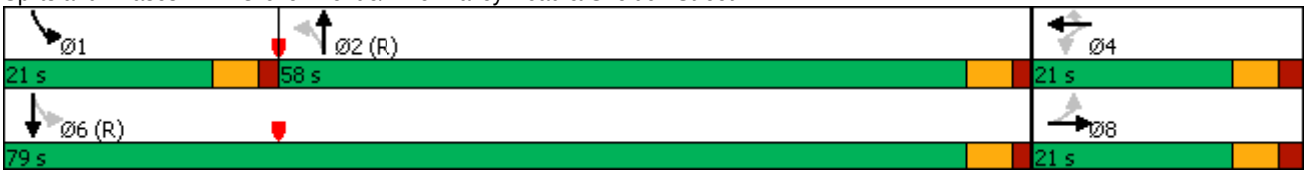
Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	10	18	4	118	14	619	206	540
Future Volume (vph)	20	10	18	4	118	14	619	206	540
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	21.0	21.0	21.0	21.0	21.0	58.0	58.0	21.0	79.0
Total Split (%)	21.0%	21.0%	21.0%	21.0%	21.0%	58.0%	58.0%	21.0%	79.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		8.8		8.8	8.8	67.8	67.8	80.7	80.7
Actuated g/C Ratio		0.09		0.09	0.09	0.68	0.68	0.81	0.81
v/c Ratio		0.31		0.20	0.50	0.03	0.29	0.37	0.22
Control Delay		39.3		45.1	14.8	3.3	3.1	4.7	0.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		39.3		45.1	14.8	3.3	3.1	4.7	0.8
LOS		D		D	B	A	A	A	A
Approach Delay		39.3		19.6			3.1		1.8
Approach LOS		D		B			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 14 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 4.8	Intersection LOS: A
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	10	21	57	710	800
Future Volume (vph)	10	21	57	710	800
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	17.0	17.0	15.0		68.0
Total Split (%)	17.0%	17.0%	15.0%		68.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None		C-Max
Act Effct Green (s)	7.3	7.3	84.3	89.3	73.4
Actuated g/C Ratio	0.07	0.07	0.84	0.89	0.73
v/c Ratio	0.09	0.17	0.10	0.24	0.34
Control Delay	44.2	20.0	2.3	2.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	20.0	2.3	2.2	1.9
LOS	D	B	A	A	A
Approach Delay	27.8			2.2	1.9
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 86 (86%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 2.5	Intersection LOS: A
Intersection Capacity Utilization 42.5%	ICU Level of Service A
Analysis Period (min) 15	

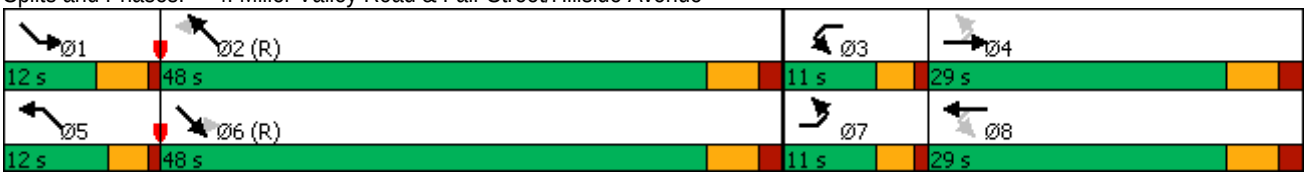
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	48	209	49	66	106	829	23	622
Future Volume (vph)	48	209	49	66	106	829	23	622
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	11.0	29.0	11.0	29.0	12.0	48.0	12.0	48.0
Total Split (%)	11.0%	29.0%	11.0%	29.0%	12.0%	48.0%	12.0%	48.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	25.5	18.3	25.5	18.3	61.4	57.4	56.8	49.5
Actuated g/C Ratio	0.26	0.18	0.26	0.18	0.61	0.57	0.57	0.50
v/c Ratio	0.16	0.80	0.24	0.44	0.27	0.50	0.08	0.39
Control Delay	24.1	55.3	25.6	26.2	8.6	12.1	9.2	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	55.3	25.6	26.2	8.6	12.1	9.2	17.1
LOS	C	E	C	C	A	B	A	B
Approach Delay		50.3		26.1		11.7		16.8
Approach LOS		D		C		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 49 (49%), Referenced to phase 2:NWTL and 6:SETL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

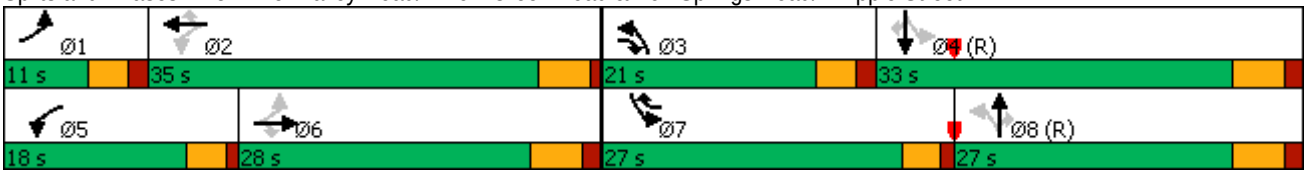
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	517	350	193	444	516	208	416	87	328	572	83
Future Volume (vph)	95	517	350	193	444	516	208	416	87	328	572	83
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	11.0	28.0	21.0	18.0	35.0	27.0	21.0	27.0	27.0	27.0	33.0	33.0
Total Split (%)	11.0%	28.0%	21.0%	18.0%	35.0%	27.0%	21.0%	27.0%	27.0%	27.0%	33.0%	33.0%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.3	21.0	38.3	39.1	29.3	51.2	43.2	30.5	30.5	52.4	35.1	35.1
Actuated g/C Ratio	0.28	0.21	0.38	0.39	0.29	0.51	0.43	0.30	0.30	0.52	0.35	0.35
v/c Ratio	0.34	0.76	0.54	0.64	0.47	0.63	0.55	0.42	0.15	0.67	0.50	0.14
Control Delay	22.9	44.0	15.2	30.0	30.7	14.4	11.1	22.1	4.6	11.5	17.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	44.0	15.2	30.0	30.7	14.4	11.1	22.1	4.6	11.5	17.3	2.5
LOS	C	D	B	C	C	B	B	C	A	B	B	A
Approach Delay		31.5			23.3			16.7			14.1	
Approach LOS		C			C			B			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

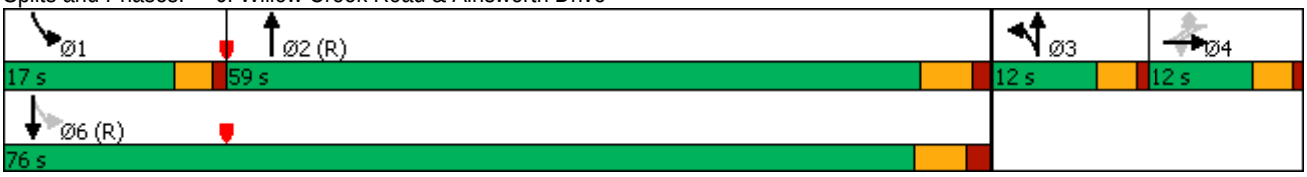
Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	10	21	5	36	743	130	1047	
Future Volume (vph)	10	21	5	36	743	130	1047	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	12.0	12.0	12.0	12.0		17.0	76.0	59.0
Total Split (%)	12.0%	12.0%	12.0%	12.0%		17.0%	76.0%	59%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None		None	C-Max	C-Max
Act Effct Green (s)	6.5	6.5	6.5	7.6	77.0	77.6	75.6	
Actuated g/C Ratio	0.06	0.06	0.06	0.08	0.77	0.78	0.76	
v/c Ratio	0.13	0.21	0.02	0.29	0.34	0.29	0.44	
Control Delay	40.3	48.1	0.2	41.2	2.8	2.4	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.3	48.1	0.2	41.2	2.8	2.4	2.6	
LOS	D	D	A	D	A	A	A	
Approach Delay	40.3				4.4		2.6	
Approach LOS	D				A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 86 (86%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 4.0	Intersection LOS: A
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	8	22	4	5	29	649	18	1240
Future Volume (vph)	8	22	4	5	29	649	18	1240
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	21.0	21.0	21.0	21.0	12.0	67.0	12.0	67.0
Total Split (%)	21.0%	21.0%	21.0%	21.0%	12.0%	67.0%	12.0%	67.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	9.6	9.6	9.6	9.6	79.9	76.3	78.8	74.4
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.80	0.76	0.79	0.74
v/c Ratio	0.07	0.63	0.05	0.03	0.10	0.29	0.03	0.52
Control Delay	39.2	18.5	39.5	38.2	2.6	3.1	0.3	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	18.5	39.5	38.2	2.6	3.1	0.3	1.0
LOS	D	B	D	D	A	A	A	A
Approach Delay		19.4		38.8		3.1		1.0
Approach LOS		B		D		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 25 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 3.4	Intersection LOS: A
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

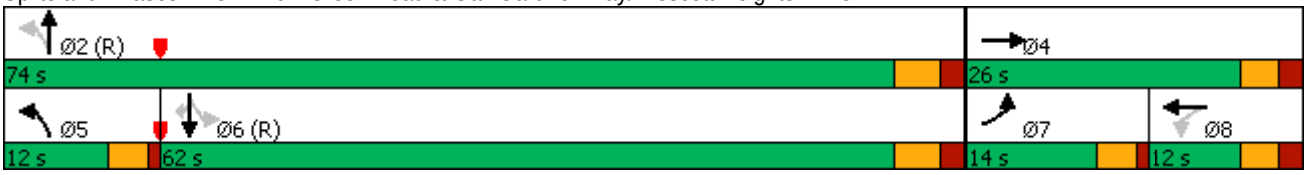
Splits and Phases: 7: Willow Creek Road & Black Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	276	10	7	7	25	617	11	1269	230
Future Volume (vph)	276	10	7	7	25	617	11	1269	230
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	14.0	26.0	12.0	12.0	12.0	74.0	62.0	62.0	62.0
Total Split (%)	14.0%	26.0%	12.0%	12.0%	12.0%	74.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	10.0	12.8	6.8	6.8	77.2	75.7	70.2	70.2	70.2
Actuated g/C Ratio	0.10	0.13	0.07	0.07	0.77	0.76	0.70	0.70	0.70
v/c Ratio	0.87	0.17	0.06	0.10	0.10	0.26	0.02	0.56	0.22
Control Delay	70.7	17.5	44.7	37.8	4.5	4.7	5.5	5.7	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	17.5	44.7	37.8	4.5	4.7	5.5	5.7	1.4
LOS	E	B	D	D	A	A	A	A	A
Approach Delay		64.3		40.6		4.6		5.1	
Approach LOS		E		D		A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 18 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	1	205	9	12	790	222	1366
Future Volume (vph)	5	1	205	9	12	790	222	1366
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.4	12.4	19.4	19.4	68.6	68.6	68.6	68.6
Actuated g/C Ratio	0.12	0.12	0.19	0.19	0.69	0.69	0.69	0.69
v/c Ratio	0.03	0.07	0.83	0.17	0.08	0.40	0.70	0.63
Control Delay	33.6	16.6	63.3	13.4	4.2	4.1	13.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	16.6	63.3	13.4	4.2	4.1	13.8	3.7
LOS	C	B	E	B	A	A	B	A
Approach Delay		20.9		52.8		4.1		5.1
Approach LOS		C		D		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

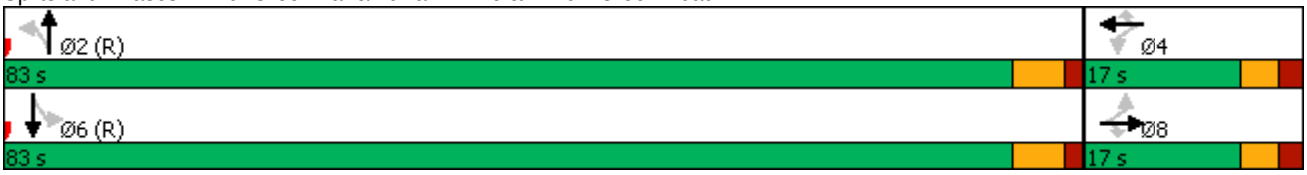
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	10	11	51	10	66	41	721	108	1603
Future Volume (vph)	10	10	11	51	10	66	41	721	108	1603
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	17.0	17.0	17.0	17.0	17.0	17.0	83.0	83.0	83.0	83.0
Total Split (%)	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	83.0%	83.0%	83.0%	83.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		9.7	9.7		10.2	10.2	82.8	82.8	82.8	82.8
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.83	0.83	0.83	0.83
v/c Ratio		0.15	0.07		0.47	0.32	0.28	0.28	0.22	0.62
Control Delay		42.3	7.0		52.9	14.0	5.5	0.4	1.1	1.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		42.3	7.0		52.9	14.0	5.5	0.4	1.1	1.1
LOS		D	A		D	B	A	A	A	A
Approach Delay		29.8			32.6			0.7		1.1
Approach LOS		C			C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 47 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 2.8	Intersection LOS: A
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	91	2	2	0	33	758	16	1639
Future Volume (vph)	91	2	2	0	33	758	16	1639
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	29.0	29.0	29.0	29.0	71.0	71.0	71.0	71.0
Total Split (%)	29.0%	29.0%	29.0%	29.0%	71.0%	71.0%	71.0%	71.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		18.4		9.9	70.6	70.6	70.6	70.6
Actuated g/C Ratio		0.18		0.10	0.71	0.71	0.71	0.71
v/c Ratio		0.73		0.02	0.35	0.34	0.04	0.72
Control Delay		47.9		0.3	18.8	6.4	1.9	5.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		47.9		0.3	18.8	6.4	1.9	5.0
LOS		D		A	B	A	A	A
Approach Delay		47.9		0.3		6.9		4.9
Approach LOS		D		A		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 33 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

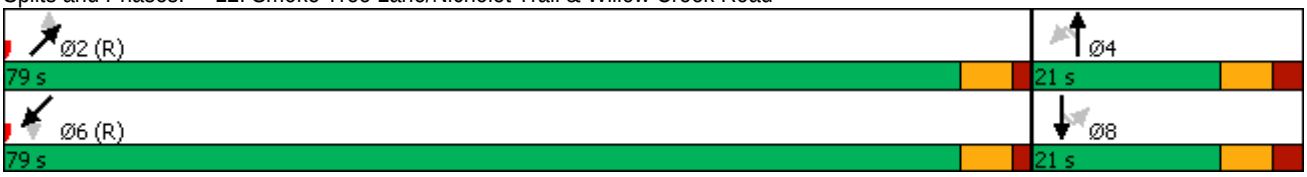
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	77	0	2	2	6	743	73	1587
Future Volume (vph)	77	0	2	2	6	743	73	1587
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	21.0	21.0	21.0	21.0	79.0	79.0	79.0	79.0
Total Split (%)	21.0%	21.0%	21.0%	21.0%	79.0%	79.0%	79.0%	79.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	11.7	11.7	9.7	9.7	76.3	76.3	76.3	76.3
Actuated g/C Ratio	0.12	0.12	0.10	0.10	0.76	0.76	0.76	0.76
v/c Ratio	0.52	0.37	0.02	0.08	0.05	0.33	0.18	0.64
Control Delay	52.1	2.5	38.0	22.0	3.7	4.2	5.0	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	2.5	38.0	22.0	3.7	4.2	5.0	6.0
LOS	D	A	D	C	A	A	A	A
Approach Delay		20.1		24.1		4.2		6.0
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 33 (33%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

