Appendix C: Future Scenario

Traffic Forecasting Memo

CITY OF SAN MARCOS TRANSPORTATION MASTER PLAN UPDATE

TRAFFIC FORECASTING METHODOLOGY AND TRAVEL DEMAND MODEL RESULTS

Prepared by HDR Engineering, Inc.

October 19, 2018

CITY OF SAN MARCOS TRANSPORTATION MASTER PLAN UPDATE
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TRAFFIC FORECASTING METHODOLOGY AND TRAVEL DEMAND MODEL RESULTS

INTRODUCTION

This technical memorandum provides a summary of the travel demand forecasting process and evaluation of the different modeling scenarios for the City of San Marcos Transportation Master Plan (TMP) Update project. The travel demand models prepared as part of the San Marcos Comprehensive Plan: *Vision San Marcos a River Runs Through Us* (Vision San Marcos), was utilized as a basis for the TMP Update process. The Preferred Land Use Scenario of the Vision San Marcos and associated demographics, socio economic data and roadway network was utilized in the modeling process.

Three scenarios were modeled consistent with the comprehensive plan modeling process:

- Base (2010): Represents 2010 base year conditions
- Interim Conditions (2025): Provides an evaluation of interim demographic and roadway network conditions;and,
- Preferred Land Use Scenario (2035): Focuses on promoting efficient and sustainable growth in key areas and providing multimodal mobility options that connects the activity centers.

METHODOLOGY

The traffic forecasting for different transportation scenarios considered in the City of San Marcos Transportation Master Plan was conducted using Capital Area Metropolitan Planning Organization's (CAMPO) regional travel demand model. The CAMPO model simulates travel on the entire highway and transit system in the counties of Bastrop, Caldwell, Hays, Travis, and Williamson in Texas. The highway system embedded in the model includes all express highways and principal arterial roadways as well as minor arterial and some local roadways. On the transit side, the model contains information on service frequency (i.e. how often buses/trains arrive at any given transit stop), routing, intermodal connections, travel time and transit fares for all transit lines. Outputs of the model contain detailed information relating to the transportation system. The highway side of the model provides output data on traffic volumes, congested travel speeds, vehicle miles traveled, and average travel times on the roadway links.

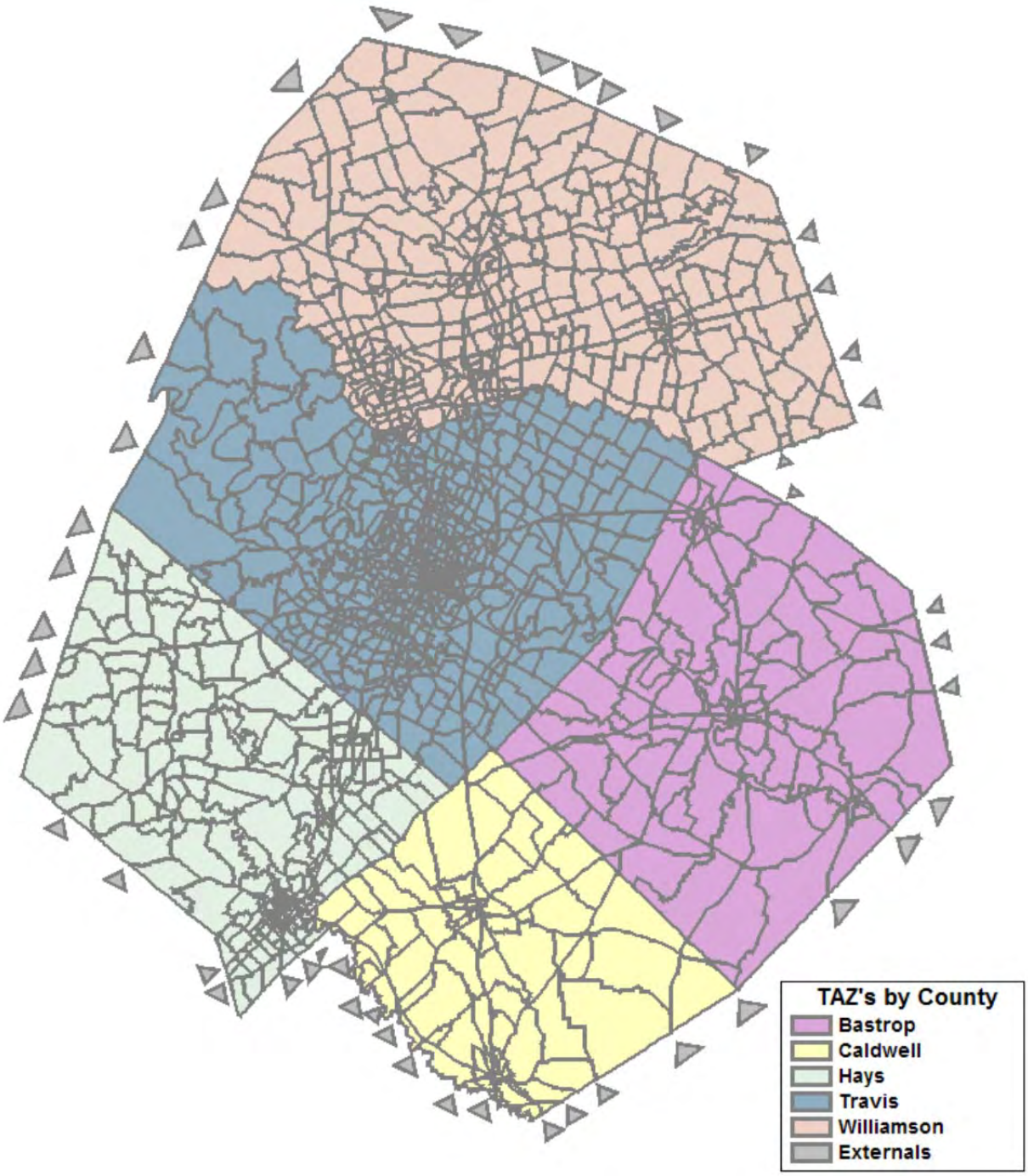
The CAMPO model is a trip-based model that uses the traditional Four-Step, sequential process including:

- Trip Generation;
- Trip Distribution;
- Mode Choice; and
- Trip Assignment.

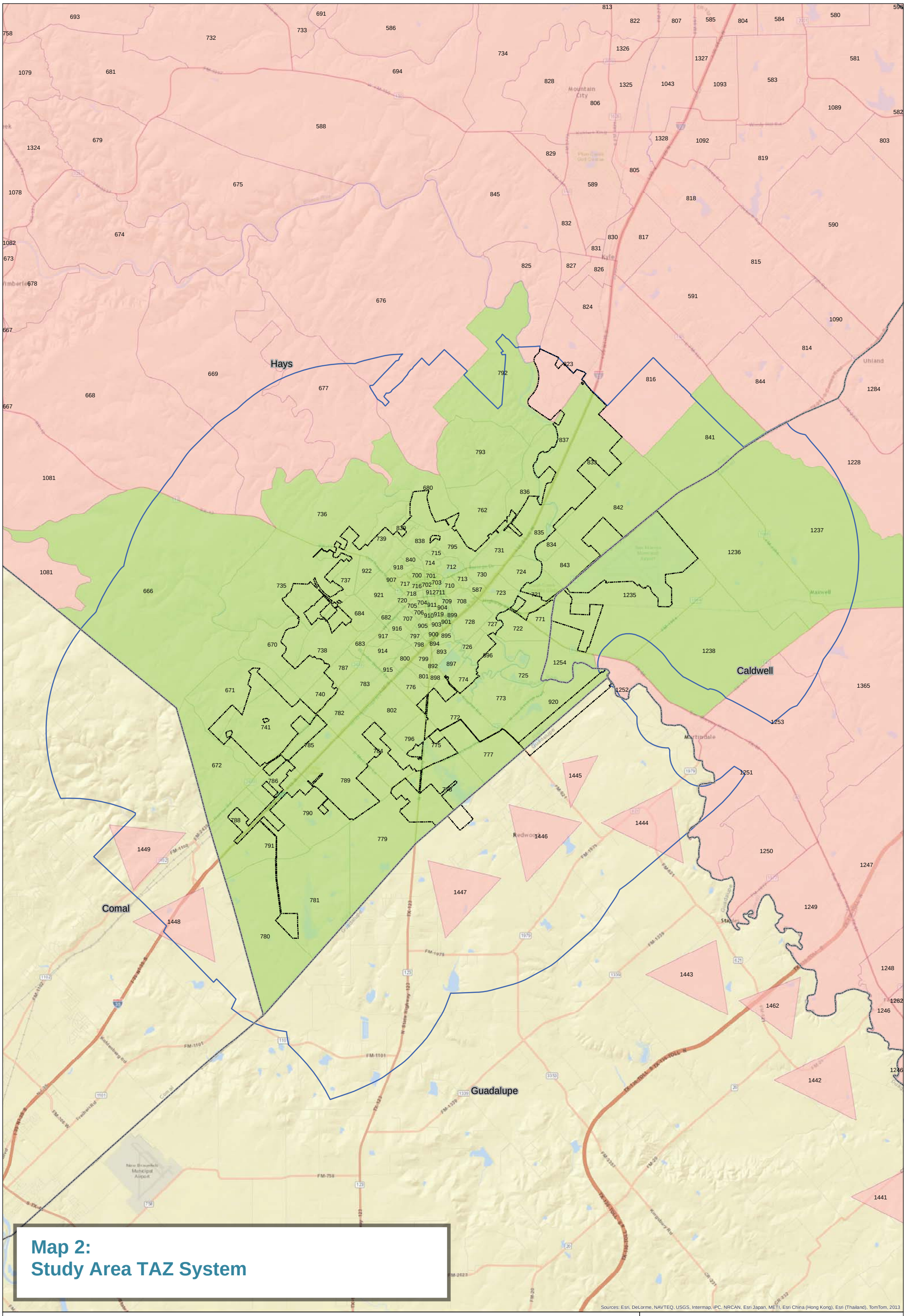
This Four-Step process is used to estimate average traffic volumes and transit ridership, based on the best available population and employment forecasts, projected highway travel conditions (including downtown parking costs) and projected transit service.

The geographic area represented in the CAMPO model is divided into smaller areas known as Traffic Analysis Zones (TAZs). There are 1,413 internal and 49 external TAZs, for a total of 1,462 zones in the CAMPO model. The zone geography covers the full extent of Bastrop, Caldwell, Hays, Travis, and Williamson Counties. The number of zones in each county is representative of its population and employment density. There are 127 zones in Bastrop, 92 zones in Caldwell, 251 in Hays, 590 in Travis, and 353 zones in Williamson County. TAZ boundaries are defined primarily based on US Census geography and regionally significant roadways. In some cases, zones are further defined along natural boundaries such as water features. For the COSM TMP study area, the model consists of 146 TAZs and 6 external zones.

Map 1 shows the TAZ system used in the CAMPO regional model and **Map 2** shows the study area system.



Map 1:
CAMPO Model TAZ System



Map 2:
Study Area TAZ System

Legend

- County Boundary
- San Marco City Limits
- San Marcos ETJ

Model TAZs

- CAMPO Region
- San Marcos Study Area
- World Street Map

0 1.75 3.5 7 Miles

San Marcos RPM

Model TAZ Structure

828

THE "FOUR-STEP" MODELING PROCESS

The following paragraphs briefly describe the Four-Step modeling process that the CAMPO model is based on. **Figure 1** shows the different steps involved in the process and how each step is linked. The four steps are illustrated in blue: Trip Generation, Trip Distribution, Mode Split, and Trip Assigment.

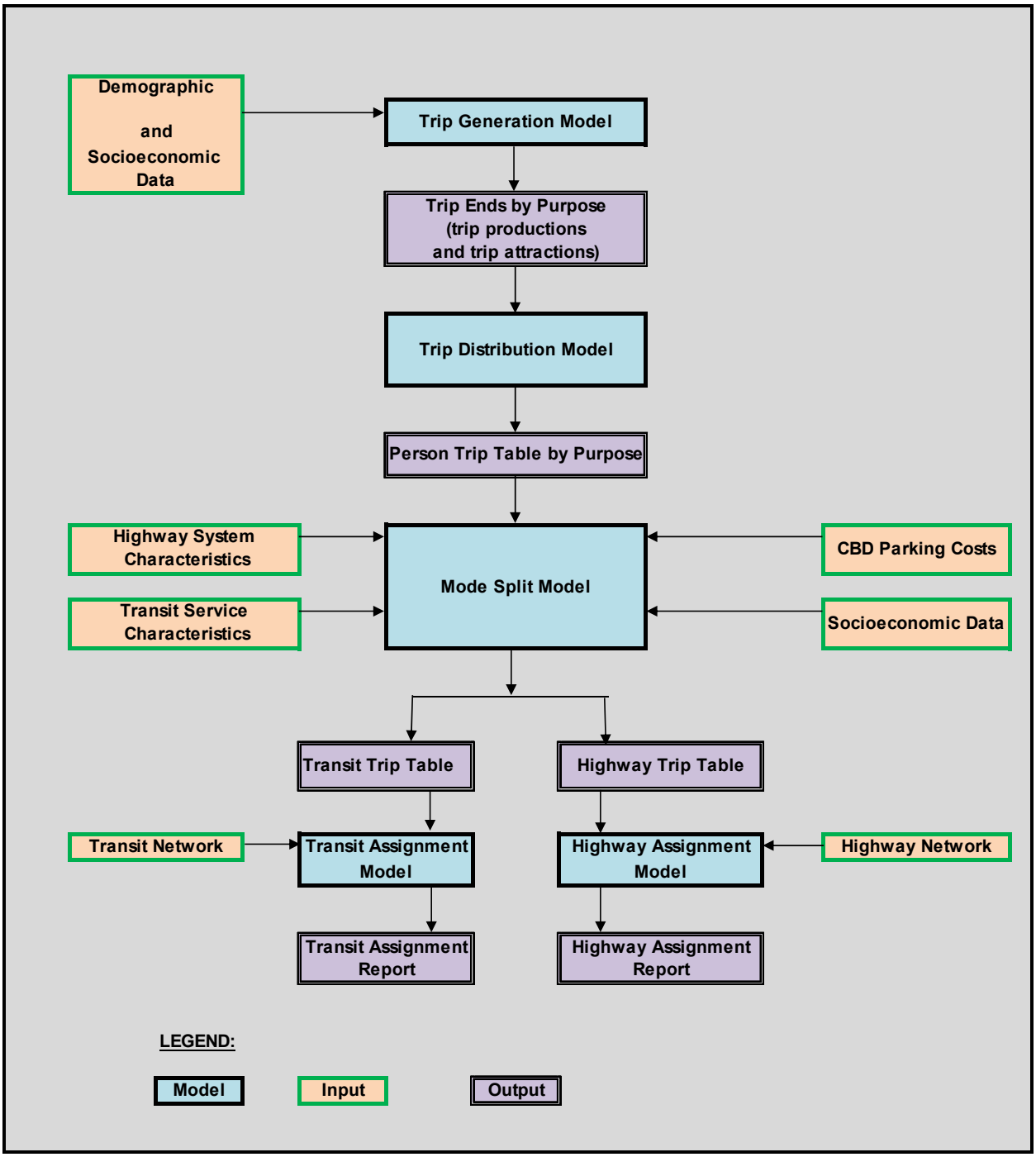


Figure 1:

The "Four-Step" Modeling Process

Step 1 - Trip Generation: In this first step, the model estimates the number of trips produced in and attracted to each TAZ. To accomplish this, the model uses estimates of projected population, employment and other socioeconomic and household characteristics of each zone. Trips are divided into major trip categories such as home-based work trips, home-based non-work trips, social-recreation trips, college/university trips and non-home based trips. A trip generation model run is executed for each trip purpose. The output of the trip generation model feeds into the rest of the model chain.

Step 2 - Trip Distribution: In the second step, the distribution model links the trip ends estimated from trip generation to form zonal trip interchanges. The output of the second step is a trip table - a matrix containing the number of trips occurring between every origin-destination zone combination. Trip distribution is performed for each trip purpose. In a system of 1,462 zones, 2.14 million trip origin-destination combinations are possible.

Step 3 - Mode Choice: In the third step, the mode choice model allocates the person-trips estimated from the trip distribution step to the two primary competing modes-automobile and transit. This allocation estimates the desirability or utility of each choice a traveler faces, based on the attributes of that choice and the characteristics of the individual. The resulting output of the mode choice model is the percentage of trips that use automobiles and transit for each trip interchange. CAMPO's Mode Choice model supports modeling auto trips, High Occupancy Vehicles (HOV) and several transit modes. The transit trips are market segmented by walk access, drive access, and park-and-ride access. It should be noted that the mode choice model does not account for pedestrian and bicycle trips as a unique mode; they are aggregated with auto trips.

Step 4 - Trip Assignment: In this final step, the model assigns the highway trips to the highway network and the transit trips to different transit modes such as local bus, express bus, commuter rail etc. The future year traffic volumes on highways and forecasted transit ridership on transit lines can be obtained from the model outputs. Highway volumes are available for daily, peak and off-peak periods. As part of Vision San Marcos, both AM and PM peak periods were evaluated as part of this project.

PERFORMANCE MEASURES

The travel demand modeling process focused on three measures of transportation system performance including:

Volume to Capacity (V/C): V/C is a conventional level-of-service measure for roadways, comparing roadway demand (vehicle volumes) with roadway supply (carrying capacity). This measure can alert transportation providers to areas where traffic mitigation measures should be considered. Each roadway, based on roadway functionality in the model, is assigned with an estimated capacity in terms of maximum

number of vehicles it can carry before experiencing operational failure. In the past, exceeding a V/C ratio of 0.85 was considered a capacity deficiency. Today, a V/C of 1.0 is considered a more appropriate threshold due to a greater awareness of environmental issues, providing for multimodal choices, limited financial resources, and system operations.

Vehicle Miles of Travel (VMT): VMT is a measure of cumulative distance traveled by all of the trips within the study area. It provides a measure of the total magnitude of travel and provides an indication of air quality and other quality-of-life measures.

Vehicle Hours of Travel (VHT): VHT is a measure of cumulative duration of all the trips within the study area and provides an indication of system delay, speed and congestion impacts.

PREPARING THE MODEL FOR APPLICATION

Before the model is applied to a specific study, it is first run and adjusted several times until it has replicated the existing highway volumes and transit ridership data at an acceptable level of accuracy. This adjustment is called model calibration. It is done by adjusting several parameters in the model components. Once the highway and transit components of the model are well calibrated to simulate the current conditions, it is ready for forecasting. The forecast year inputs are then created and the entire model is run to simulate future year travel. The CAMPO Planning Model was developed and calibrated for the 2005 conditions by CAMPO staff with input from the Transportation Planning and Programming (TPP) division of the Texas Department of Transportation (TxDOT). In the current application, no additional calibration was performed. However, the key inputs to the 2010 base year model were checked for thoroughness and accuracy. Model runs for the base year as well as forecast years were conducted using the inputs provided by the MPO staff.

REVIEW OF MODEL RESULTS AND RESOLUTION OF EXTERNAL TRIPS

The first step in the model application process for this study was to correct any issues with the travel demand model.. During review of the previously completed base year model results, an inconsistency was found between the external trip input files and the external zones in the highway network database. This resulted in external-internal trips loading into the model at the wrong locations. This issue contributed to major discrepancies in the traffic assignment and affected all model runs created as part of the Comprehensive Plan travel demand forecasting process. A technical explanation of the issue and how it was resolved in the modeling process are presented in the Appendix. For the purposes of this report, the corrected model, from now on, will be referred to as the Updated CAMPO Model.

NETWORK MODIFICATIONS

During the Vision San Marcos process, seven TAZs within San Marcos were disaggregated and planned roadway improvements were added into the highway network database. These modifications were retained for this study. In addition, a 2025 scenario was created and modeled, which required changes to CAMPOs 2025 model inputs to account for the seven TAZs that were disaggregated. The roadway improvements from Caldwell and Hays County TMPs were also added to the highway network database.

MODEL APPLICATION AND RESULTS

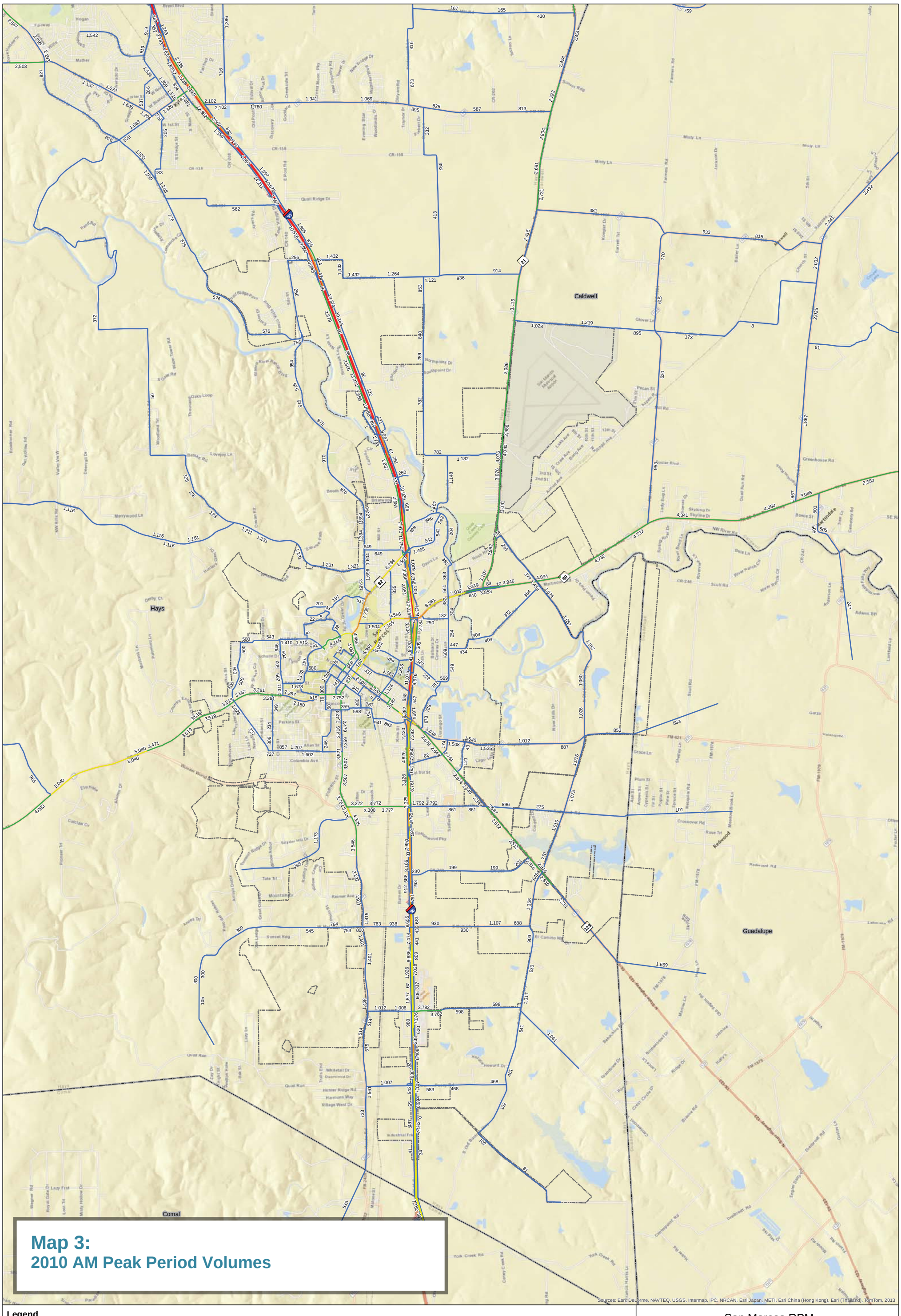
The Updated CAMPO model was run for the 2010 base year as well as two forecast years (2025 and 2035) using the demographic and land use inputs and future year network assumptions provided by the City of San Marcos. From the outputs of the travel model, several performance measures pertaining to projected travel demand were summarized and are displayed in tables and maps below.