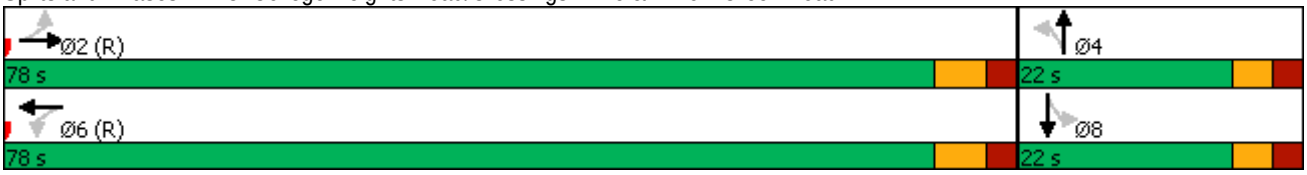
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	50	776	25	1475	80	50	30	10
Future Volume (vph)	50	776	25	1475	80	50	30	10
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	78.0	78.0	78.0	78.0	22.0	22.0	22.0	22.0
Total Split (%)	78.0%	78.0%	78.0%	78.0%	22.0%	22.0%	22.0%	22.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	75.0	75.0	75.0	75.0	13.0	13.0	13.0	13.0
Actuated g/C Ratio	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
v/c Ratio	0.31	0.34	0.06	0.60	0.60	0.35	0.20	0.52
Control Delay	6.5	1.3	1.8	2.8	57.9	31.4	40.0	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	1.3	1.8	2.8	57.9	31.4	40.0	31.2
LOS	A	A	A	A	E	C	D	C
Approach Delay		1.6		2.8		44.6		32.9
Approach LOS		A		A		D		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 49 (49%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	101	6	10	10	24	679	38	1364
Future Volume (vph)	101	6	10	10	24	679	38	1364
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.9	12.9		11.4	75.6	75.6	75.6	75.6
Actuated g/C Ratio	0.13	0.13		0.11	0.76	0.76	0.76	0.76
v/c Ratio	0.63	0.10		0.19	0.13	0.30	0.09	0.56
Control Delay	56.1	20.7		27.1	5.4	4.0	1.6	2.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	20.7		27.1	5.4	4.0	1.6	2.1
LOS	E	C		C	A	A	A	A
Approach Delay		50.0		27.1		4.0		2.1
Approach LOS		D		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 28 (28%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	184	232	601	96	236	1250
Future Volume (vph)	184	232	601	96	236	1250
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	22.0	27.0	51.0	22.0	27.0	78.0
Total Split (%)	22.0%	27.0%	51.0%	22.0%	27.0%	78.0%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	13.1	27.1	63.4	82.0	77.4	75.9
Actuated g/C Ratio	0.13	0.27	0.63	0.82	0.77	0.76
v/c Ratio	0.45	0.46	0.29	0.08	0.42	0.51
Control Delay	42.8	12.8	6.1	1.1	1.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	12.8	6.1	1.1	1.9	1.1
LOS	D	B	A	A	A	A
Approach Delay	26.1		5.4			1.2
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 32 (32%), Referenced to phase 2:NET and 6:SWTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	57	10	5	2	147	738	4	1612	175
Future Volume (vph)	57	10	5	2	147	738	4	1612	175
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	3	8		4	1	6		2	
Permitted Phases			4		6		2		2
Detector Phase	3	8	4	4	1	6	2	2	2
Switch Phase									
Minimum Initial (s)	2.0	4.0	4.0	4.0	1.0	25.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	10.0	5.0	31.0	31.0	31.0	31.0
Total Split (s)	12.0	22.0	10.0	10.0	13.0	78.0	65.0	65.0	65.0
Total Split (%)	12.0%	22.0%	10.0%	10.0%	13.0%	78.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0		6.0	4.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.9	10.0		4.7	83.5	82.7	69.5	69.5	69.5
Actuated g/C Ratio	0.08	0.10		0.05	0.84	0.83	0.70	0.70	0.70
v/c Ratio	0.23	0.32		0.14	0.70	0.27	0.01	0.71	0.17
Control Delay	45.4	17.7		40.0	38.1	2.8	2.8	3.6	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	45.4	17.7		40.0	38.1	2.8	2.8	3.7	0.3
LOS	D	B		D	D	A	A	A	A
Approach Delay		30.8		40.0		8.7		3.4	
Approach LOS		C		D		A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 86 (86%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	175	117	683	1616	197
Future Volume (vph)	16	175	117	683	1616	197
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	18.0	18.0	14.0	82.0	68.0	68.0
Total Split (%)	18.0%	18.0%	14.0%	82.0%	68.0%	68.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.3	9.3	78.7	78.7	65.1	65.1
Actuated g/C Ratio	0.09	0.09	0.79	0.79	0.65	0.65
v/c Ratio	0.10	0.68	0.58	0.27	0.76	0.20
Control Delay	41.3	25.5	31.0	5.5	5.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	41.3	25.5	31.0	5.5	5.1	0.7
LOS	D	C	C	A	A	A
Approach Delay	26.8			9.2	4.6	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 77 (77%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 69.5%	ICU Level of Service C
Analysis Period (min) 15	

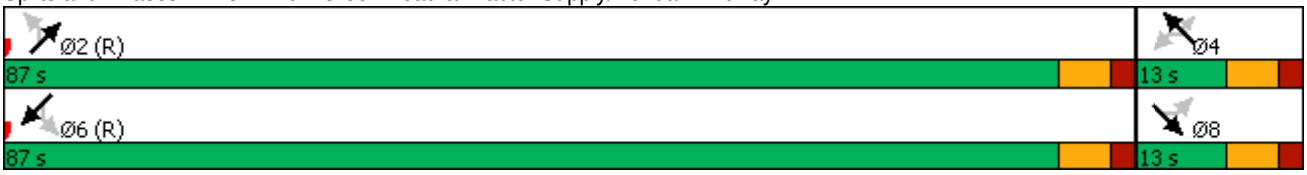
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	7	10	5	1	5	2	656	5	1813
Future Volume (vph)	7	10	5	1	5	2	656	5	1813
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	13.0	13.0	13.0	13.0	13.0	87.0	87.0	87.0	87.0
Total Split (%)	13.0%	13.0%	13.0%	13.0%	13.0%	87.0%	87.0%	87.0%	87.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		6.8		6.8	6.8	88.6	88.6	88.6	88.6
Actuated g/C Ratio		0.07		0.07	0.07	0.89	0.89	0.89	0.89
v/c Ratio		0.25		0.05	0.04	0.01	0.23	0.01	0.64
Control Delay		37.4		44.7	0.4	2.0	1.6	0.0	1.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		37.4		44.7	0.4	2.0	1.6	0.0	1.0
LOS		D		D	A	A	A	A	A
Approach Delay		37.4		24.5			1.6		1.0
Approach LOS		D		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 44 (44%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 1.6	Intersection LOS: A
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

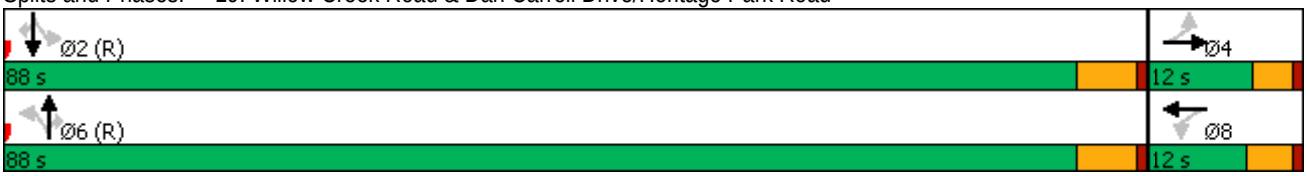
Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	33	2	10	11	133	519	16	10	1917	72
Future Volume (vph)	33	2	10	11	133	519	16	10	1917	72
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	12.0	12.0	12.0	12.0	88.0	88.0	88.0	88.0	88.0	88.0
Total Split (%)	12.0%	12.0%	12.0%	12.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.6	7.6	7.1	7.1	89.5	89.5	89.5	89.5	89.5	89.5
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.90	0.90	0.90	0.90	0.90	0.90
v/c Ratio	0.32	0.14	0.09	0.15	1.14	0.18	0.01	0.01	0.66	0.05
Control Delay	51.4	22.6	45.1	34.6	150.7	1.1	0.9	0.4	4.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	22.6	45.1	34.6	150.7	1.1	0.9	0.4	4.2	0.2
LOS	D	C	D	C	F	A	A	A	A	A
Approach Delay		41.1		38.3		31.0			4.0	
Approach LOS		D		D		C			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 90 (90%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 132.9%	ICU Level of Service H
Analysis Period (min) 15	

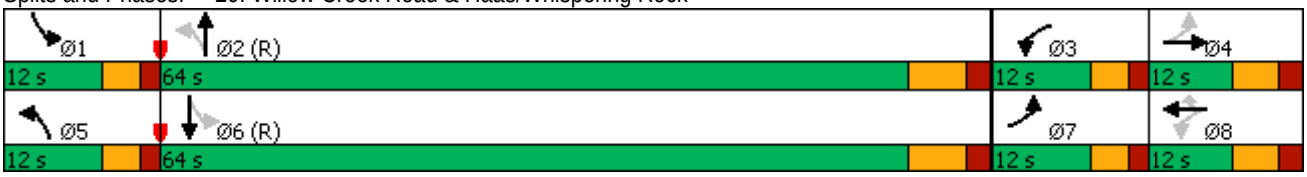
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	28	1	1	1	1	70	488	1	1977
Future Volume (vph)	28	1	1	1	1	70	488	1	1977
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	12.0	12.0	12.0	12.0	12.0	12.0	64.0	12.0	64.0
Total Split (%)	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	64.0%	12.0%	64.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	8.7	6.6	7.1	6.1	6.1	85.4	84.5	81.6	76.5
Actuated g/C Ratio	0.09	0.07	0.07	0.06	0.06	0.85	0.84	0.82	0.76
v/c Ratio	0.20	0.19	0.01	0.01	0.00	0.40	0.18	0.00	0.87
Control Delay	42.3	21.5	37.0	44.0	0.0	21.3	5.1	2.0	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	21.5	37.0	44.0	0.0	21.3	5.1	2.0	9.6
LOS	D	C	D	D	A	C	A	A	A
Approach Delay		33.0		27.0			7.1		9.6
Approach LOS		C		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 66 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

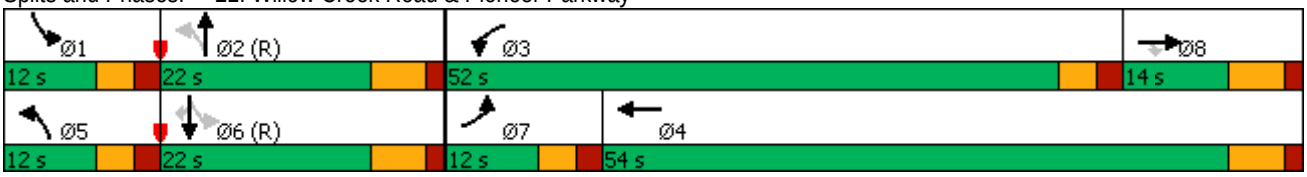
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	229	118	1397	245	24	145	325	30	588	70
Future Volume (vph)	27	229	118	1397	245	24	145	325	30	588	70
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	12.0	14.0	14.0	52.0	54.0	12.0	22.0		12.0	22.0	22.0
Total Split (%)	12.0%	14.0%	14.0%	52.0%	54.0%	12.0%	22.0%		12.0%	22.0%	22.0%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.9	8.7	8.7	46.3	53.0	26.0	21.5	100.0	27.2	23.7	23.7
Actuated g/C Ratio	0.06	0.09	0.09	0.46	0.53	0.26	0.22	1.00	0.27	0.24	0.24
v/c Ratio	0.28	0.81	0.41	0.95	0.15	0.14	0.21	0.22	0.10	0.76	0.15
Control Delay	51.3	66.0	5.3	40.6	13.0	37.2	42.0	1.1	26.7	44.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	66.0	5.3	40.6	13.0	37.2	42.0	1.1	26.7	44.5	0.6
LOS	D	E	A	D	B	D	D	A	C	D	A
Approach Delay		45.8			36.3		14.9			39.3	
Approach LOS		D			D		B			D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 34.8	Intersection LOS: C
Intersection Capacity Utilization 83.8%	ICU Level of Service E
Analysis Period (min) 15	

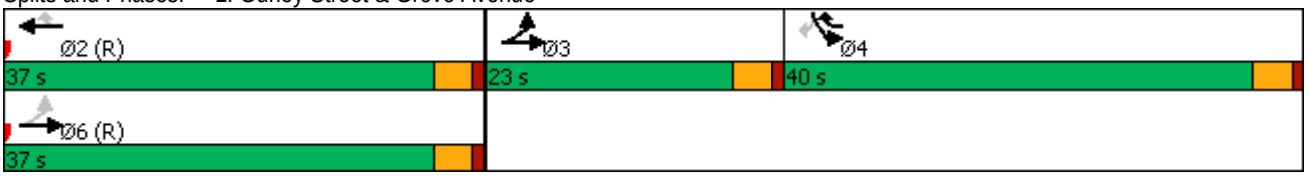
Splits and Phases: 21: Willow Creek Road & Pioneer Parkway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6
Lane Configurations							
Traffic Volume (vph)	256	286	323	252	336	322	
Future Volume (vph)	256	286	323	252	336	322	
Turn Type	custom	NA	NA	pm+ov	Prot	Perm	
Protected Phases	3	3 6	2	4	4		6
Permitted Phases	6			2		4	
Detector Phase	3	3 6	2	4	4	4	
Switch Phase							
Minimum Initial (s)	5.0		25.0	20.0	20.0	20.0	25.0
Minimum Split (s)	9.0		29.0	24.0	24.0	24.0	29.0
Total Split (s)	23.0		37.0	40.0	40.0	40.0	37.0
Total Split (%)	23.0%		37.0%	40.0%	40.0%	40.0%	37%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?							
Recall Mode	None		C-Max	None	None	None	C-Max
Act Effct Green (s)		64.2	52.7	80.5	23.8	23.8	
Actuated g/C Ratio		0.64	0.53	0.80	0.24	0.24	
v/c Ratio		0.36	0.19	0.21	0.45	0.54	
Control Delay		8.2	13.9	0.7	22.4	4.9	
Queue Delay		0.0	0.0	0.0	0.0	0.0	
Total Delay		8.2	13.9	0.7	22.4	4.9	
LOS		A	B	A	C	A	
Approach Delay		8.2	8.1		13.8		
Approach LOS		A	A		B		

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	9	29	13	219	8	477	180	637
Future Volume (vph)	8	9	29	13	219	8	477	180	637
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	57.0	57.0	16.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	27.0%	57.0%	57.0%	16.0%	73.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		9.8		10.1	10.1	66.7	66.7	79.4	79.4
Actuated g/C Ratio		0.10		0.10	0.10	0.67	0.67	0.79	0.79
v/c Ratio		0.22		0.32	0.64	0.02	0.23	0.29	0.26
Control Delay		26.8		46.2	13.7	5.6	4.9	2.9	2.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		26.8		46.2	13.7	5.6	4.9	2.9	2.0
LOS		C		D	B	A	A	A	A
Approach Delay		26.8		18.9			4.9		2.2
Approach LOS		C		B			A		A

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 5 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 6.2 Intersection LOS: A
Intersection Capacity Utilization 96.6% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	37	59	69	657	820
Future Volume (vph)	37	59	69	657	820
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	19.0	19.0	14.0		67.0
Total Split (%)	19.0%	19.0%	14.0%		67.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None		C-Max
Act Effct Green (s)	8.7	8.7	80.6	84.6	69.7
Actuated g/C Ratio	0.09	0.09	0.81	0.85	0.70
v/c Ratio	0.26	0.33	0.14	0.24	0.39
Control Delay	46.1	15.6	2.6	2.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	15.6	2.6	2.4	2.6
LOS	D	B	A	A	A
Approach Delay	27.3			2.4	2.6
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 89 (89%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 3.9	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

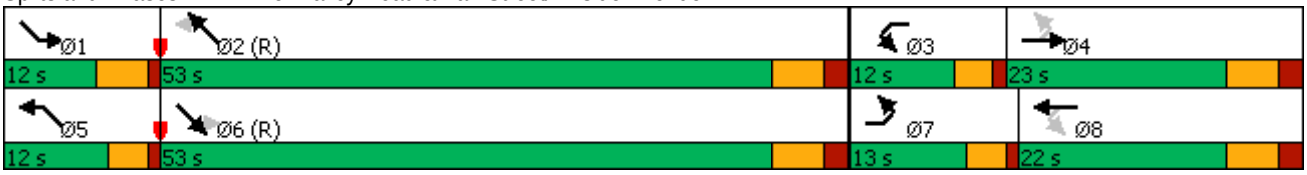
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	57	95	39	81	48	800	93	576
Future Volume (vph)	57	95	39	81	48	800	93	576
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	13.0	23.0	12.0	22.0	12.0	53.0	12.0	53.0
Total Split (%)	13.0%	23.0%	12.0%	22.0%	12.0%	53.0%	12.0%	53.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	21.2	14.3	19.0	11.6	64.1	58.3	65.8	58.3
Actuated g/C Ratio	0.21	0.14	0.19	0.12	0.64	0.58	0.66	0.58
v/c Ratio	0.25	0.64	0.17	0.67	0.10	0.45	0.26	0.32
Control Delay	29.8	43.7	28.5	47.1	5.3	11.2	8.3	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	43.7	28.5	47.1	5.3	11.2	8.3	12.1
LOS	C	D	C	D	A	B	A	B
Approach Delay		40.1		43.1		10.9		11.6
Approach LOS		D		D		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 48 (48%), Referenced to phase 2:NWTL and 6:SETL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

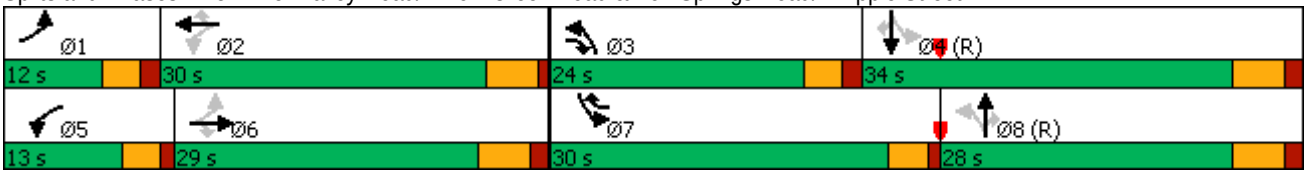
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	459	300	139	566	462	267	397	91	327	500	42
Future Volume (vph)	81	459	300	139	566	462	267	397	91	327	500	42
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	12.0	29.0	24.0	13.0	30.0	30.0	24.0	28.0	28.0	30.0	34.0	34.0
Total Split (%)	12.0%	29.0%	24.0%	13.0%	30.0%	30.0%	24.0%	28.0%	28.0%	30.0%	34.0%	34.0%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.0	21.1	40.1	32.9	24.8	45.8	49.7	35.3	35.3	54.9	37.3	37.3
Actuated g/C Ratio	0.29	0.21	0.40	0.33	0.25	0.46	0.50	0.35	0.35	0.55	0.37	0.37
v/c Ratio	0.40	0.67	0.45	0.55	0.70	0.61	0.58	0.35	0.15	0.61	0.41	0.07
Control Delay	27.0	40.7	12.6	30.0	39.4	15.1	10.9	18.8	3.6	13.0	16.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	40.7	12.6	30.0	39.4	15.1	10.9	18.8	3.6	13.0	16.2	0.5
LOS	C	D	B	C	D	B	B	B	A	B	B	A
Approach Delay		29.3			28.7			14.2			14.2	
Approach LOS		C			C			B			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 9 (9%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

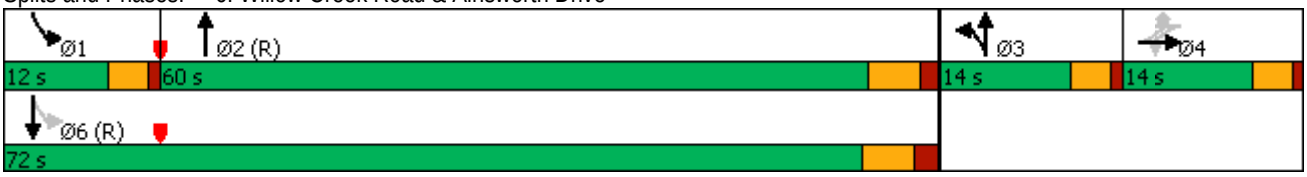
Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	5	11	31	30	706	32	654	
Future Volume (vph)	5	11	31	30	706	32	654	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	14.0	14.0	14.0	14.0		12.0	72.0	60.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%		12.0%	72.0%	60%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None		None	C-Max	C-Max
Act Effct Green (s)	7.2	7.2	7.2	7.8	80.5	74.8	72.8	
Actuated g/C Ratio	0.07	0.07	0.07	0.08	0.80	0.75	0.73	
v/c Ratio	0.33	0.11	0.15	0.24	0.28	0.07	0.28	
Control Delay	46.0	44.3	1.4	37.9	1.9	1.4	1.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.0	44.3	1.4	37.9	1.9	1.4	1.5	
LOS	D	D	A	D	A	A	A	
Approach Delay	46.0				3.4		1.5	
Approach LOS	D				A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 75 (75%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 3.9	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	1	8	5	13	938	12	933
Future Volume (vph)	29	1	8	5	13	938	12	933
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	14.0	14.0	14.0	14.0	12.0	74.0	12.0	74.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	12.0%	74.0%	12.0%	74.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	8.1	8.1	8.1	8.1	84.4	83.0	83.6	81.3
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.84	0.83	0.84	0.81
v/c Ratio	0.28	0.30	0.08	0.08	0.03	0.35	0.03	0.36
Control Delay	49.5	17.4	43.6	30.8	0.9	1.9	0.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	17.4	43.6	30.8	0.9	1.9	0.8	1.5
LOS	D	B	D	C	A	A	A	A
Approach Delay		29.5		36.3		1.8		1.5
Approach LOS		C		D		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 14 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

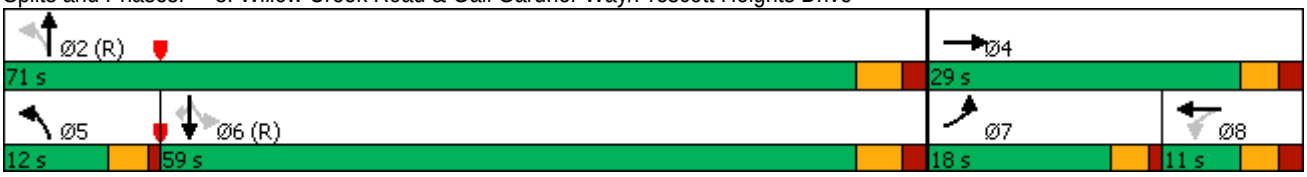
Splits and Phases: 7: Willow Creek Road & Black Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	430	11	5	14	56	844	7	863	249
Future Volume (vph)	430	11	5	14	56	844	7	863	249
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	18.0	29.0	11.0	11.0	12.0	71.0	59.0	59.0	59.0
Total Split (%)	18.0%	29.0%	11.0%	11.0%	12.0%	71.0%	59.0%	59.0%	59.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.0	18.3	6.0	6.0	71.4	69.9	62.0	62.0	62.0
Actuated g/C Ratio	0.14	0.18	0.06	0.06	0.71	0.70	0.62	0.62	0.62
v/c Ratio	0.97	0.20	0.05	0.22	0.16	0.37	0.02	0.43	0.25
Control Delay	78.8	12.3	45.4	36.8	6.9	7.1	6.7	7.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.8	12.3	45.4	36.8	6.9	7.1	6.7	7.6	0.8
LOS	E	B	D	D	A	A	A	A	A
Approach Delay		70.2		38.3		7.1		6.1	
Approach LOS		E		D		A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 24 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 19.3	Intersection LOS: B
Intersection Capacity Utilization 77.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	4	139	8	21	1098	35	945
Future Volume (vph)	5	4	139	8	21	1098	35	945
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	30.0	30.0	30.0	30.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.7	12.7	17.0	17.0	71.0	71.0	71.0	71.0
Actuated g/C Ratio	0.13	0.13	0.17	0.17	0.71	0.71	0.71	0.71
v/c Ratio	0.03	0.03	0.63	0.24	0.07	0.56	0.18	0.42
Control Delay	32.4	26.2	49.8	11.4	3.0	5.2	7.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	26.2	49.8	11.4	3.0	5.2	7.5	5.6
LOS	C	C	D	B	A	A	A	A
Approach Delay		28.8		36.4		5.2		5.7
Approach LOS		C		D		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 7 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

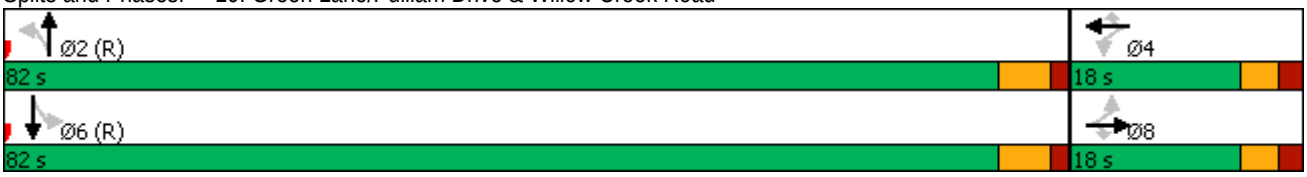
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	10	27	34	0	38	43	1089	41	875
Future Volume (vph)	10	10	27	34	0	38	43	1089	41	875
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	82.0	82.0	82.0	82.0
Total Split (%)	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	82.0%	82.0%	82.0%	82.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		9.0	9.0		9.2	9.2	83.7	83.7	83.7	83.7
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.84	0.84	0.84	0.84
v/c Ratio		0.16	0.17		0.29	0.23	0.11	0.41	0.13	0.34
Control Delay		43.4	16.9		47.5	15.8	0.7	0.8	2.9	2.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.4	16.9		47.5	15.8	0.7	0.8	2.9	2.2
LOS		D	B		D	B	A	A	A	A
Approach Delay		28.3			30.8			0.8		2.2
Approach LOS		C			C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 2.9	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

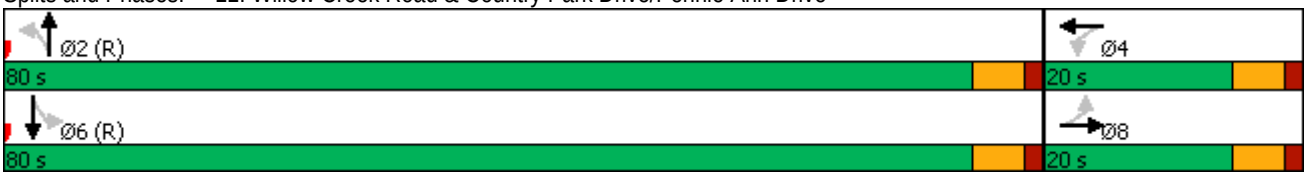
Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Configurations						
Traffic Volume (vph)	23	0	0	55	1111	920
Future Volume (vph)	23	0	0	55	1111	920
Turn Type	Perm	NA	NA	Perm	NA	NA
Protected Phases		8	4		2	6
Permitted Phases	8			2		
Detector Phase	8	8	4	2	2	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	20.0	20.0	20.0	80.0	80.0	80.0
Total Split (%)	20.0%	20.0%	20.0%	80.0%	80.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)		8.5	7.6	84.0	84.0	84.0
Actuated g/C Ratio		0.08	0.08	0.84	0.84	0.84
v/c Ratio		0.37	0.00	0.14	0.41	0.34
Control Delay		29.6	0.0	1.5	1.1	2.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		29.6	0.0	1.5	1.1	2.0
LOS		C	A	A	A	A
Approach Delay		29.6			1.2	2.0
Approach LOS		C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 64 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 2.2	Intersection LOS: A
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

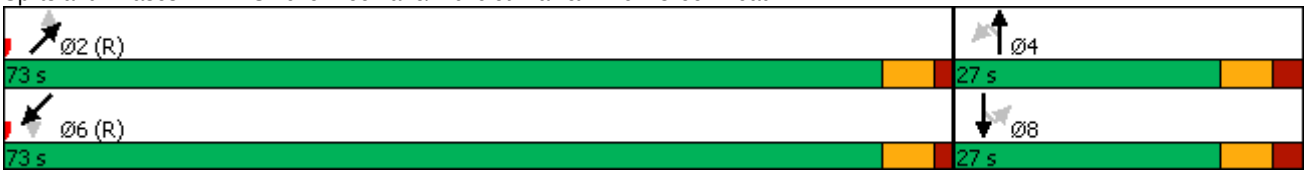
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	81	3	2	6	15	993	70	871
Future Volume (vph)	81	3	2	6	15	993	70	871
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.5	12.5	10.4	10.4	75.5	75.5	75.5	75.5
Actuated g/C Ratio	0.12	0.12	0.10	0.10	0.76	0.76	0.76	0.76
v/c Ratio	0.50	0.40	0.02	0.06	0.04	0.44	0.25	0.36
Control Delay	49.9	11.7	36.0	29.3	1.4	1.7	6.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	11.7	36.0	29.3	1.4	1.7	6.4	4.8
LOS	D	B	D	C	A	A	A	A
Approach Delay		27.9		30.2		1.7		4.9
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 72 (72%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

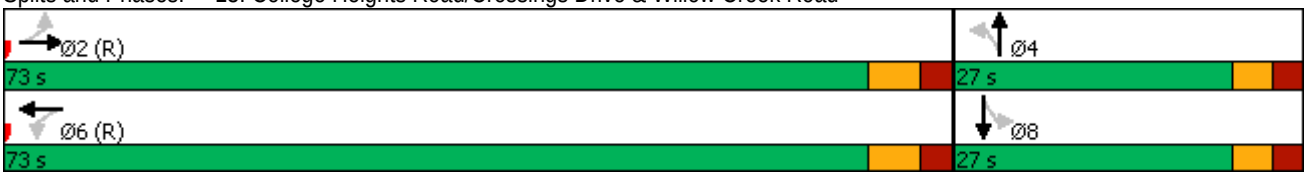
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	3	1034	12	864	5	0	86	1
Future Volume (vph)	3	1034	12	864	5	0	86	1
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	73.0	73.0	73.0	73.0	27.0	27.0	27.0	27.0
Total Split (%)	73.0%	73.0%	73.0%	73.0%	27.0%	27.0%	27.0%	27.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	79.1	79.1	79.1	79.1	10.5	10.5	12.9	12.9
Actuated g/C Ratio	0.79	0.79	0.79	0.79	0.10	0.10	0.13	0.13
v/c Ratio	0.01	0.41	0.04	0.34	0.04	0.03	0.52	0.26
Control Delay	1.0	1.2	6.1	5.6	36.6	0.2	49.9	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.0	1.2	6.1	5.6	36.6	0.2	49.9	12.0
LOS	A	A	A	A	D	A	D	B
Approach Delay		1.2		5.6		13.2		33.8
Approach LOS		A		A		B		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 80 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	45	0	14	5	20	1056	26	888
Future Volume (vph)	45	0	14	5	20	1056	26	888
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.6	8.6		8.2	83.2	83.2	83.2	83.2
Actuated g/C Ratio	0.09	0.09		0.08	0.83	0.83	0.83	0.83
v/c Ratio	0.42	0.12		0.30	0.05	0.41	0.08	0.34
Control Delay	53.4	1.1		29.4	1.1	1.2	1.5	1.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	1.1		29.4	1.1	1.2	1.5	1.5
LOS	D	A		C	A	A	A	A
Approach Delay		33.5		29.4		1.2		1.5
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 19 (19%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 3.0	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	224	372	980	198	290	800
Future Volume (vph)	224	372	980	198	290	800
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	20.0	28.0	52.0	20.0	28.0	80.0
Total Split (%)	20.0%	28.0%	52.0%	20.0%	28.0%	80.0%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	13.4	31.7	58.8	77.7	77.1	75.6
Actuated g/C Ratio	0.13	0.32	0.59	0.78	0.77	0.76
v/c Ratio	0.53	0.76	0.51	0.17	0.68	0.33
Control Delay	44.7	35.3	8.7	0.3	21.2	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	35.3	8.7	0.3	21.2	3.3
LOS	D	D	A	A	C	A
Approach Delay	38.8		7.3			8.1
Approach LOS	D		A			A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NET and 6:SWTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