Base Year (2010) Travel Conditions

Map 3 presents the 2010 AM peak period volumes in the study area network. The maximum AM peak period volume in the study area (14,200 vehicles) is carried by IH 35 in the inbound direction just south of CR 138. The inbound volumes on SH 80 range from 3,000 to just over 6,300 vehicles as SH 80 approaches IH 35. Several maps are included in the **Appendix** that illustrate the 2010 daily traffic volumes and 2010 daily levels of service.

Map 4 presents the traffic conditions estimated by the 2010 base year model for the study area. The level of service estimated by the model is shown using a color coding scheme. As shown on the map, a significant portion of IH 35 (north of Loop 82), and Loop 82 and SH 80 experience very high levels of traffic flows during the morning peak period and are operating at level of service F. In general, most roadways south of SH 80 are operating at acceptable levels of service.

Map 5 shows the top 25 most congested intersections in the base year model during the AM peak period in the study area. As shown, most of these intersections are located in and around the downtown area. **Table 1** shows the base year levels of congestion at these top 25 intersections. During the AM peak period, the highest levels of congestion occur at FM 110 and IH 35 Frontage Road, FM 12 and Fulton Ranch Road and SH 80 and Bugg Lane.



Map 3:
2010 AM Peak Period Volumes

Legend

AM Peak Total Flow

- Less than 2,500
- 2,501 to 5,000
- 5,001 to 7,000
- 7,501 to 10,000
- Greater than 10,000

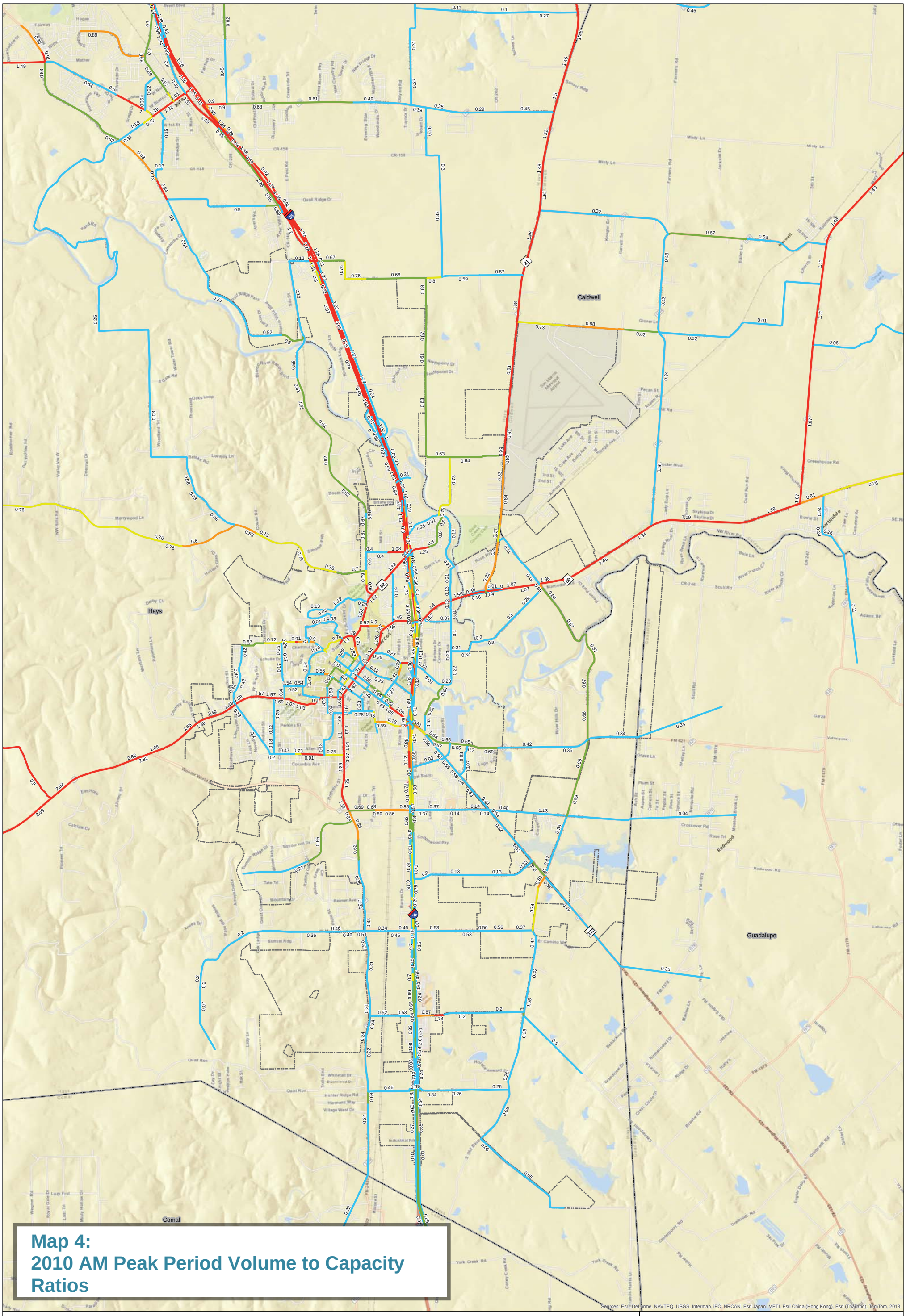
County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2010

Total Flows (AM Peak)



Map 4:
2010 AM Peak Period Volume to Capacity Ratios

Legend

Level of Service

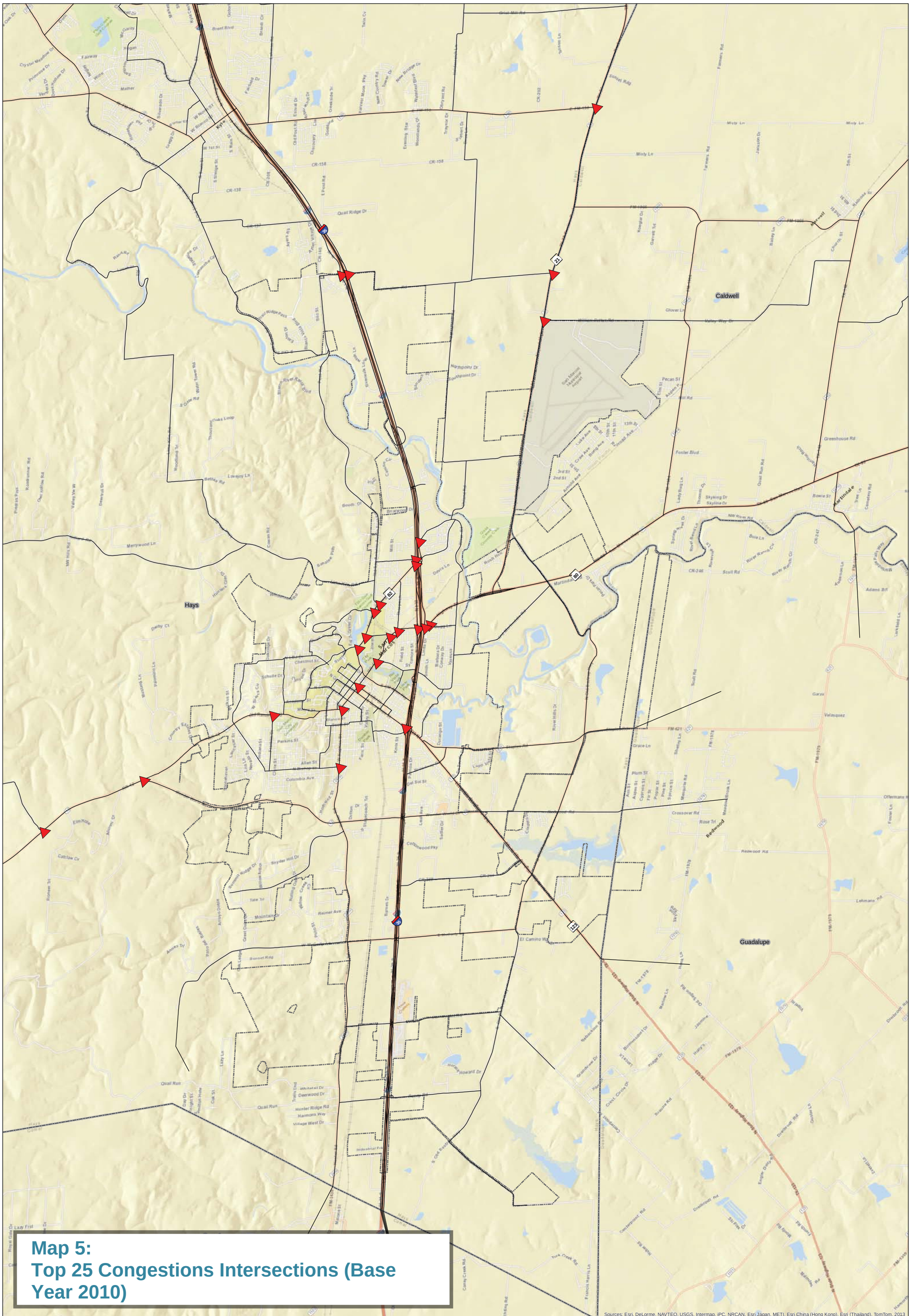
- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2010

Volume/Capacity (AM Peak)



Map 5:
Top 25 Congestions Intersections (Base Year 2010)

Legend

- Congested Intersection
- Model Highway Network
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2010

Top 25
Congested Intersections
(AM Peak)

Table 1:
Top 25 Congested Intersections in the Study Area During the AM Peak Period (Base Year 2010)

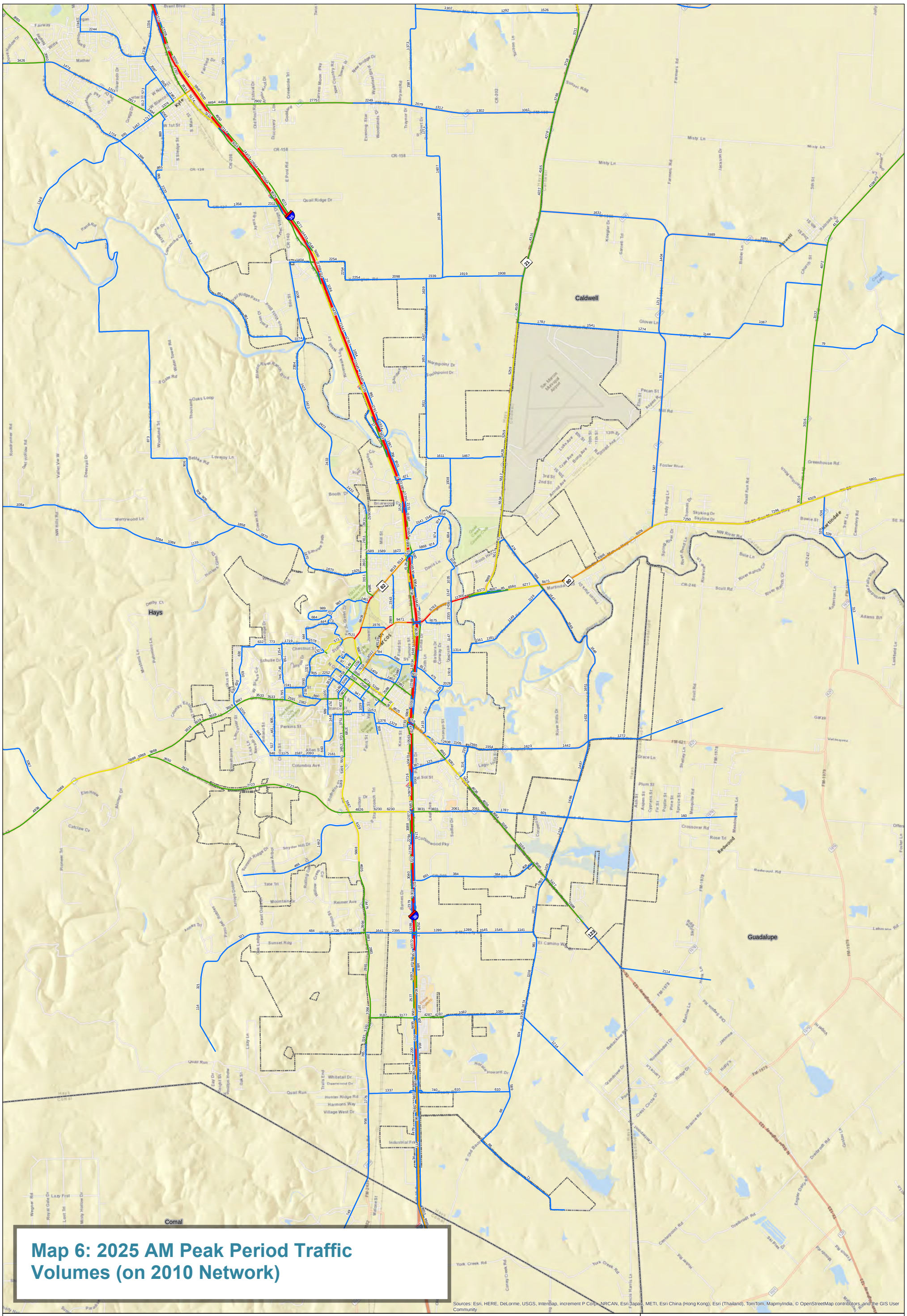
	Incoming Volumes V/C	Outgoing Volumes V/C	Maximum V/C for Intersection	Intersection Description
1	0.65	1.25	1.25	FM 110 & IH 35 Frontage NB
2	1.23	1.23	1.23	RM 12 & Fulton Ranch Rd
3	1.21	1.21	1.21	SH 80 & Bugg Ln
4	1.12	1.12	1.12	Loop 82 & Charles Austin
5	1.06	1.06	1.06	IH 35 Frontage NB & Uhland Rd
6	1.05	1.05	1.05	SH 21 & Yarrington Rd
7	1.04	0.99	1.04	SH 80 & IH 35 Frontage NB
8	1.03	1.04	1.04	SH 21 & Valley Way Dr
9	0.98	0.98	0.98	Loop 82 & Laurel Ridge
10	0.97	0.51	0.97	FM 110 & IH 35 Frontage SB
11	0.97	0.97	0.97	SH 21 & FM 150
12	0.96	0.96	0.96	Loop 82 & Old Post Rd
13	0.95	0.95	0.95	Hopkins St E & Charles Austin
14	0.79	0.95	0.95	Guadalupe St S & IH 35 Frontage SB
15	0.89	0.93	0.93	Hopkins St E & IH 35 Frontage SB
16	0.93	0.93	0.93	IH 35 Frontage SB & Uhland Rd
17	0.91	0.91	0.91	SH 21 & FM 1966
18	0.91	0.91	0.91	RM 12/Hopkins St E & Riverside Dr
19	0.90	0.90	0.90	RM 12 & FM 3407
20	0.90	0.90	0.90	RM 12 & Franklin St
21	0.90	0.90	0.90	Loop 82 & Sessom Dr
22	0.78	0.86	0.86	SH 123 & IH I35 Frontage NB
23	0.52	0.85	0.85	Old RM 12 & FM 2439
24	0.84	0.84	0.84	Patton St & IH 35 Service Rd SB
25	0.82	0.71	0.82	Loop 82 & IH 35 Frontage SB

Interim (2025) Travel Conditions

In order to understand how the transportation network improvements, or lack there of, impact the 2025 traffic conditions, we performed the following model runs:

- **Scenario 1**: Run 2025 demographics on 2010 network
- **Scenario 2:** Run 2025 demographics on 2035 network

Map 6 presents the anticipated traffic volume conditions for Scenario 1. As expected, when no transportation improvements are in place in 2025, the traffic conditions in 2025 worsen on several roadways in the study area. A careful comparison of the volume to capacity ratios for Scenario 1 (**Map 7)** with base volume to capacity ratios (**Map 4**) indicate SH 150 (east of IH 35), SH 152 (north of 150), Yarrington Road (east of IH 35), some sections of SH 80 (east of IH 35), Martindale Road and several segments of the roadway system around downtown will experience much higher levels of congestion compared to today. The average speed in the study area, according to the model will drop to about 35 miles per hour. **Maps 8 and 10** depict the anticipated traffic volume conditions for Scenario 2. As shown on **Maps 9 and 11**, when long-term network improvements are included as in Scenario 2, the level of service in the study area improves and is reflected in much higher average speeds. This information is summarized in **Table 2.**



Map 6: 2025 AM Peak Period Traffic Volumes (on 2010 Network)

Legend

MasterNet

AM Peak Total Flow

- Less than 2,500
- 2,501 to 5,000
- 5,001 to 7,500
- 7,501 to 10,000
- Greater than 10,000

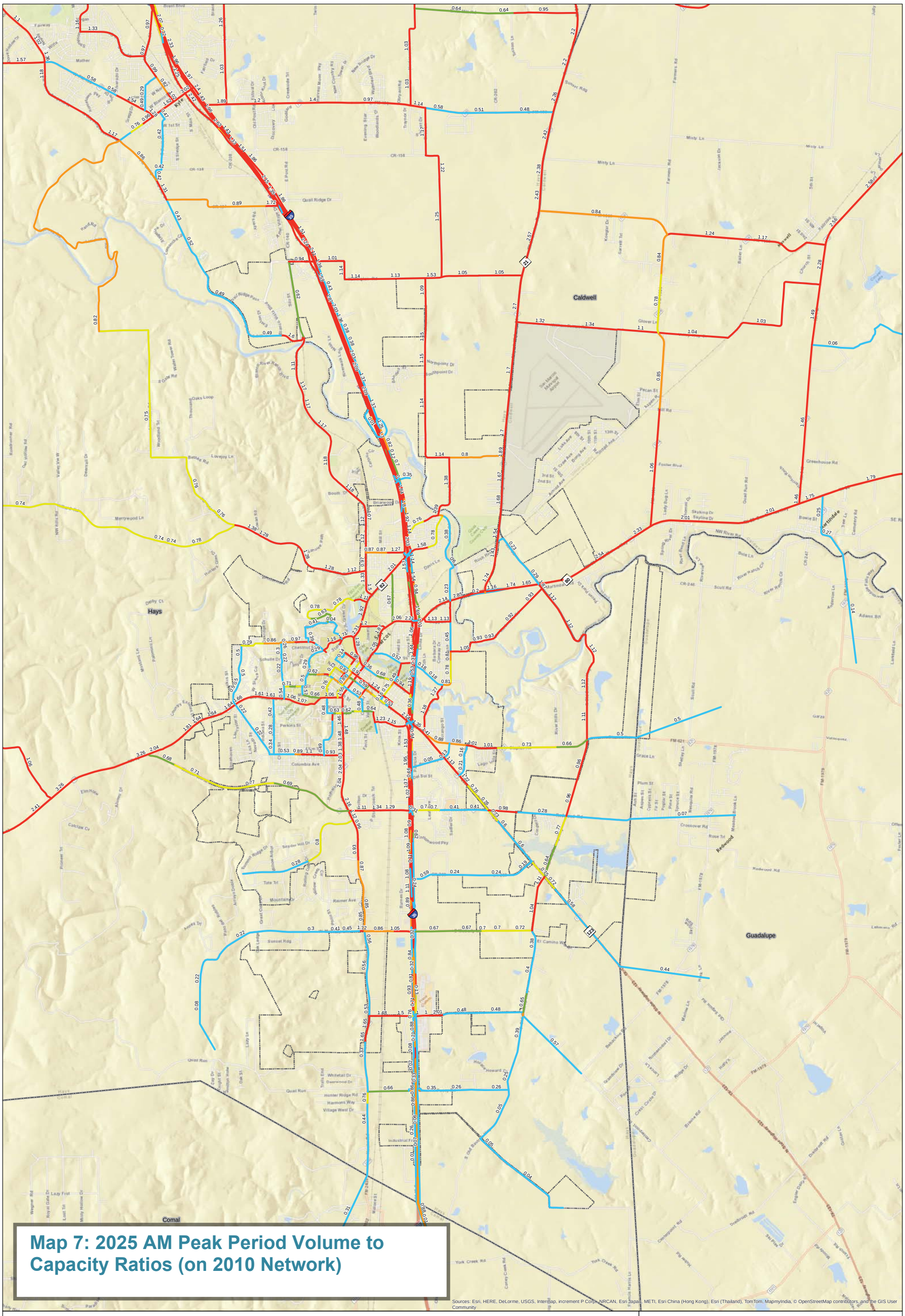
- San Marcos City Limits
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2025 on 2010 Network

Total Flows (AM Peak)



Map 7: 2025 AM Peak Period Volume to Capacity Ratios (on 2010 Network)

Legend

Level of Service

- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)