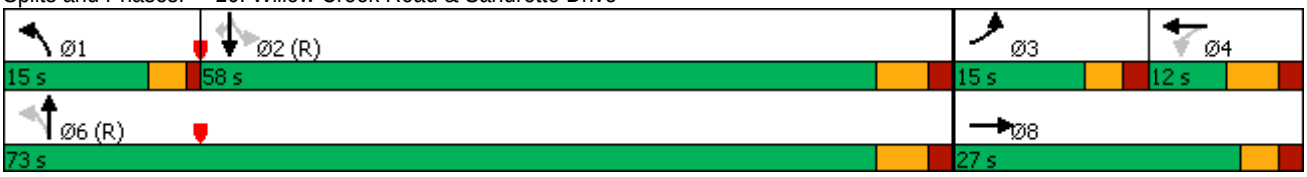
Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	93	0	0	98	926	808	79
Future Volume (vph)	93	0	0	98	926	808	79
Turn Type	Prot	NA	NA	pm+pt	NA	NA	Perm
Protected Phases	3	8	4	1	6	2	
Permitted Phases				6			2
Detector Phase	3	8	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	2.0	4.0	4.0	1.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	5.0	31.0	31.0	31.0
Total Split (s)	15.0	27.0	12.0	15.0	73.0	58.0	58.0
Total Split (%)	15.0%	27.0%	12.0%	15.0%	73.0%	58.0%	58.0%
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lead		Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.5	11.8	6.4	81.7	80.9	69.8	69.8
Actuated g/C Ratio	0.10	0.12	0.06	0.82	0.81	0.70	0.70
v/c Ratio	0.31	0.21	0.02	0.22	0.35	0.36	0.08
Control Delay	44.7	1.1	0.2	2.5	2.3	4.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	1.1	0.2	2.5	2.3	4.8	0.5
LOS	D	A	A	A	A	A	A
Approach Delay		24.0	0.2		2.4	4.4	
Approach LOS		C	A		A	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 59 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	165	154	845	700	74
Future Volume (vph)	64	165	154	845	700	74
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	20.0	20.0	17.0	80.0	63.0	63.0
Total Split (%)	20.0%	20.0%	17.0%	80.0%	63.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	10.3	10.3	77.7	77.7	63.3	63.3
Actuated g/C Ratio	0.10	0.10	0.78	0.78	0.63	0.63
v/c Ratio	0.39	0.55	0.31	0.33	0.34	0.08
Control Delay	47.3	13.2	3.3	2.3	4.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	13.2	3.3	2.3	4.2	0.4
LOS	D	B	A	A	A	A
Approach Delay	22.8			2.4	3.8	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

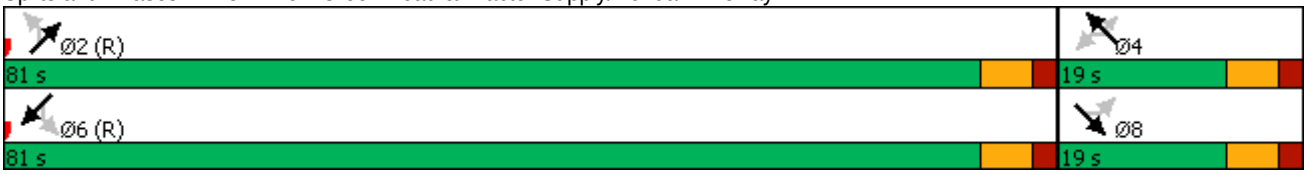
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	7	2	10	5	20	2	921	15	723
Future Volume (vph)	7	2	10	5	20	2	921	15	723
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	19.0	19.0	19.0	19.0	19.0	81.0	81.0	81.0	81.0
Total Split (%)	19.0%	19.0%	19.0%	19.0%	19.0%	81.0%	81.0%	81.0%	81.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		7.5		7.6	7.6	87.8	87.8	87.8	87.8
Actuated g/C Ratio		0.08		0.08	0.08	0.88	0.88	0.88	0.88
v/c Ratio		0.11		0.14	0.15	0.00	0.32	0.03	0.26
Control Delay		40.6		45.4	11.8	1.0	1.0	1.1	0.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		40.6		45.4	11.8	1.0	1.0	1.1	0.9
LOS		D		D	B	A	A	A	A
Approach Delay		40.6		25.9			1.0		0.9
Approach LOS		D		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 64 (64%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 1.7	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	31	2	12	6	75	768	15	14	620	18
Future Volume (vph)	31	2	12	6	75	768	15	14	620	18
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	14.0	14.0	14.0	14.0	86.0	86.0	86.0	86.0	86.0	86.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.6	8.6	8.1	8.1	85.1	85.1	85.1	85.1	85.1	85.1
Actuated g/C Ratio	0.09	0.09	0.08	0.08	0.85	0.85	0.85	0.85	0.85	0.85
v/c Ratio	0.29	0.29	0.12	0.15	0.13	0.28	0.01	0.03	0.22	0.01
Control Delay	48.7	17.2	44.4	25.9	0.6	0.4	0.0	0.9	0.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	17.2	44.4	25.9	0.6	0.4	0.0	0.9	0.9	0.1
LOS	D	B	D	C	A	A	A	A	A	A
Approach Delay		29.7		32.6		0.4			0.8	
Approach LOS		C		C		A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 10 (10%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 2.7	Intersection LOS: A
Intersection Capacity Utilization 132.9%	ICU Level of Service H
Analysis Period (min) 15	

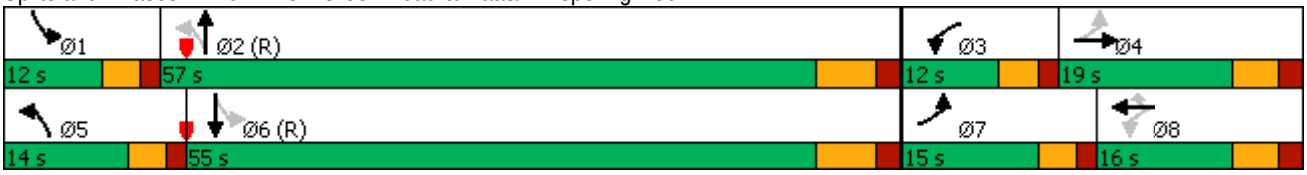
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	52	5	5	5	5	63	760	5	598
Future Volume (vph)	52	5	5	5	5	63	760	5	598
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	15.0	19.0	12.0	16.0	16.0	14.0	57.0	12.0	55.0
Total Split (%)	15.0%	19.0%	12.0%	16.0%	16.0%	14.0%	57.0%	12.0%	55.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	10.7	7.9	7.5	6.4	6.4	81.7	79.4	77.8	72.6
Actuated g/C Ratio	0.11	0.08	0.08	0.06	0.06	0.82	0.79	0.78	0.73
v/c Ratio	0.32	0.36	0.04	0.04	0.02	0.12	0.30	0.01	0.29
Control Delay	43.2	18.4	37.0	44.4	0.2	2.3	3.4	0.8	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	18.4	37.0	44.4	0.2	2.3	3.4	0.8	1.9
LOS	D	B	D	D	A	A	A	A	A
Approach Delay		30.0		27.2			3.3		1.9
Approach LOS		C		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 4.8	Intersection LOS: A
Intersection Capacity Utilization 47.8%	ICU Level of Service A
Analysis Period (min) 15	

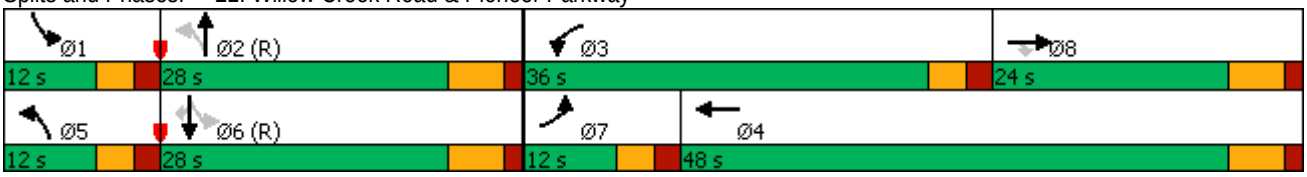
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	15	183	44	410	172	39	222	531	19	187	21
Future Volume (vph)	15	183	44	410	172	39	222	531	19	187	21
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	12.0	24.0	24.0	36.0	48.0	12.0	28.0		12.0	28.0	28.0
Total Split (%)	12.0%	24.0%	24.0%	36.0%	48.0%	12.0%	28.0%		12.0%	28.0%	28.0%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.5	11.9	11.9	17.5	29.7	53.2	49.7	100.0	51.4	47.2	47.2
Actuated g/C Ratio	0.06	0.12	0.12	0.18	0.30	0.53	0.50	1.00	0.51	0.47	0.47
v/c Ratio	0.16	0.47	0.13	0.74	0.19	0.07	0.14	0.36	0.03	0.12	0.03
Control Delay	48.4	44.6	0.8	46.8	25.7	13.4	15.7	1.9	12.9	17.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	44.6	0.8	46.8	25.7	13.4	15.7	1.9	12.9	17.8	0.0
LOS	D	D	A	D	C	B	B	A	B	B	A
Approach Delay		36.8			40.3		6.3			15.8	
Approach LOS		D			D		A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

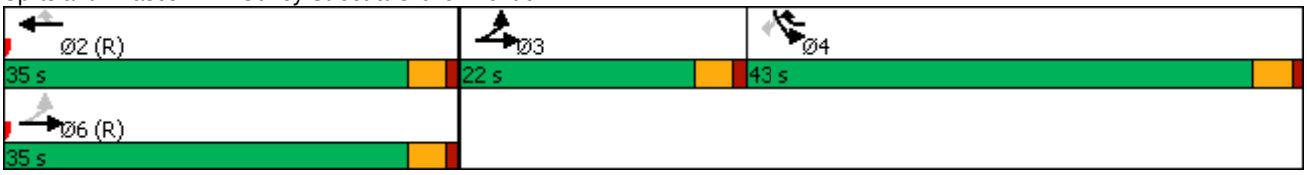
Splits and Phases: 21: Willow Creek Road & Pioneer Parkway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6
Lane Configurations							
Traffic Volume (vph)	289	292	306	215	276	442	
Future Volume (vph)	289	292	306	215	276	442	
Turn Type	custom	NA	NA	pm+ov	Prot	Perm	
Protected Phases	3	3 6	2	4	4		6
Permitted Phases	6			2		4	
Detector Phase	3	3 6	2	4	4	4	
Switch Phase							
Minimum Initial (s)	5.0		25.0	20.0	20.0	20.0	25.0
Minimum Split (s)	9.0		29.0	24.0	24.0	24.0	29.0
Total Split (s)	22.0		35.0	43.0	43.0	43.0	35.0
Total Split (%)	22.0%		35.0%	43.0%	43.0%	43.0%	35%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	
Total Lost Time (s)			4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?							
Recall Mode	None		C-Max	None	None	None	C-Max
Act Effct Green (s)		64.7	52.8	80.1	23.3	23.3	
Actuated g/C Ratio		0.65	0.53	0.80	0.23	0.23	
v/c Ratio		0.38	0.18	0.18	0.38	0.65	
Control Delay		8.3	13.9	0.7	22.3	5.7	
Queue Delay		0.0	0.0	0.0	0.0	0.0	
Total Delay		8.3	13.9	0.7	22.3	5.7	
LOS		A	B	A	C	A	
Approach Delay		8.3	8.5		12.1		
Approach LOS		A	A		B		

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 24 (24%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 64.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Gurley Street & Grove Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	41	30	12	41	213	11	451	239	622
Future Volume (vph)	41	30	12	41	213	11	451	239	622
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	45.0	45.0	2.0	45.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	50.0	50.0	7.0	50.0
Total Split (s)	26.0	26.0	26.0	26.0	26.0	55.0	55.0	19.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%	55.0%	55.0%	19.0%	74.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.0	5.0	5.0	5.0
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		11.7		11.6	11.6	63.9	63.9	77.9	77.9
Actuated g/C Ratio		0.12		0.12	0.12	0.64	0.64	0.78	0.78
v/c Ratio		0.49		0.29	0.60	0.03	0.23	0.37	0.26
Control Delay		47.5		42.7	12.1	5.6	4.9	3.7	1.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		47.5		42.7	12.1	5.6	4.9	3.7	1.3
LOS		D		D	B	A	A	A	A
Approach Delay		47.5		18.2			4.9		1.9
Approach LOS		D		B			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 45 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Grove Avenue/Miller Valley Road & Sheldon Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	53	123	65	700	826
Future Volume (vph)	53	123	65	700	826
Turn Type	Prot	Perm	D.P+P	NA	NA
Protected Phases	4		1	2 1	2
Permitted Phases		4	2		
Detector Phase	4	4	1	2 1	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	9.0		10.0
Total Split (s)	25.0	25.0	14.0		61.0
Total Split (%)	25.0%	25.0%	14.0%		61.0%
Yellow Time (s)	4.0	4.0	3.0		4.0
All-Red Time (s)	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	4.0		5.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None		C-Max
Act Effct Green (s)	9.6	9.6	77.4	80.4	64.7
Actuated g/C Ratio	0.10	0.10	0.77	0.80	0.65
v/c Ratio	0.34	0.49	0.14	0.27	0.42
Control Delay	46.9	13.8	3.1	3.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	13.8	3.1	3.2	4.1
LOS	D	B	A	A	A
Approach Delay	23.8			3.2	4.1
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 22 (22%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

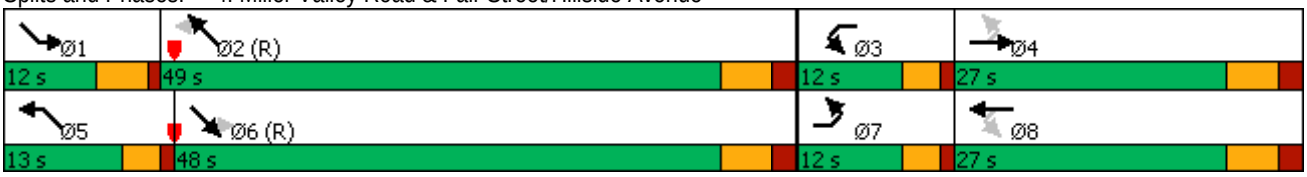
Splits and Phases: 3: Miller Valley Road & Schemmer Drive



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Traffic Volume (vph)	39	113	43	145	107	810	114	742
Future Volume (vph)	39	113	43	145	107	810	114	742
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	7	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0
Minimum Split (s)	9.5	11.0	9.5	11.0	10.0	46.0	9.5	46.0
Total Split (s)	12.0	27.0	12.0	27.0	12.0	48.0	13.0	49.0
Total Split (%)	12.0%	27.0%	12.0%	27.0%	12.0%	48.0%	13.0%	49.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	24.0	17.7	24.0	17.8	59.9	52.4	61.3	52.1
Actuated g/C Ratio	0.24	0.18	0.24	0.18	0.60	0.52	0.61	0.52
v/c Ratio	0.20	0.66	0.19	0.83	0.31	0.52	0.35	0.46
Control Delay	26.1	40.9	25.6	54.8	11.2	17.5	11.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	40.9	25.6	54.8	11.2	17.5	11.5	17.1
LOS	C	D	C	D	B	B	B	B
Approach Delay		38.5		50.6		16.8		16.3
Approach LOS		D		D		B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 79 (79%), Referenced to phase 2:NWTL and 6:SETL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

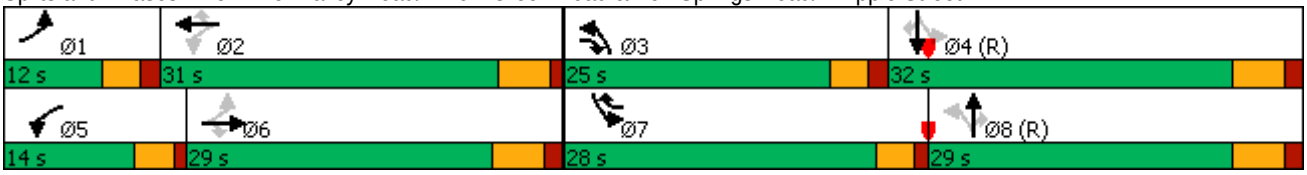
Splits and Phases: 4: Miller Valley Road & Fair Street/Hillside Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	617	384	190	582	404	358	518	144	420	494	59
Future Volume (vph)	72	617	384	190	582	404	358	518	144	420	494	59
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	3	5	2	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0
Minimum Split (s)	5.5	7.5	5.5	5.0	7.0	5.0	5.5	7.5	7.5	5.0	7.5	7.5
Total Split (s)	12.0	29.0	25.0	14.0	31.0	28.0	25.0	29.0	29.0	28.0	32.0	32.0
Total Split (%)	12.0%	29.0%	25.0%	14.0%	31.0%	28.0%	25.0%	29.0%	29.0%	28.0%	32.0%	32.0%
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.0	5.0	4.0	4.5	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	30.6	22.9	45.7	37.1	28.1	54.1	45.4	27.1	27.1	52.7	30.3	30.3
Actuated g/C Ratio	0.31	0.23	0.46	0.37	0.28	0.54	0.45	0.27	0.27	0.53	0.30	0.30
v/c Ratio	0.32	0.83	0.54	0.81	0.64	0.47	0.77	0.59	0.30	0.87	0.50	0.11
Control Delay	23.9	46.6	16.9	47.2	35.6	10.1	23.3	25.5	7.1	25.3	21.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	46.6	16.9	47.2	35.6	10.1	23.3	25.5	7.1	25.3	21.2	4.6
LOS	C	D	B	D	D	B	C	C	A	C	C	A
Approach Delay		34.4			28.7			22.1			22.0	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 36 (36%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

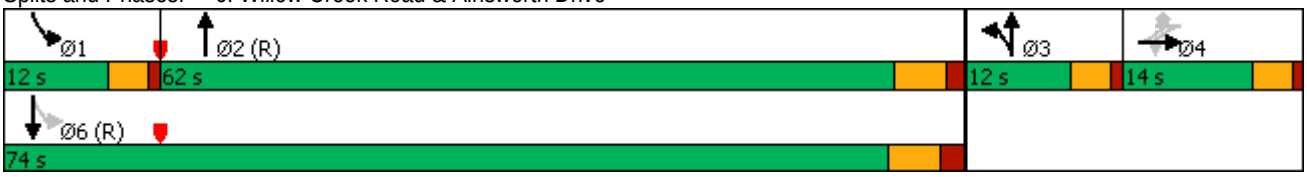
Splits and Phases: 5: Miller Valley Road/Willow Creek Road & Iron Springs Road/Whipple Street



Lane Group	EBT	WBL	WBR	NBL	NBT	SBL	SBT	Ø2
Lane Configurations								
Traffic Volume (vph)	0	28	49	2	898	25	876	
Future Volume (vph)	0	28	49	2	898	25	876	
Turn Type	NA	D.Pm	Perm	Prot	NA	pm+pt	NA	
Protected Phases	4			3	2 3	1	6	2
Permitted Phases		4	4			6		
Detector Phase	4	4	4	3	2 3	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	40.0	40.0
Minimum Split (s)	9.0	9.0	9.0	9.0		9.0	46.0	45.5
Total Split (s)	14.0	14.0	14.0	12.0		12.0	74.0	62.0
Total Split (%)	14.0%	14.0%	14.0%	12.0%		12.0%	74.0%	62%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	2.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None		None	C-Max	C-Max
Act Effct Green (s)	7.3	7.3	7.3	7.8	80.6	74.8	72.8	
Actuated g/C Ratio	0.07	0.07	0.07	0.08	0.81	0.75	0.73	
v/c Ratio	0.07	0.30	0.23	0.01	0.35	0.06	0.37	
Control Delay	0.6	50.8	2.4	49.5	6.7	0.8	1.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	0.6	50.8	2.4	49.5	6.7	0.8	1.8	
LOS	A	D	A	D	A	A	A	
Approach Delay	0.6				6.8		1.8	
Approach LOS	A				A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 98 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Willow Creek Road & Ainsworth Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	6	14	0	27	1024	15	973
Future Volume (vph)	17	6	14	0	27	1024	15	973
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		4	5	2	1	6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	1.0	60.0
Minimum Split (s)	7.0	7.0	7.0	7.0	5.5	65.5	5.5	65.5
Total Split (s)	14.0	14.0	14.0	14.0	12.0	74.0	12.0	74.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	12.0%	74.0%	12.0%	74.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.0	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.5	4.0	5.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.7	7.7	7.7	7.7	84.1	81.7	83.1	79.8
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.84	0.82	0.83	0.80
v/c Ratio	0.17	0.34	0.15	0.05	0.07	0.39	0.04	0.38
Control Delay	46.3	20.5	45.8	0.3	1.6	3.3	0.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	20.5	45.8	0.3	1.6	3.3	0.3	0.6
LOS	D	C	D	A	A	A	A	A
Approach Delay		26.5		23.0		3.2		0.6
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 35 (35%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 3.0	Intersection LOS: A
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

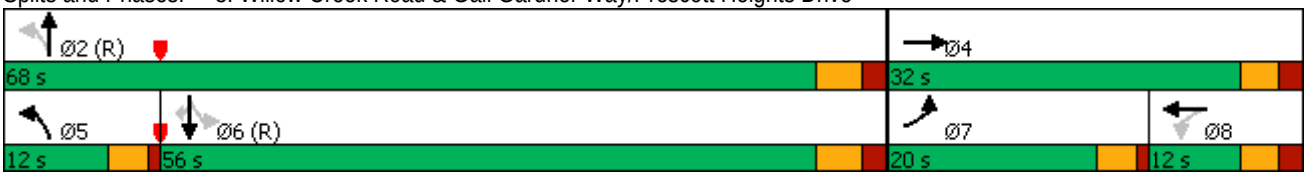
Splits and Phases: 7: Willow Creek Road & Black Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	494	25	10	11	64	976	15	970	300
Future Volume (vph)	494	25	10	11	64	976	15	970	300
Turn Type	Prot	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases	7	4		8	5	2		6	
Permitted Phases			8		2		6		6
Detector Phase	7	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	1.0	60.0	60.0	60.0	60.0
Minimum Split (s)	6.0	7.0	7.0	7.0	5.0	65.5	65.5	65.5	65.5
Total Split (s)	20.0	32.0	12.0	12.0	12.0	68.0	56.0	56.0	56.0
Total Split (%)	20.0%	32.0%	12.0%	12.0%	12.0%	68.0%	56.0%	56.0%	56.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	16.0	20.5	6.8	6.8	68.8	67.3	59.1	59.1	59.1
Actuated g/C Ratio	0.16	0.20	0.07	0.07	0.69	0.67	0.59	0.59	0.59
v/c Ratio	0.98	0.20	0.09	0.16	0.21	0.46	0.06	0.50	0.32
Control Delay	76.3	13.9	45.4	35.2	5.4	6.2	8.3	9.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	76.3	13.9	45.4	35.2	5.4	6.3	8.3	9.0	1.4
LOS	E	B	D	D	A	A	A	A	A
Approach Delay		68.5		38.8		6.2		7.2	
Approach LOS		E		D		A		A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 35 (35%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Willow Creek Road & Gail Gardner Way/Prescott Heights Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	21	173	5	22	1290	46	1111
Future Volume (vph)	14	21	173	5	22	1290	46	1111
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	11.0	11.0	11.0	11.0	56.0	56.0	56.0	56.0
Total Split (s)	30.0	30.0	30.0	30.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	15.9	15.9	19.1	19.1	68.9	68.9	68.9	68.9
Actuated g/C Ratio	0.16	0.16	0.19	0.19	0.69	0.69	0.69	0.69
v/c Ratio	0.07	0.09	0.72	0.29	0.10	0.67	0.37	0.51
Control Delay	31.7	28.6	52.8	17.8	5.4	7.1	13.0	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	28.6	52.8	17.8	5.4	7.1	13.0	5.8
LOS	C	C	D	B	A	A	B	A
Approach Delay		29.7		40.6		7.1		6.1
Approach LOS		C		D		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 19 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

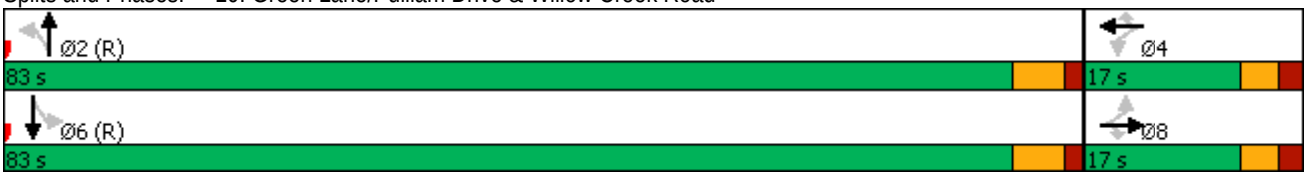
Splits and Phases: 9: Willow Creek Road & Rosser Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	19	7	17	35	0	65	35	1225	69	1070
Future Volume (vph)	19	7	17	35	0	65	35	1225	69	1070
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8			4			2		6
Permitted Phases	8		8	4		4	2		6	
Detector Phase	8	8	8	4	4	4	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	50.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	55.5	55.5	55.5	55.5
Total Split (s)	17.0	17.0	17.0	17.0	17.0	17.0	83.0	83.0	83.0	83.0
Total Split (%)	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	83.0%	83.0%	83.0%	83.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		9.0	9.0		9.2	9.2	83.7	83.7	83.7	83.7
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.84	0.84	0.84	0.84
v/c Ratio		0.23	0.11		0.30	0.34	0.11	0.47	0.27	0.41
Control Delay		45.5	11.8		47.9	14.9	0.8	1.1	4.6	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.5	11.8		47.9	14.9	0.8	1.1	4.6	2.5
LOS		D	B		D	B	A	A	A	A
Approach Delay		32.6			26.4			1.1		2.6
Approach LOS		C			C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 67 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 74.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Green Lane/Pulliam Drive & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	28	0	1	0	39	1273	10	1119
Future Volume (vph)	28	0	1	0	39	1273	10	1119
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Total Split (s)	23.0	23.0	23.0	23.0	77.0	77.0	77.0	77.0
Total Split (%)	23.0%	23.0%	23.0%	23.0%	77.0%	77.0%	77.0%	77.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		9.0		7.9	83.5	83.5	83.5	83.5
Actuated g/C Ratio		0.09		0.08	0.84	0.84	0.84	0.84
v/c Ratio		0.48		0.03	0.13	0.47	0.04	0.43
Control Delay		25.7		0.4	3.6	2.8	1.2	1.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		25.7		0.4	3.6	2.8	1.2	1.3
LOS		C		A	A	A	A	A
Approach Delay		25.7		0.4		2.8		1.3
Approach LOS		C		A		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 2.9	Intersection LOS: A
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

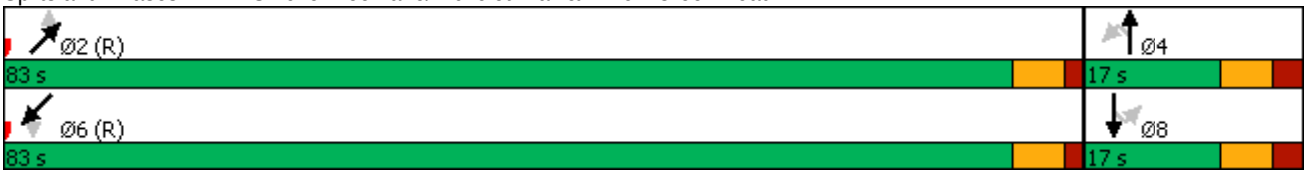
Splits and Phases: 11: Willow Creek Road & Country Park Drive/Pennie Ann Drive



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	46	0	3	0	15	1159	114	1095
Future Volume (vph)	46	0	3	0	15	1159	114	1095
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	11.5	11.5	11.5	11.5	30.5	30.5	30.5	30.5
Total Split (s)	17.0	17.0	17.0	17.0	83.0	83.0	83.0	83.0
Total Split (%)	17.0%	17.0%	17.0%	17.0%	83.0%	83.0%	83.0%	83.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.2	9.2	7.5	7.5	78.8	78.8	78.8	78.8
Actuated g/C Ratio	0.09	0.09	0.08	0.08	0.79	0.79	0.79	0.79
v/c Ratio	0.39	0.46	0.03	0.02	0.05	0.49	0.47	0.43
Control Delay	51.3	13.2	42.3	0.2	2.1	2.3	7.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	13.2	42.3	0.2	2.1	2.3	7.8	1.1
LOS	D	B	D	A	A	A	A	A
Approach Delay		24.3		16.0		2.3		1.7
Approach LOS		C		B		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 81 (81%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 3.4	Intersection LOS: A
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

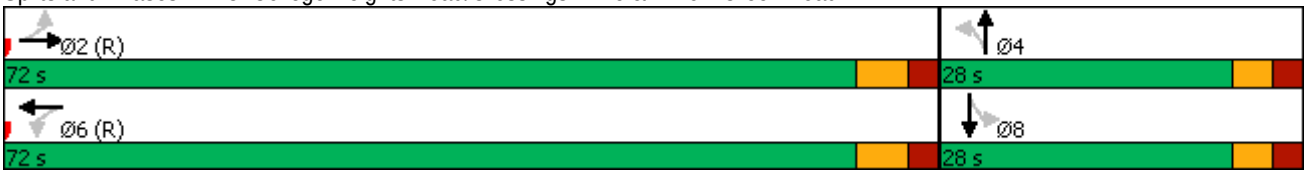
Splits and Phases: 12: Smoke Tree Lane/Nicholet Trail & Willow Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	1157	14	1076	17	0	104	0
Future Volume (vph)	14	1157	14	1076	17	0	104	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	45.0	45.0	45.0	45.0	6.0	6.0	6.0	6.0
Minimum Split (s)	51.5	51.5	51.5	51.5	11.5	11.5	11.5	11.5
Total Split (s)	72.0	72.0	72.0	72.0	28.0	28.0	28.0	28.0
Total Split (%)	72.0%	72.0%	72.0%	72.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	11.7	11.7	14.4	14.4
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.12	0.12	0.14	0.14
v/c Ratio	0.05	0.49	0.06	0.45	0.12	0.02	0.56	0.32
Control Delay	2.5	3.0	2.0	2.9	37.5	0.0	49.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	3.0	2.0	2.9	37.5	0.0	49.5	9.7
LOS	A	A	A	A	D	A	D	A
Approach Delay		3.0		2.9		30.7		30.8
Approach LOS		A		A		C		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 78 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 59.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: College Heights Road/Crossings Drive & Willow Creek Road



Lane Group	NBL	NBT	SBL	SBT	NEL	NET	SWL	SWT
Lane Configurations								
Traffic Volume (vph)	57	0	7	5	16	1080	38	1000
Future Volume (vph)	57	0	7	5	16	1080	38	1000
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	25.0	25.0	25.0
Minimum Split (s)	22.5	22.5	22.5	22.5	30.5	30.5	30.5	30.5
Total Split (s)	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.3	9.3		8.1	82.5	82.5	82.5	82.5
Actuated g/C Ratio	0.09	0.09		0.08	0.82	0.82	0.82	0.82
v/c Ratio	0.48	0.17		0.16	0.04	0.45	0.14	0.38
Control Delay	54.4	1.6		32.2	2.1	2.9	1.1	0.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	1.6		32.2	2.1	2.9	1.1	0.5
LOS	D	A		C	A	A	A	A
Approach Delay		32.7		32.2		2.9		0.6
Approach LOS		C		C		A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 37 (37%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Willow Creek Road & Montana Drive



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	217	412	912	250	310	844
Future Volume (vph)	217	412	912	250	310	844
Turn Type	Prot	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	4	1	2	4	1	6
Permitted Phases		4		2	6	
Detector Phase	4	1	2	4	1	6
Switch Phase						
Minimum Initial (s)	5.0	1.0	35.0	5.0	1.0	35.0
Minimum Split (s)	10.5	5.0	40.5	10.5	5.0	40.5
Total Split (s)	19.0	30.0	51.0	19.0	30.0	81.0
Total Split (%)	19.0%	30.0%	51.0%	19.0%	30.0%	81.0%
Yellow Time (s)	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.0	1.5	1.5	1.0	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	4.0	5.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	12.8	34.3	56.2	74.5	77.7	76.2
Actuated g/C Ratio	0.13	0.34	0.56	0.74	0.78	0.76
v/c Ratio	0.54	0.77	0.50	0.22	0.64	0.34
Control Delay	45.6	33.8	7.4	1.1	10.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	33.8	7.4	1.1	10.5	4.6
LOS	D	C	A	A	B	A
Approach Delay	37.9		6.1			6.2
Approach LOS	D		A			A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 58 (58%), Referenced to phase 2:NET and 6:SWTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