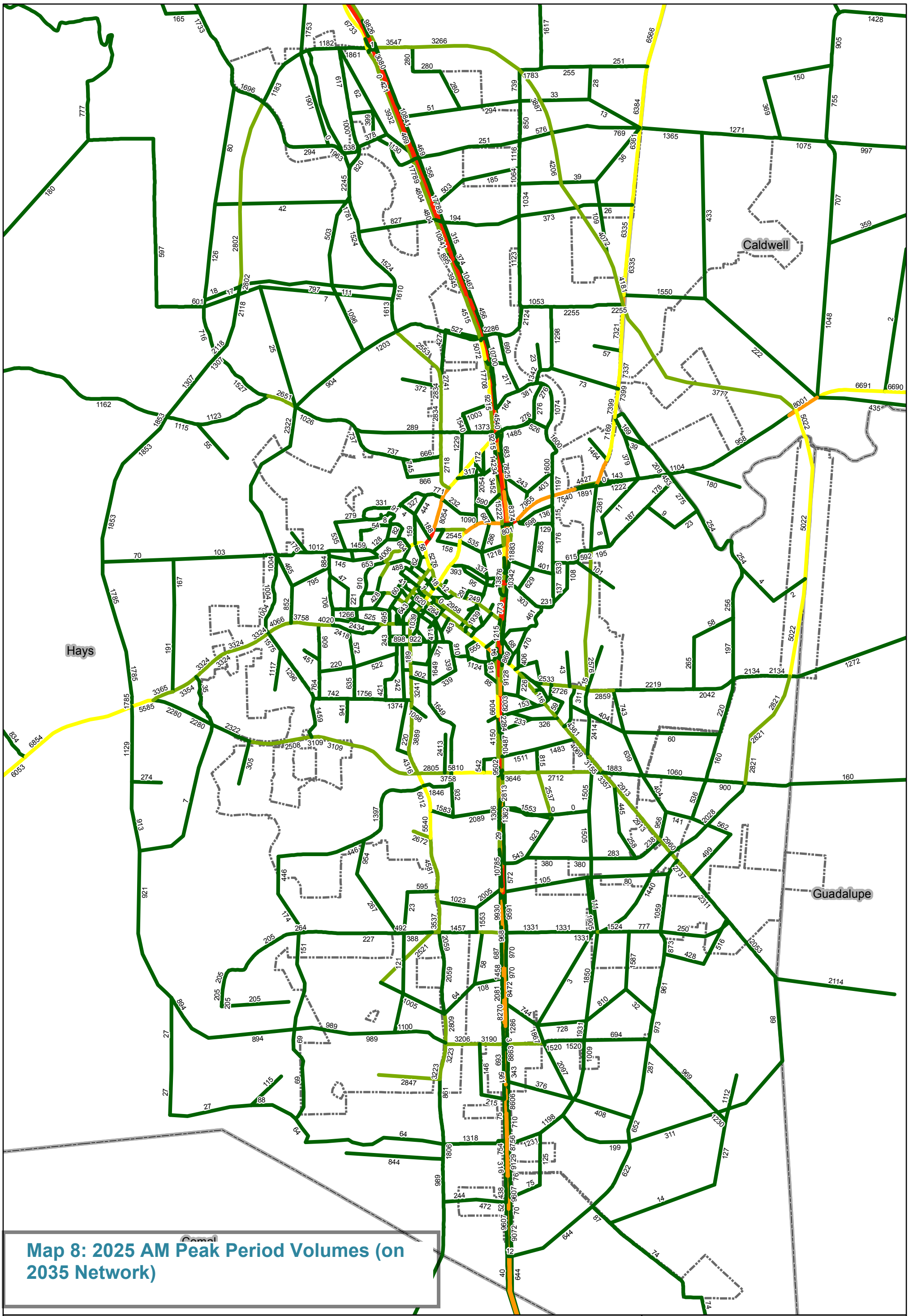
- San Marcos City Limits
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2025 on 2010 Network

Volume/Capacity (AM Peak)



Map 8: 2025 AM Peak Period Volumes (on 2035 Network)

Legend

San Marcos Hwy Links
Total Flow
- Less than 2,500
- 2,501 to 5,000
- 5,001 to 7,000
- 7,001 to 10,000
- Greater than 10,000

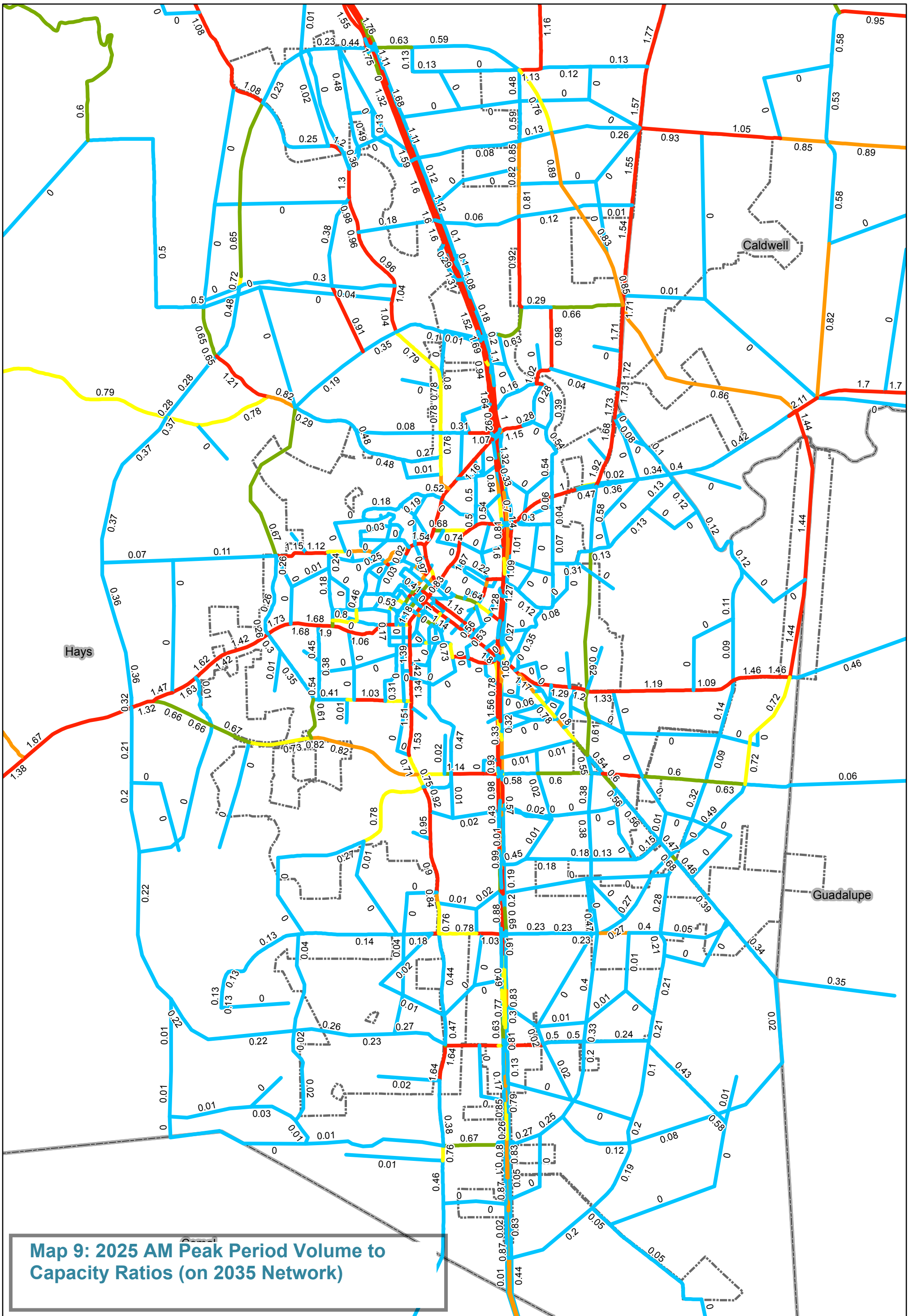
- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

Year 2025 on
2035 Preferred Build Network

Total Flows
(AM Peak)



Map 9: 2025 AM Peak Period Volume to Capacity Ratios (on 2035 Network)

Legend

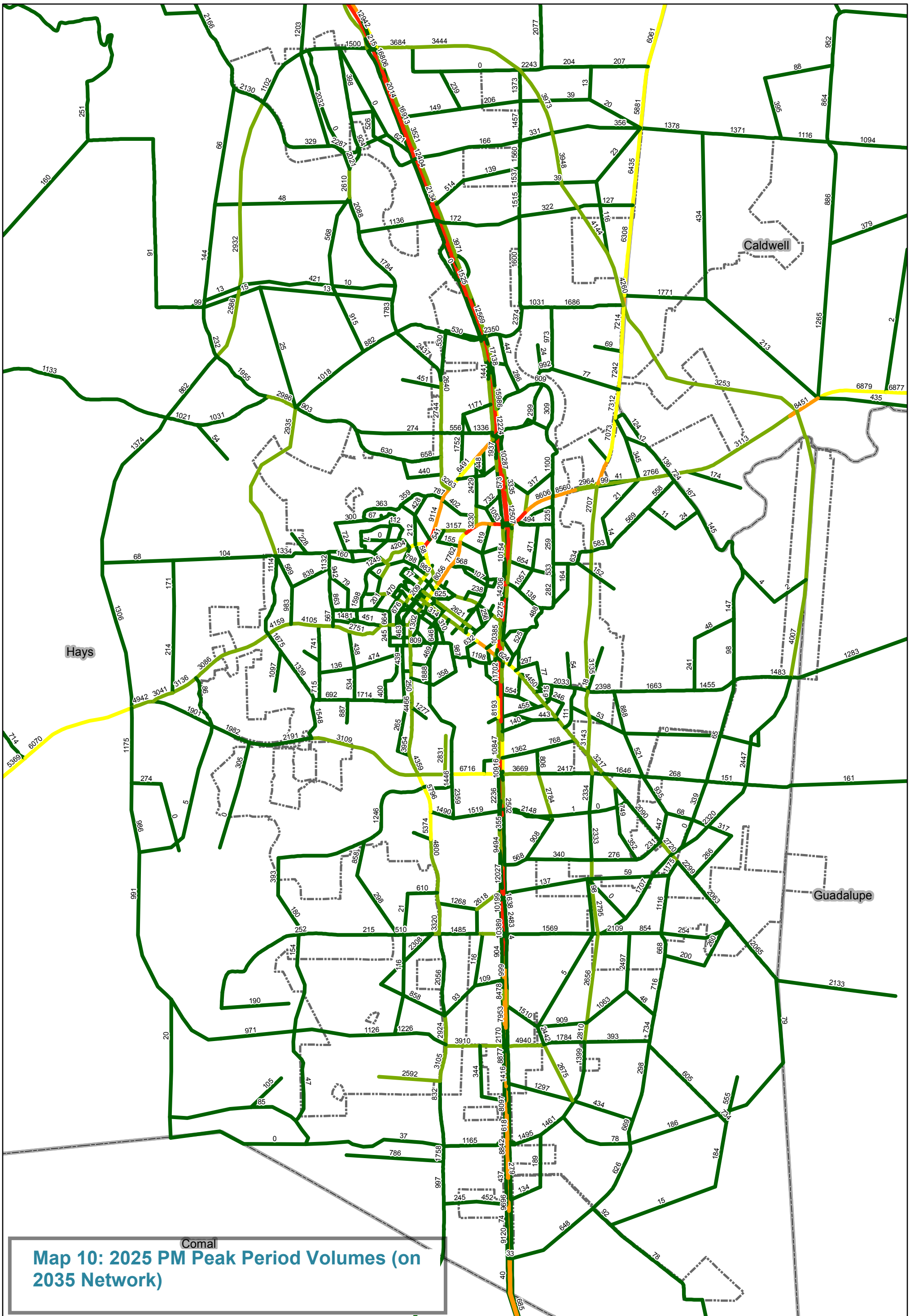
San Marcos Hwy Links
Max VOC
- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)
- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