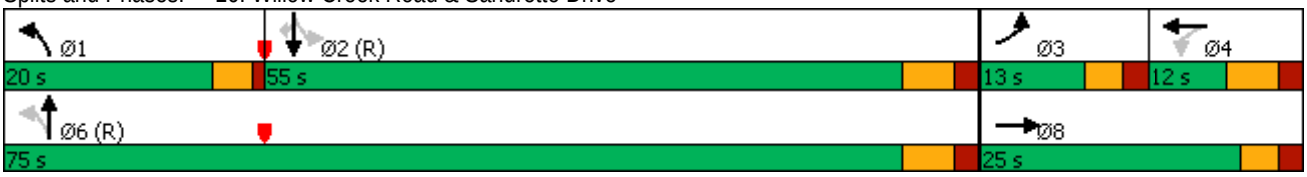
Splits and Phases: 15: Willow Creek Road & Willow Lake Road



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	142	0	0	196	1122	1044	60
Future Volume (vph)	142	0	0	196	1122	1044	60
Turn Type	Prot	NA	NA	pm+pt	NA	NA	Perm
Protected Phases	3	8	4	1	6	2	
Permitted Phases				6			2
Detector Phase	3	8	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	2.0	4.0	4.0	1.0	25.0	25.0	25.0
Minimum Split (s)	7.0	9.0	10.0	5.0	31.0	31.0	31.0
Total Split (s)	13.0	25.0	12.0	20.0	75.0	55.0	55.0
Total Split (%)	13.0%	25.0%	12.0%	20.0%	75.0%	55.0%	55.0%
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lead		Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	8.0	10.3	6.0	80.6	78.6	66.5	66.5
Actuated g/C Ratio	0.08	0.10	0.06	0.81	0.79	0.66	0.66
v/c Ratio	0.56	0.22	0.04	0.54	0.44	0.48	0.06
Control Delay	52.8	1.2	0.3	7.5	3.2	6.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	1.2	0.3	7.5	3.2	6.4	0.1
LOS	D	A	A	A	A	A	A
Approach Delay		32.7	0.3		3.9	6.0	
Approach LOS		C	A		A	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: Willow Creek Road & Sandretto Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	83	233	208	1043	858	81
Future Volume (vph)	83	233	208	1043	858	81
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8	2			6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	2.0	50.0	50.0	50.0
Minimum Split (s)	10.0	10.0	8.0	56.0	56.0	56.0
Total Split (s)	23.0	23.0	18.0	77.0	59.0	59.0
Total Split (%)	23.0%	23.0%	18.0%	77.0%	59.0%	59.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	11.4	11.4	76.6	76.6	61.0	61.0
Actuated g/C Ratio	0.11	0.11	0.77	0.77	0.61	0.61
v/c Ratio	0.45	0.63	0.48	0.42	0.43	0.09
Control Delay	47.8	12.5	6.9	3.4	5.7	1.2
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	47.8	12.5	6.9	3.5	5.7	1.2
LOS	D	B	A	A	A	A
Approach Delay	21.8			4.1	5.3	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

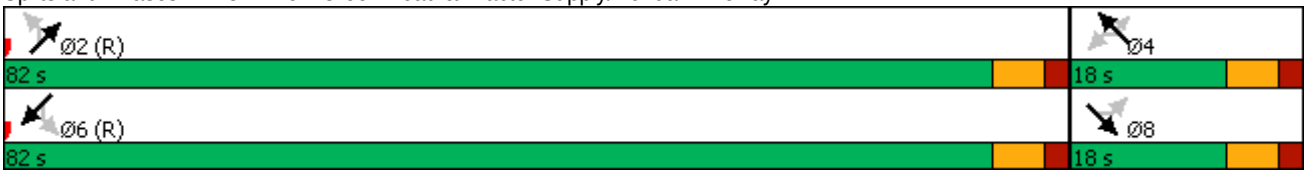
Splits and Phases: 17: Willow Creek Road & Commerce Drive



Lane Group	SEL	SET	NWL	NWT	NWR	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	6	0	10	10	10	2	1092	10	874
Future Volume (vph)	6	0	10	10	10	2	1092	10	874
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		8		4			2		6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	4	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	18.0	18.0	18.0	18.0	18.0	82.0	82.0	82.0	82.0
Total Split (%)	18.0%	18.0%	18.0%	18.0%	18.0%	82.0%	82.0%	82.0%	82.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		7.2		8.0	8.0	87.5	87.5	87.5	87.5
Actuated g/C Ratio		0.07		0.08	0.08	0.88	0.88	0.88	0.88
v/c Ratio		0.07		0.18	0.07	0.00	0.38	0.03	0.31
Control Delay		1.0		45.6	3.2	2.0	1.6	0.8	0.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		1.0		45.6	3.2	2.0	1.6	0.8	0.8
LOS		A		D	A	A	A	A	A
Approach Delay		1.0		31.5			1.6		0.8
Approach LOS		A		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 71 (71%), Referenced to phase 2:NETL and 6:SWTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 1.7	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: Willow Creek Road & Tractor Supply/Honda Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	32	0	30	0	37	1011	23	12	721	18
Future Volume (vph)	32	0	30	0	37	1011	23	12	721	18
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		6			2	
Permitted Phases	4		8		6		6	2		2
Detector Phase	4	4	8	8	6	6	6	2	2	2
Switch Phase										
Minimum Initial (s)	2.0	2.0	2.0	2.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Split (s)	6.0	6.0	6.5	6.5	75.5	75.5	75.5	75.5	75.5	75.5
Total Split (s)	14.0	14.0	14.0	14.0	86.0	86.0	86.0	86.0	86.0	86.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%
Yellow Time (s)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.7	8.7	8.4	8.4	85.0	85.0	85.0	85.0	85.0	85.0
Actuated g/C Ratio	0.09	0.09	0.08	0.08	0.85	0.85	0.85	0.85	0.85	0.85
v/c Ratio	0.29	0.08	0.29	0.01	0.07	0.37	0.02	0.03	0.26	0.01
Control Delay	48.4	0.4	49.3	0.0	0.4	0.5	0.0	0.9	2.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	0.4	49.3	0.0	0.4	0.5	0.0	0.9	2.8	0.3
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		24.7		46.5		0.5			2.7	
Approach LOS		C		D		A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 2.9	Intersection LOS: A
Intersection Capacity Utilization 132.9%	ICU Level of Service H
Analysis Period (min) 15	

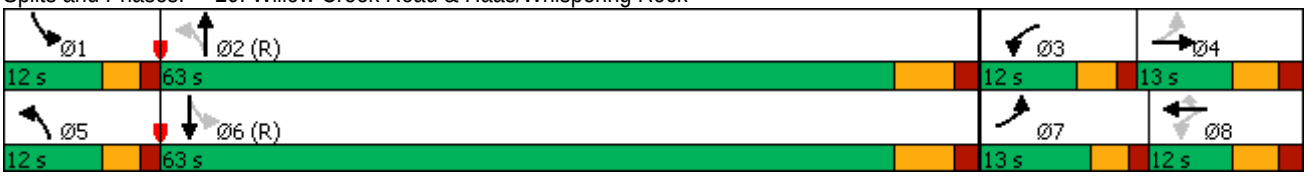
Splits and Phases: 19: Willow Creek Road & Dan Carrell Drive/Heritage Park Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	3	8	3	8	20	1040	8	720
Future Volume (vph)	42	3	8	3	8	20	1040	8	720
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	3.0	5.0	3.0	5.0	5.0	3.0	12.0	3.0	12.0
Minimum Split (s)	7.5	10.5	7.5	10.5	10.5	7.5	18.5	7.5	18.5
Total Split (s)	13.0	13.0	12.0	12.0	12.0	12.0	63.0	12.0	63.0
Total Split (%)	13.0%	13.0%	12.0%	12.0%	12.0%	12.0%	63.0%	12.0%	63.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.0	4.5	3.0	4.5
All-Red Time (s)	1.5	2.0	1.5	2.0	2.0	1.5	2.0	1.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	5.5	5.5	4.5	6.5	4.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	11.6	9.3	9.0	6.2	6.2	82.2	81.5	81.1	79.3
Actuated g/C Ratio	0.12	0.09	0.09	0.06	0.06	0.82	0.82	0.81	0.79
v/c Ratio	0.26	0.22	0.06	0.03	0.04	0.04	0.40	0.02	0.28
Control Delay	40.0	17.9	34.8	44.3	0.4	1.7	4.2	2.8	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.0	17.9	34.8	44.3	0.4	1.7	4.2	2.8	9.0
LOS	D	B	C	D	A	A	A	A	A
Approach Delay		29.9		21.4			4.1		8.9
Approach LOS		C		C			A		A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 50.3%	ICU Level of Service A
Analysis Period (min) 15	

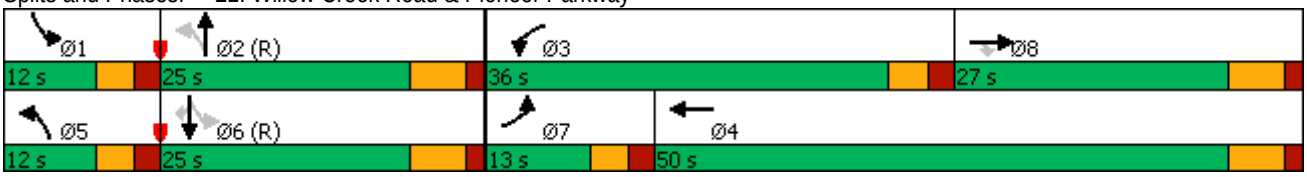
Splits and Phases: 20: Willow Creek Road & Haas/Whispering Rock



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	325	39	526	224	51	274	691	28	157	23
Future Volume (vph)	37	325	39	526	224	51	274	691	28	157	23
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	8		3	4	5	2		1	6	
Permitted Phases			8			2		Free	6		6
Detector Phase	7	8	8	3	4	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	2.0	4.0	4.0	2.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Split (s)	7.0	9.8	9.8	7.0	9.8	7.0	9.8		7.0	9.8	9.8
Total Split (s)	13.0	27.0	27.0	36.0	50.0	12.0	25.0		12.0	25.0	25.0
Total Split (%)	13.0%	27.0%	27.0%	36.0%	50.0%	12.0%	25.0%		12.0%	25.0%	25.0%
Yellow Time (s)	3.0	4.3	4.3	3.0	4.3	3.0	4.3		3.0	4.3	4.3
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.8	5.8	5.0	5.8	5.0	5.8		5.0	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	6.5	16.4	16.4	21.2	35.1	44.3	39.1	100.0	41.8	36.3	36.3
Actuated g/C Ratio	0.06	0.16	0.16	0.21	0.35	0.44	0.39	1.00	0.42	0.36	0.36
v/c Ratio	0.35	0.61	0.10	0.79	0.23	0.10	0.22	0.47	0.06	0.13	0.04
Control Delay	52.5	43.0	0.5	45.3	21.2	11.8	18.5	3.1	18.2	25.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	43.0	0.5	45.3	21.2	11.8	18.5	3.1	18.2	25.3	0.1
LOS	D	D	A	D	C	B	B	A	B	C	A
Approach Delay		39.8			37.4		7.7			21.6	
Approach LOS		D			D		A			C	

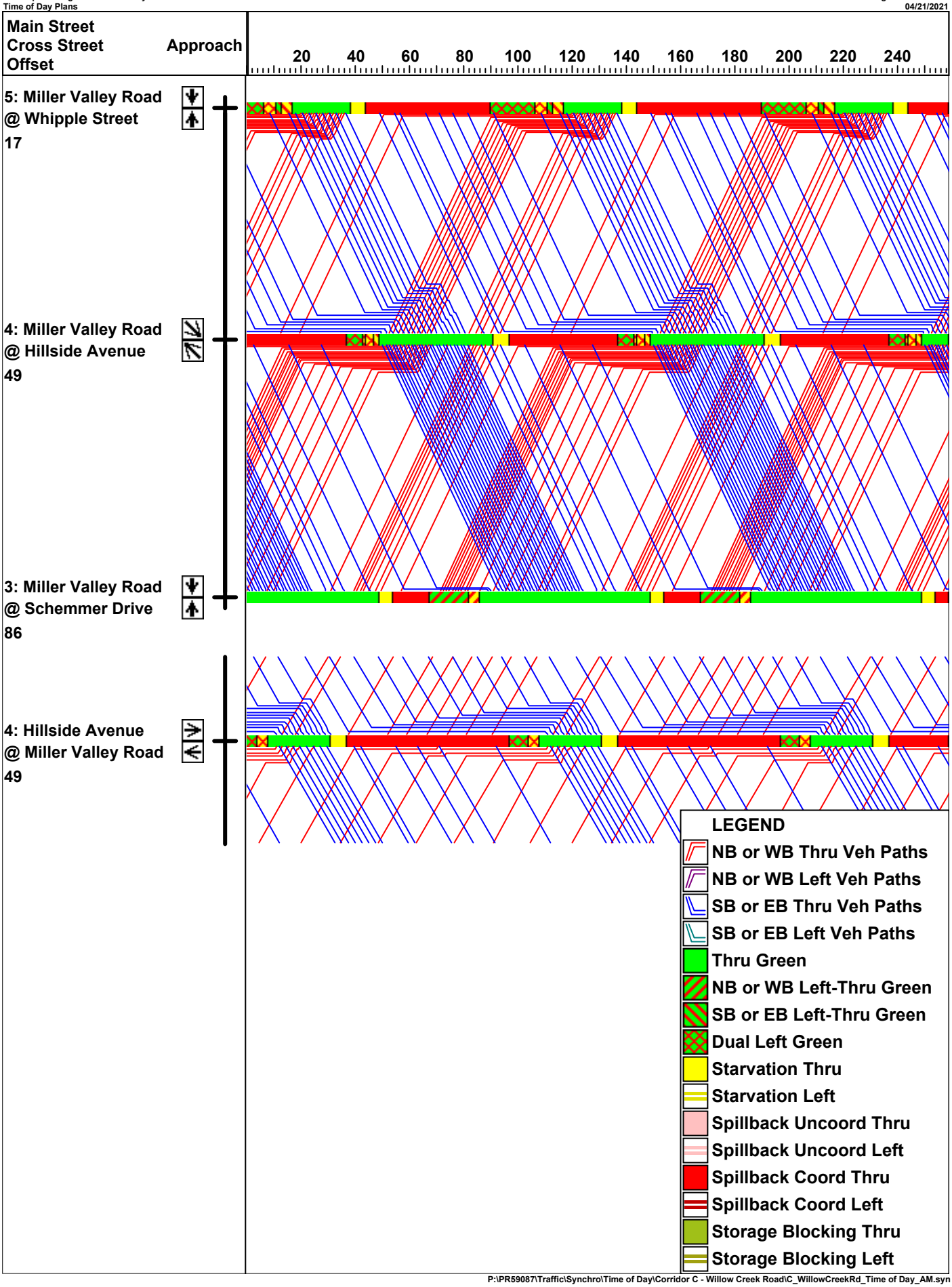
Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 23.9	Intersection LOS: C
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