Year 2025 on 2035 Preferred Build Network

Volumes/Capacity (AM Peak)



Map 10: 2025 PM Peak Period Volumes (on 2035 Network)

Legend

San Marcos Hwy Links
Total Flow
- Less than 2,500
- 2,501 to 5,000
- 5,001 to 7,500
- 7,501 to 10,000
- Greater than 10,000

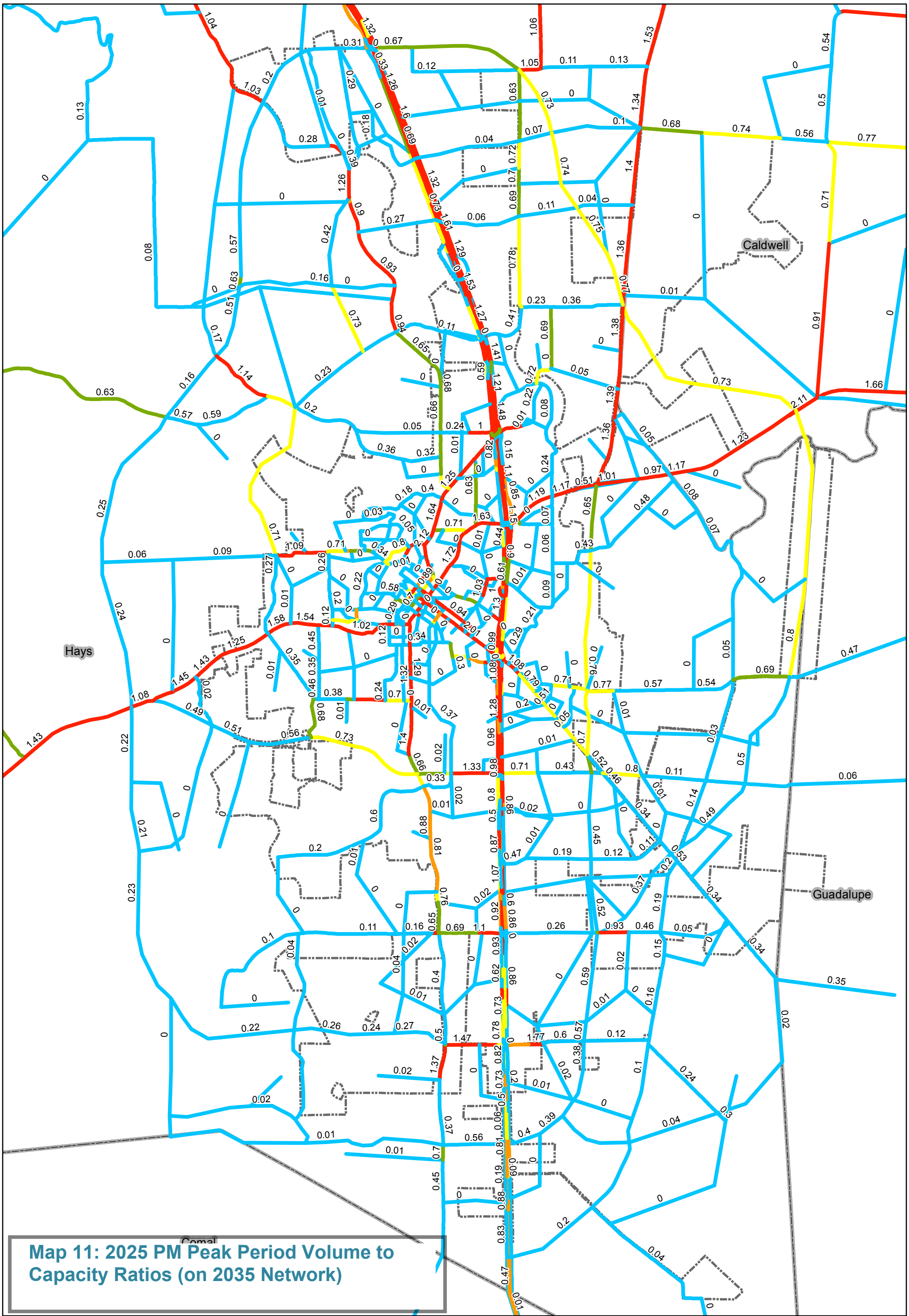
- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

Year 2025 on
2035 Preferred Build Network

Total Flows
(PM Peak)



Map 11: 2025 PM Peak Period Volume to Capacity Ratios (on 2035 Network)

Legend

San Marcos Hwy Links
Max VOC
- LOS A (0.00 - 0.60)
- LOS B (0.61 - 0.70)
- LOS C (0.71 - 0.80)
- LOS D (0.81 - 0.90)
- LOS F (Over 0.90)

- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

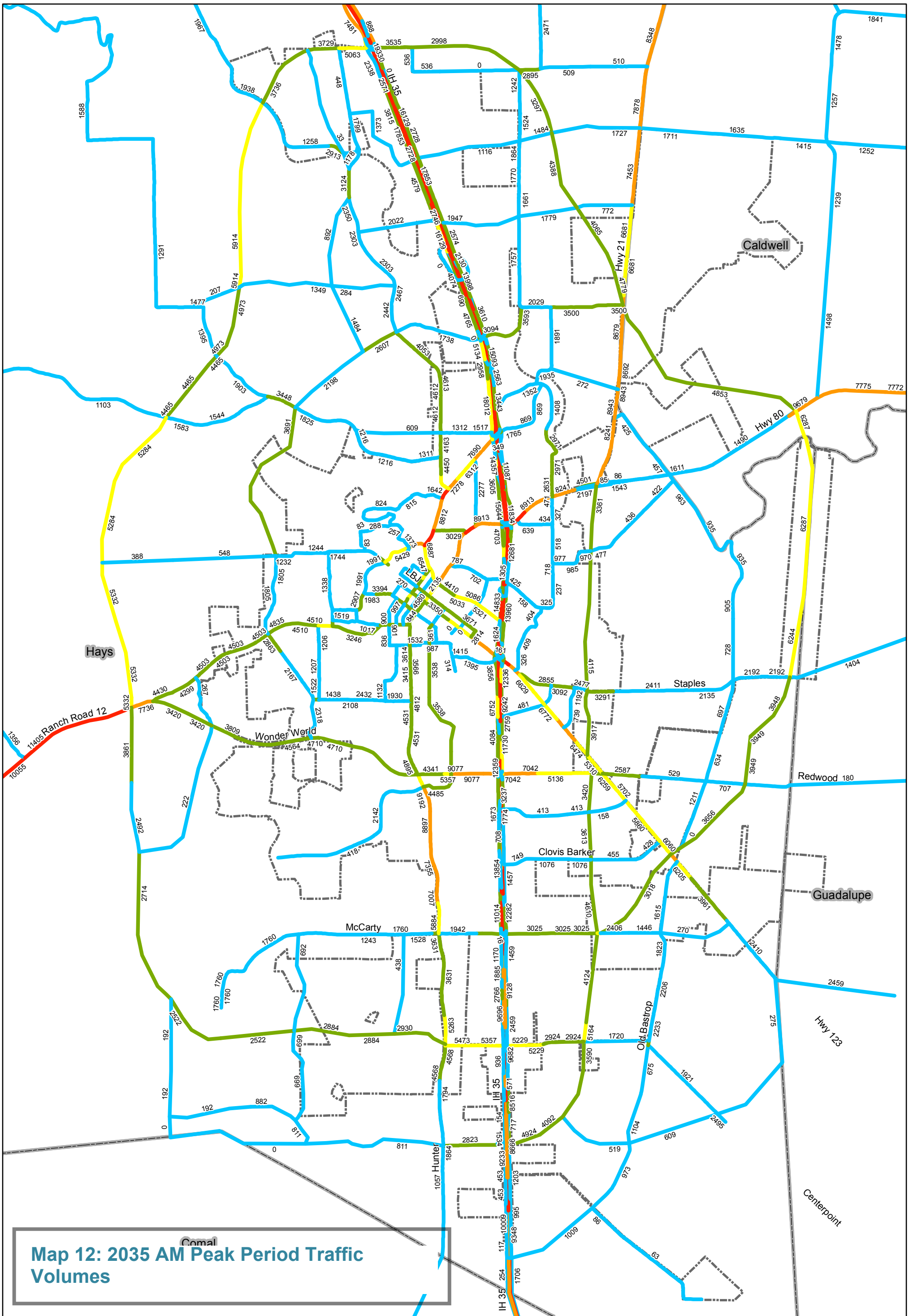
Year 2025 on 2035 Preferred Build Network

Volumes/Capacity (PM Peak)

Preferred Land Use Scenario (2035) Travel Conditions

Maps 12 through 15 illustrate the estimated peak level of service and traffic volumes for the year 2035. These results are based on the 2035 demographic and land use forecasts as well as the long-range transportation improvements embedded in the CAMPO model for the preferred scenario. According to local MPO forecasts, the City's population in 2035 is projected to grow by 96 percent and employment by 77 percent from current levels. The model results indicate this robust growth would place a heavy demand on the City's transportation system. Inbound traffic volumes on IH 35, north of downtown, are expected to reach nearly 19,500 vehicles during the AM peak period, which is about 36 percent higher than current levels. On SH 80, the inbound traffic volumes are projected to increase by 24 percent compared to current levels. A careful examination of **Maps 13 and 15** indicates a majority of the minor and major arterials within 4 miles of downtown would operate at level of service F during the AM and PM peak periods.

In order to manage the projected travel demand on the region's highways, several transportation strategies need to be considered. Several strategies have been well tested in other parts of the country including: Travel Demand Management techniques, Transportation Systems Management, Flex Hours, Tele-commuting, providing transportation choices such as bikeways, pedestrian network and transit service. In this study, the impact of providing bike and pedestrian network and transit service is explored further.