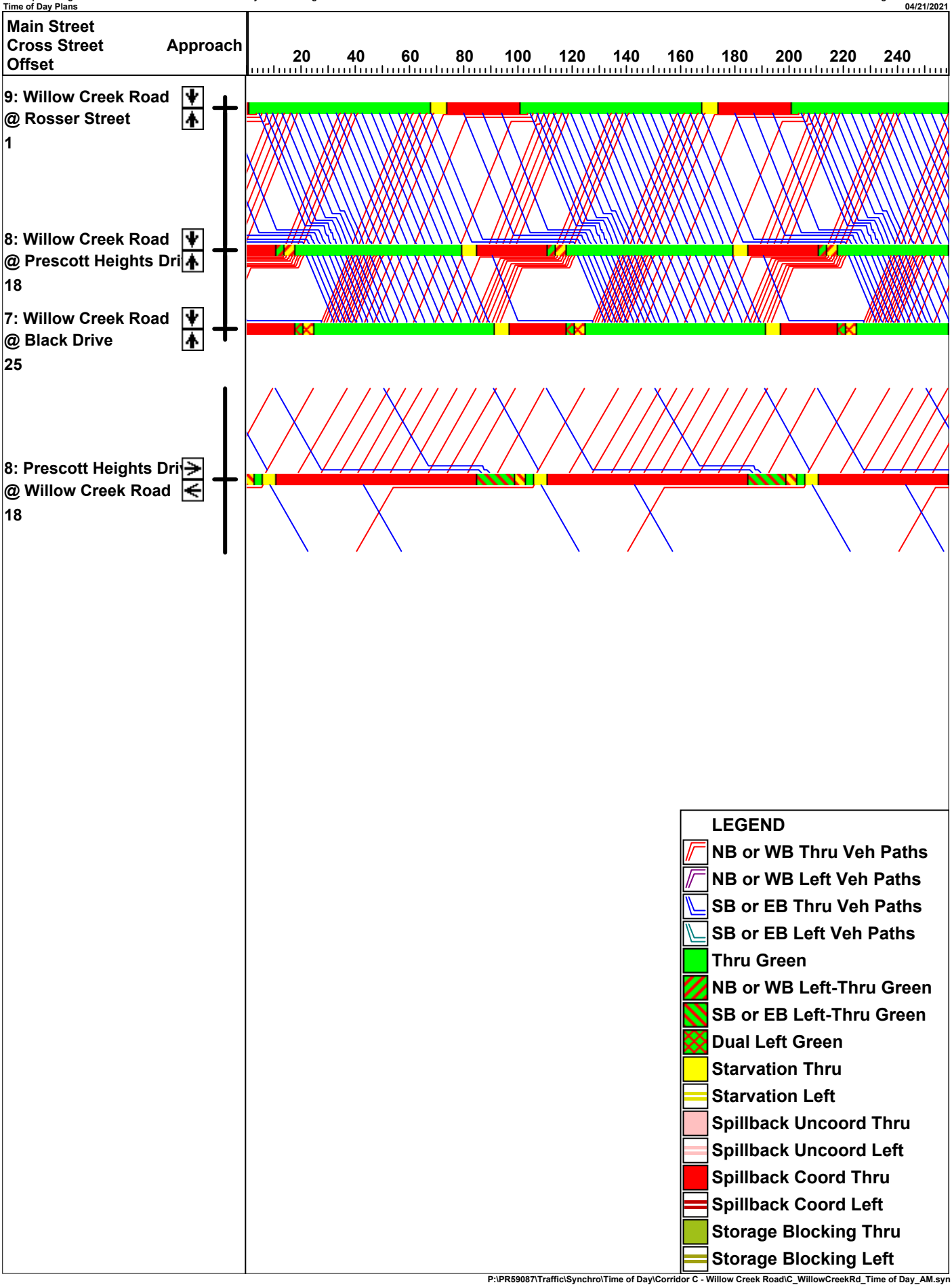
Splits and Phases: 21: Willow Creek Road & Pioneer Parkway

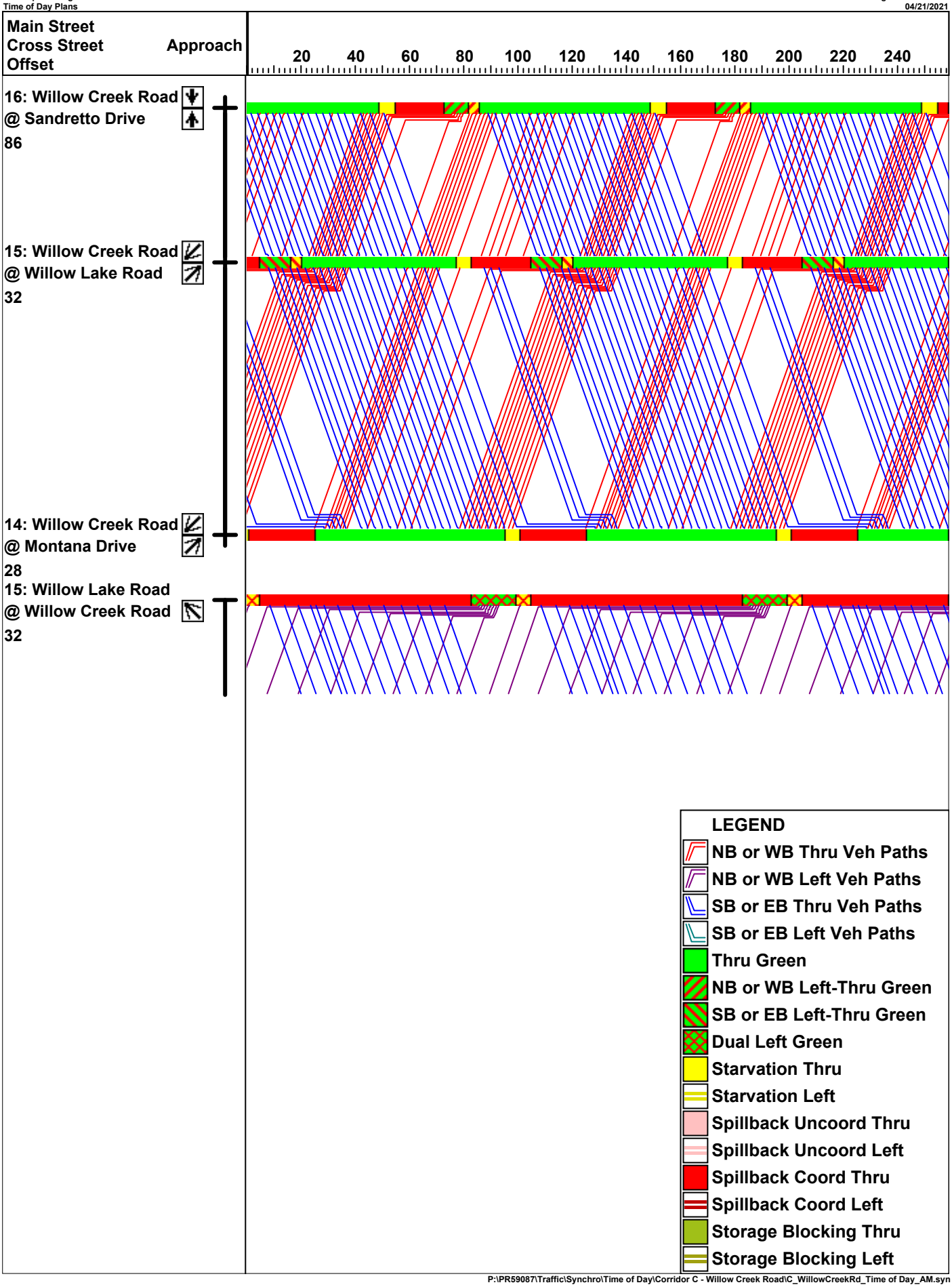


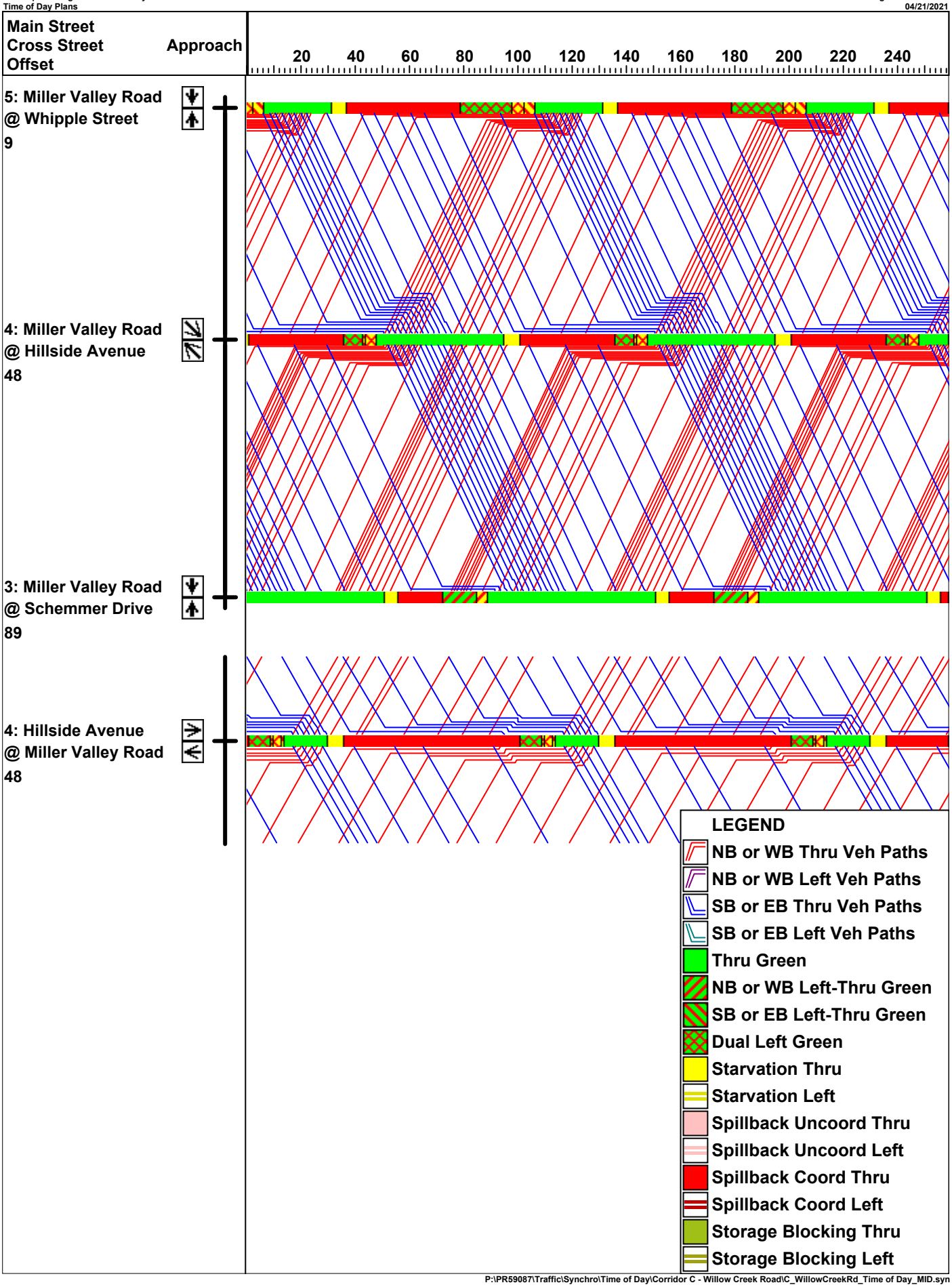
APPENDIX SS-19

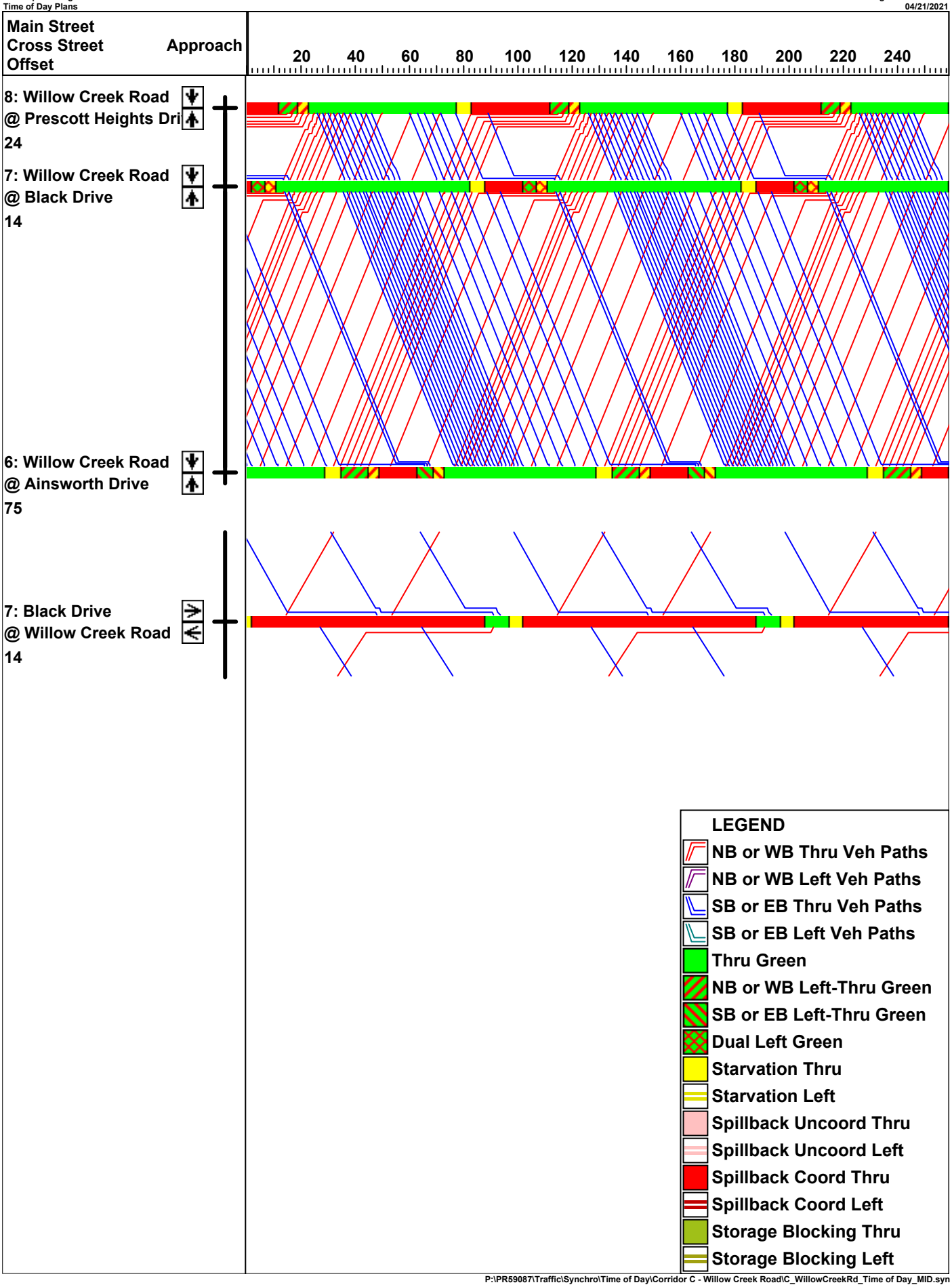
Willow Creek Road Optimized Time-Space Diagrams