Map 12: 2035 AM Peak Period Traffic Volumes

Legend

San Marcos Hwy Links
- 5,001 to 7,000
- 7,001 to 10,000
- Greater than 10,000

Total Flow
- Less than 2,500
- 2,501 to 5,000

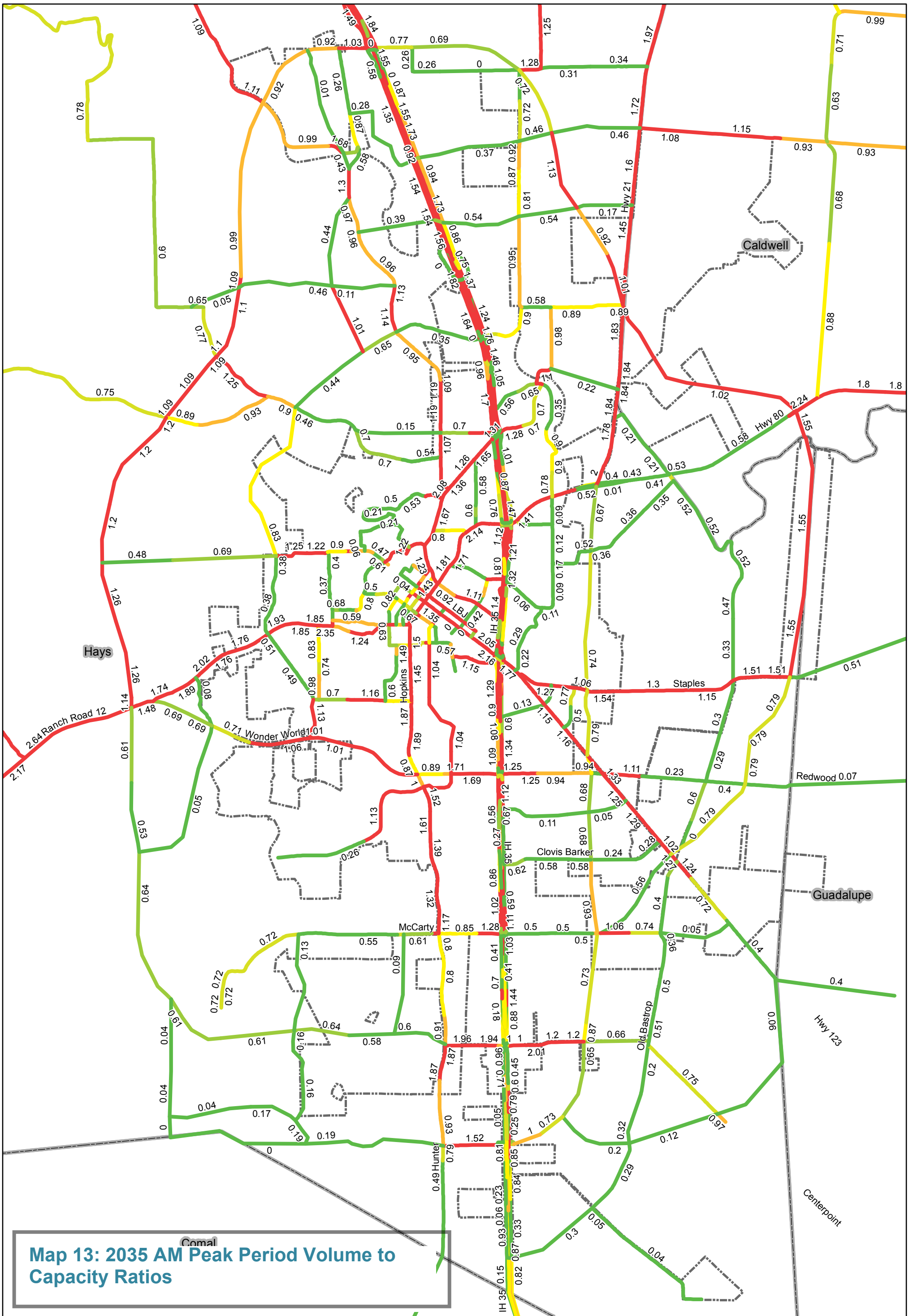
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Total Flows (AM Peak)



Map 13: 2035 AM Peak Period Volume to Capacity Ratios

Legend

San Marcos Hwy Links
Max VOC
- LOS A (0.00 - 0.60)
- LOS B (0.61 - 0.70)
- LOS C (0.71 - 0.80)
- LOS D (0.81 - 0.90)
- LOS E (0.91 - 1.00)
- LOS F (Over 0.90)

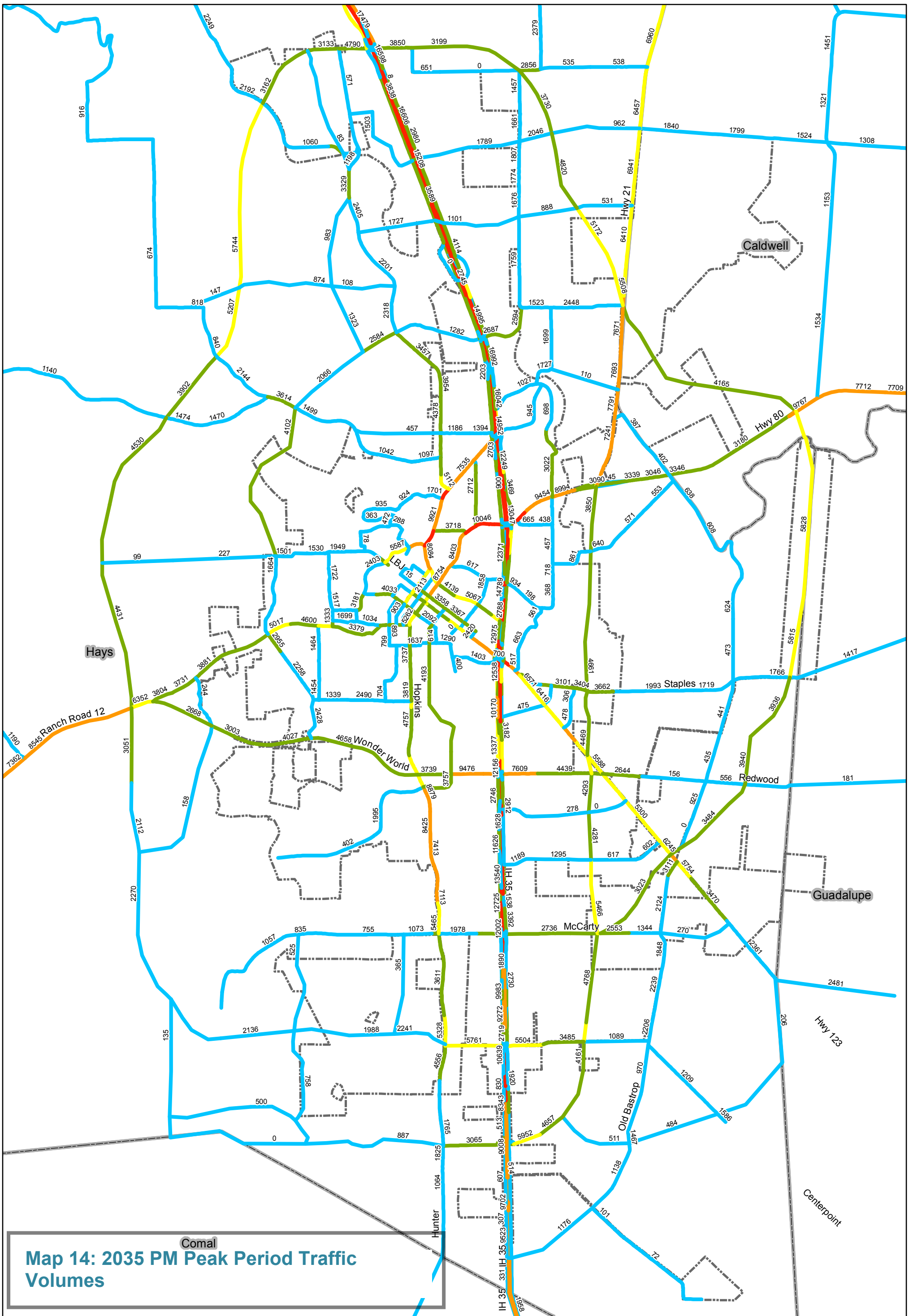
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Volume/Capacity (AM Peak)



Map 14: 2035 PM Peak Period Traffic Volumes

Legend

San Marcos Hwy Links
- 5,001 to 7,000
- 7,001 to 10,000
- Greater than 10,000

Total Flow
- Less than 2,500
- 2,501 to 5,000

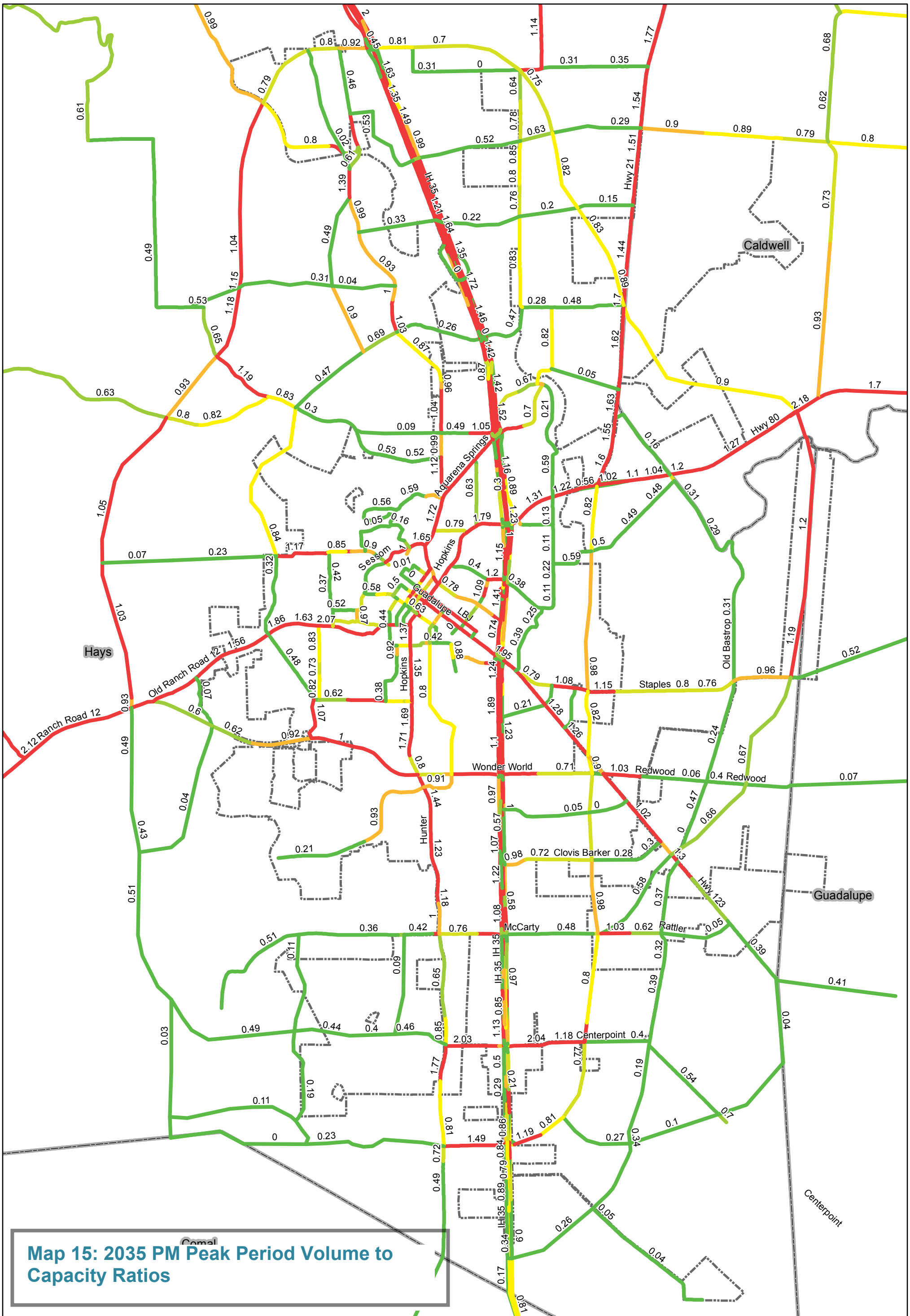
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Total Flows (PM Peak)



Legend

Max VOC

- LOS A (0.00 - 0.60)
- LOS B (0.61 - 0.70)
- LOS C (0.71 - 0.80)
- LOS D (0.81 - 0.90)
- LOS E (0.91 - 1.00)
- LOS F (Over 0.90)
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Volume/Capacity (PM Peak)

A summary of the performance measures for the different modeling scenarios are summarized in **Table 2** below:

Table 2:
Study Area VMT and VHT for Different Scenarios

	Study Area VMT	Study Area VHT	Study Area Average Speed (MPH)
Base Year 2010	2,348,047	49,296	47.63
Year 2025 demand on 2010 network	3,515,629	100,698	34.91
Year 2025 demand on 2035 network	3,403,513	80,996	42.02
Year 2035 demand on 2035 network	4,280,823	114,312	37.45

CONSIDERATION OF TRANSIT, BIKE AND PEDESTRIAN NETWORK

The San Marcos Comprehensive Plan lays out two specific goals for the Transportation Master Plan Update. Goal 1 is to provide a safe, well-coordinated transportation system implemented in an environmentally sensitive manner. Goal 2 states that a multi-modal transportation network should be developed to improve accessibility and mobility and to minimize congestion and reduce pollution. The development of the Transportation Master Plan is centered on a comprehensive multimodal and balanced transportation system. Providing for walking and bicycling modes, individually or coupled with transit, has the potential to reduce auto use, mitigate traffic congestion and contribute to improved air quality. In order to assess the need and viability of providing for bike and pedestrian trips and quantify the resulting VMT benefits, the results of the travel demand model were analyzed in detail.