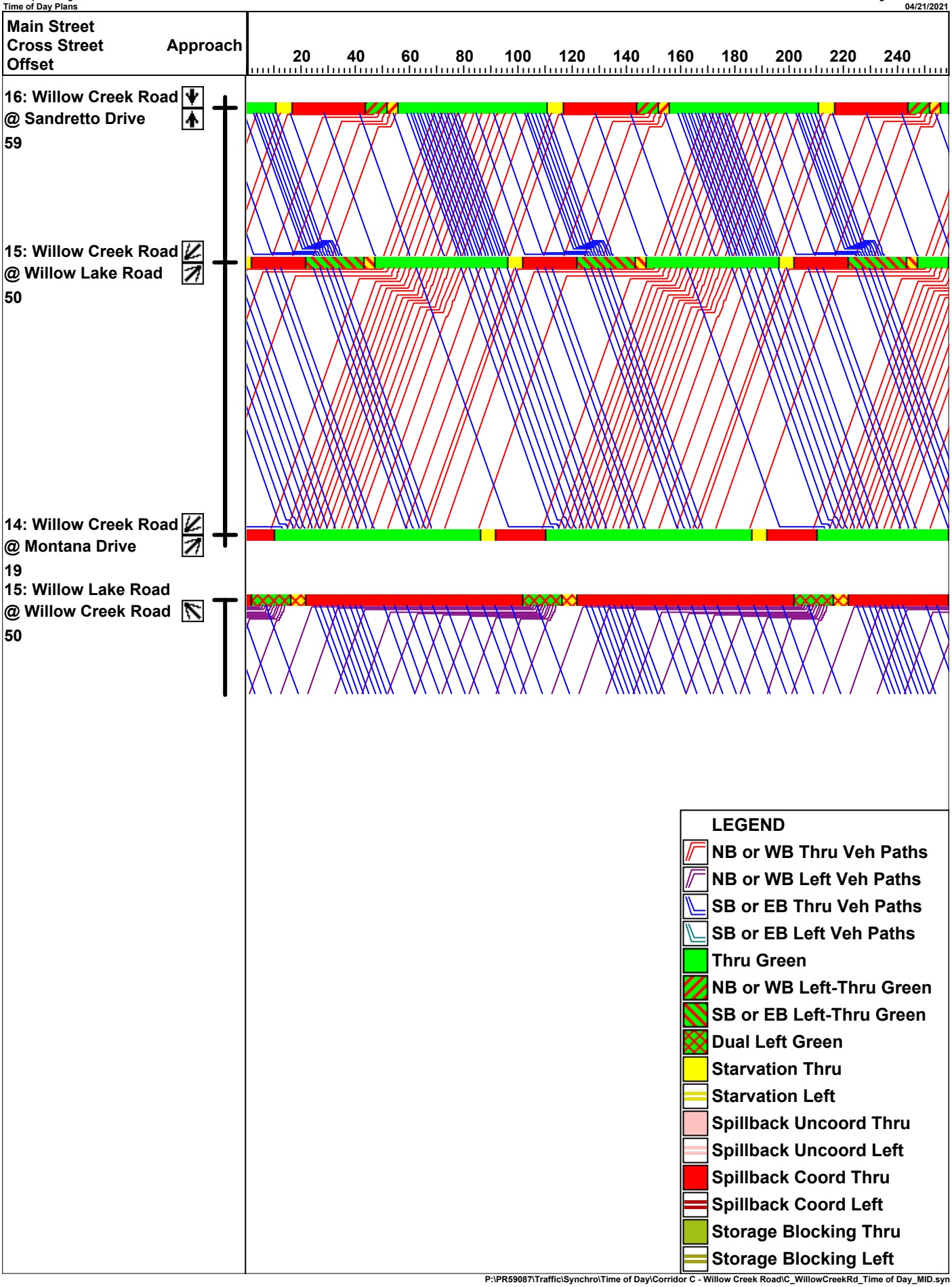

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
5: Miller Valley Road
@ Whipple Street
17
4: Miller Valley Road
@ Hillside Avenue
49
3: Miller Valley Road
@ Schemmer Drive
86
4: Hillside Avenue
@ Miller Valley Road
49
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

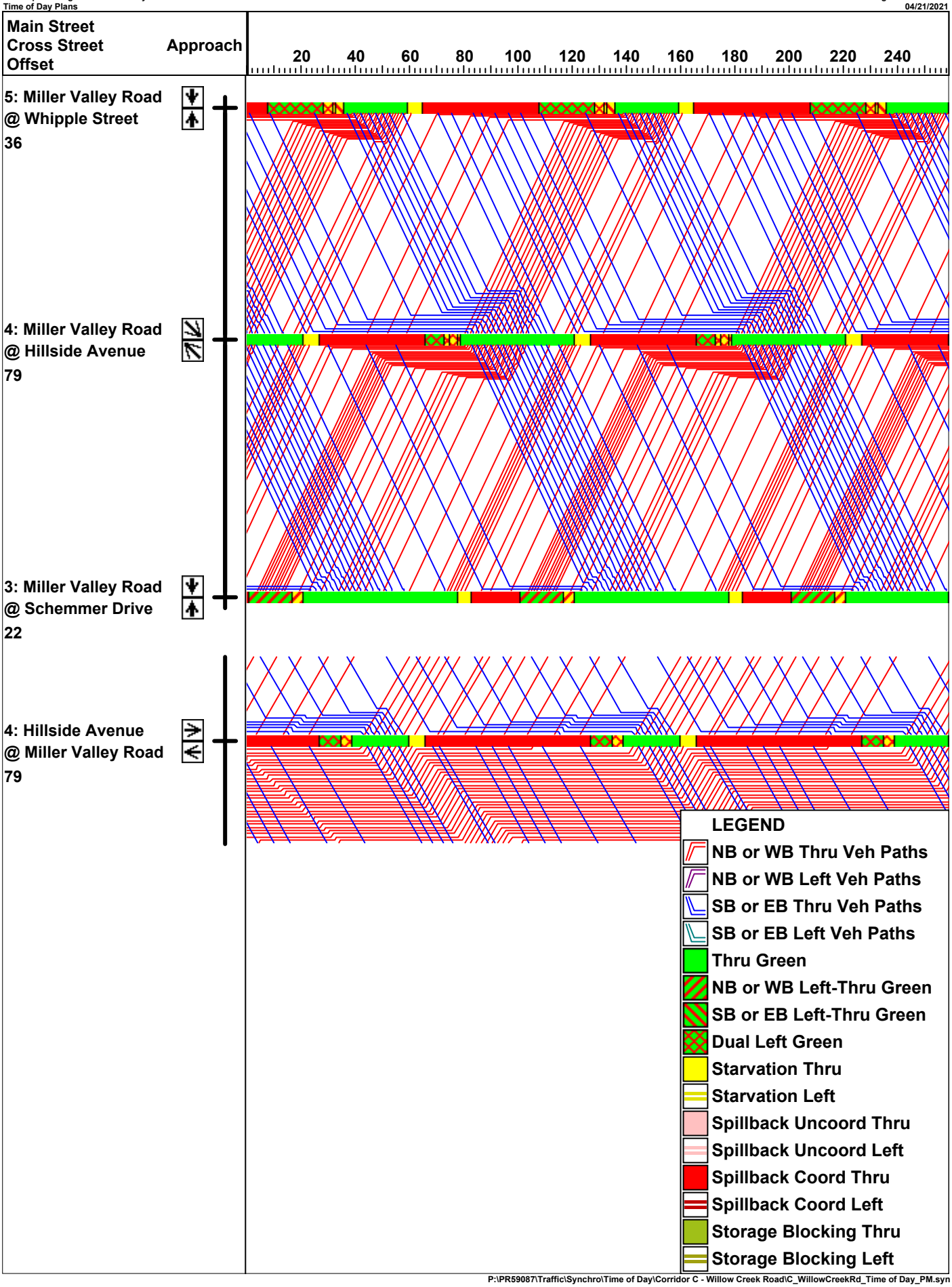

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
9: Willow Creek Road
@ Rosser Street
1
8: Willow Creek Road
@ Prescott Heights Dri
18
7: Willow Creek Road
@ Black Drive
25
8: Prescott Heights Dri
@ Willow Creek Road
18
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

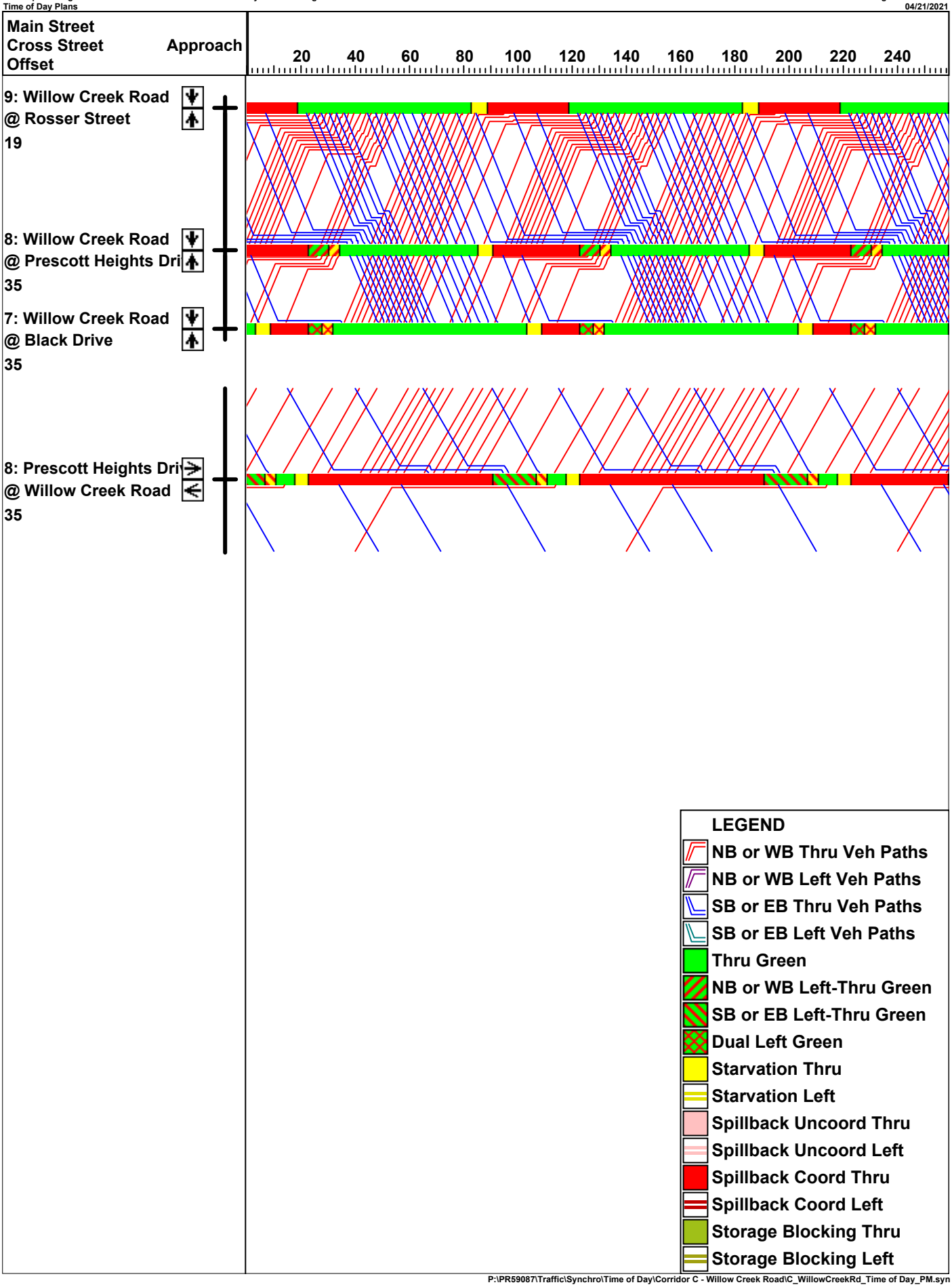

Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
16: Willow Creek Road
@ Sandretto Drive
86
15: Willow Creek Road
@ Willow Lake Road
32
14: Willow Creek Road
@ Montana Drive
28
15: Willow Lake Road
@ Willow Creek Road
32
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left

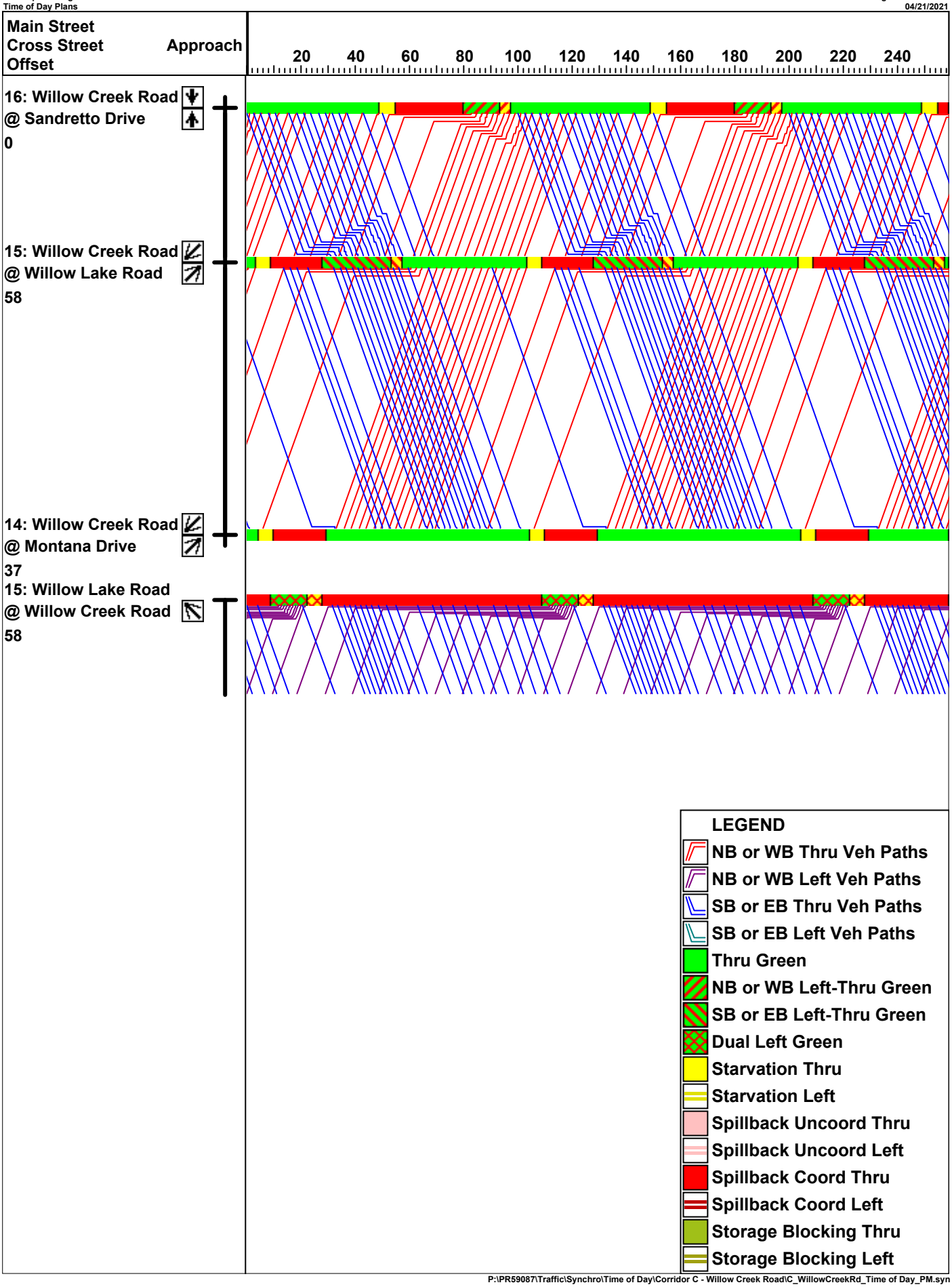

Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
5: Miller Valley Road
@ Whipple Street
9
4: Miller Valley Road
@ Hillside Avenue
48
3: Miller Valley Road
@ Schemmer Drive
89
4: Hillside Avenue
@ Miller Valley Road
48
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
8: Willow Creek Road
@ Prescott Heights Dri
24
7: Willow Creek Road
@ Black Drive
14
6: Willow Creek Road
@ Ainsworth Drive
75
7: Black Drive
@ Willow Creek Road
14
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
16: Willow Creek Road
@ Sandretto Drive
59
15: Willow Creek Road
@ Willow Lake Road
50
14: Willow Creek Road
@ Montana Drive
19
15: Willow Lake Road
@ Willow Creek Road
50
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
5: Miller Valley Road
@ Whipple Street
36
4: Miller Valley Road
@ Hillside Avenue
79
3: Miller Valley Road
@ Schemmer Drive
22
4: Hillside Avenue
@ Miller Valley Road
79
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Offset
Approach
20
40
60
80
100
120
140
160
180
200
220
240
9: Willow Creek Road
@ Rosser Street
19
8: Willow Creek Road
@ Prescott Heights Dri
35
7: Willow Creek Road
@ Black Drive
35
8: Prescott Heights Dri
@ Willow Creek Road
35
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left


Main Street
Cross Street
Approach
Offset
20
40
60
80
100
120
140
160
180
200
220
240
16: Willow Creek Road
@ Sandretto Drive
0
15: Willow Creek Road
@ Willow Lake Road
58
14: Willow Creek Road
@ Montana Drive
37
15: Willow Lake Road
@ Willow Creek Road
58
LEGEND
NB or WB Thru Veh Paths
NB or WB Left Veh Paths
SB or EB Thru Veh Paths
SB or EB Left Veh Paths
Thru Green
NB or WB Left-Thru Green
SB or EB Left-Thru Green
Dual Left Green
Starvation Thru
Starvation Left
Spillback Uncoord Thru
Spillback Uncoord Left
Spillback Coord Thru
Spillback Coord Left
Storage Blocking Thru
Storage Blocking Left