The 2035 preferred scenario model results indicate that there are approximately 500,000 daily trips in the network. Most of these trips made in the San Marcos study area are relatively short in comparison to major urban areas. As shown in **Figure 2,** about 14 percent of trips are less than 1 mile long. These trips are ideal candidates for pedestrian (walk) mode. Likewise, 80 percent of the trips are less than 5 miles long. These trips have the potential to use the bicycle mode. By providing a well designed pedestrian network that is safe, efficient and provides direct access to key land use, it is possible to divert between 5 and 10 percent of all short trips to walk mode. For this study, we assumed a target capture rate of 5 percent for walk trips. In other words, 5 percent of all trips less than 1 mile have the potential to be diverted from auto trips to pedestrian trips. Under this assumption, we estimate that in year 2035, nearly 3,500 trips per day within the study area can become potential pedestrian trips.

To estimate the magnitude of potential bike trips that can be diverted from auto trips, we assumed a 10 percent capture rate of the trips less than 5 miles. Under this assumption, it is possible to divert nearly 41,000 auto trips to bike trips in the study area in 2035.

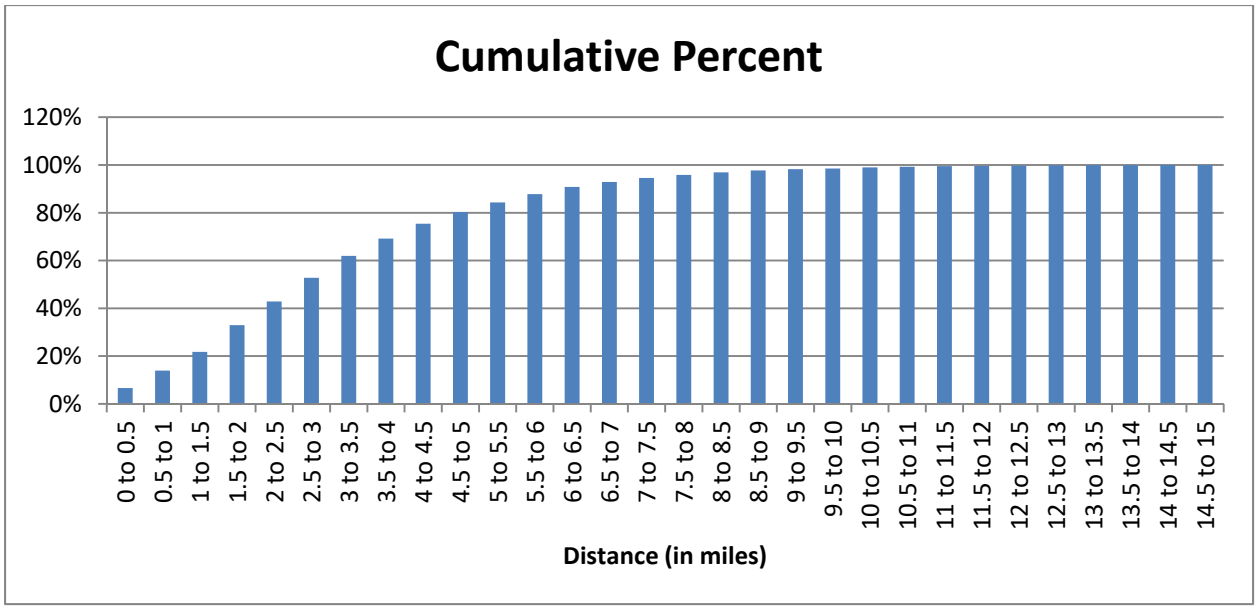


Figure 2:
Cumulative Trip Distribution by Distance

Of all the transportation strategies, transit has the greatest potential to reduce VMT, provided it is well designed to capture key travel markets. For this TMP, we designed a conceptual transit framework to serve trips between some key activity centers identified in the Comprehensive Plan. As shown in **Map 16,** eight activity centers (Downtown, Texas State, Midtown, South End, Medical District, Airport, STAR Park and East Village) were considered in this study. The results from the travel model were used to identify total trips flowing between the activity centers. **Tables 3** and **4** summarize these trips for 2010 and 2035. As shown in **Tables 3 and 4**, there are about 43,500 daily trips between the activity centers in 2010 and about 82,700 trips in 2035. Amongst all trip interchanges, trips between TSU, Midtown and Downtown are the highest. In 2035, the trip demand between TSU and the Medical District grow threefold from 2010.

The conceptual transit framework was developed to serve the areas of high trip flows. **Map 17** shows our proposed service plan which consists of five main routes emanating from the major activity centers and serving downtown directly and three circulator routes to distribute passengers close to their destinations. Depending on the peak period congestion levels, typical transit shares in small urban areas, such as San Marcos, may range anywhere between 3 and 8 percent. Assuming a 5 percent transit share, the proposed transit plan has the potential to divert about 4,200 daily trips from the auto mode in 2035 between these activity centers. In addition, the proposal transit framework will help capture additional non-activity center related trips.

Table 3:
2010 Daily Trip Flows Among Activity Centers

	Downtown	TSU	Midtown	Medical District	East Village	Airport	STAR Park	South End
Downtown	2,881	3,105	1,984	348	75	125	93	35
TSU	4,605	9,873	3,142	661	88	594	161	87
Midtown	2,265	2,615	3,133	407	104	392	107	32
Medical District	761	1,009	666	744	750	154	97	40
East Village	81	128	69	67	271	20	19	4
Airport	206	255	330	70	80	209	14	3
STAR Park	94	128	88	58	67	13	27	4
South End	22	30	20	10	1		2	

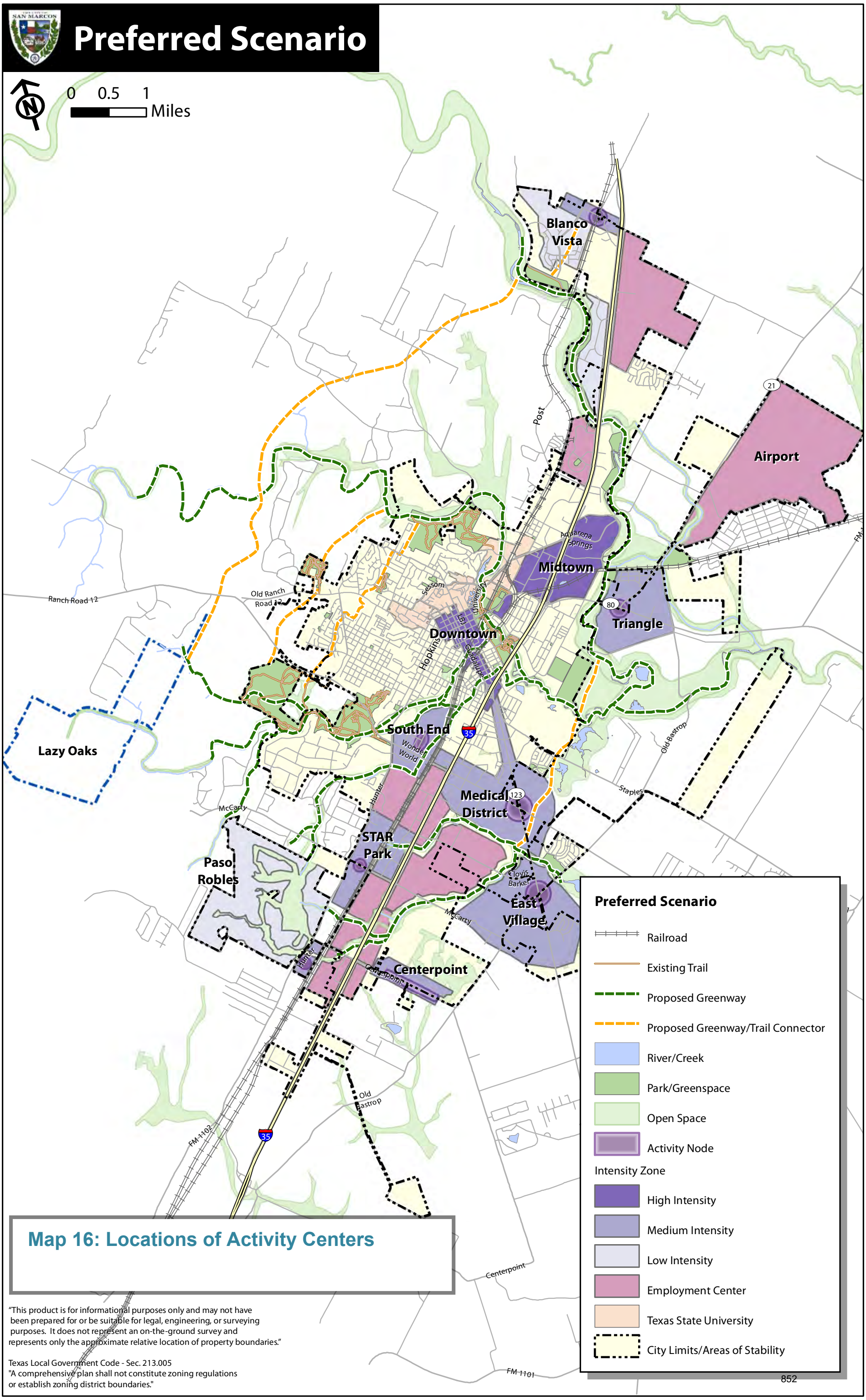
Total trips among the Activity Centers: 43,500

Table 4:
2035 Daily Trip Flows Among Activity Centers

	Downtown	TSU	Midtown	Medical District	East Village	Airport	STAR Park	South End
Downtown	3297	4501	2118	904	152	179	937	403
TSU	4300	9092	2568	1080	171	306	1076	473
Midtown	2430	3944	3287	1197	230	437	1018	344
Medical District	1937	3278	1406	5461	3115	370	1648	660
East Village	773	1694	517	2125	4067	225	1143	269
Airport	119	212	192	70	19	111	51	21
STAR Park	877	1517	668	1121	774	80	2120	313
South End	280	393	185	374	62	17		

Total trips among the Activity Centers: 82,700

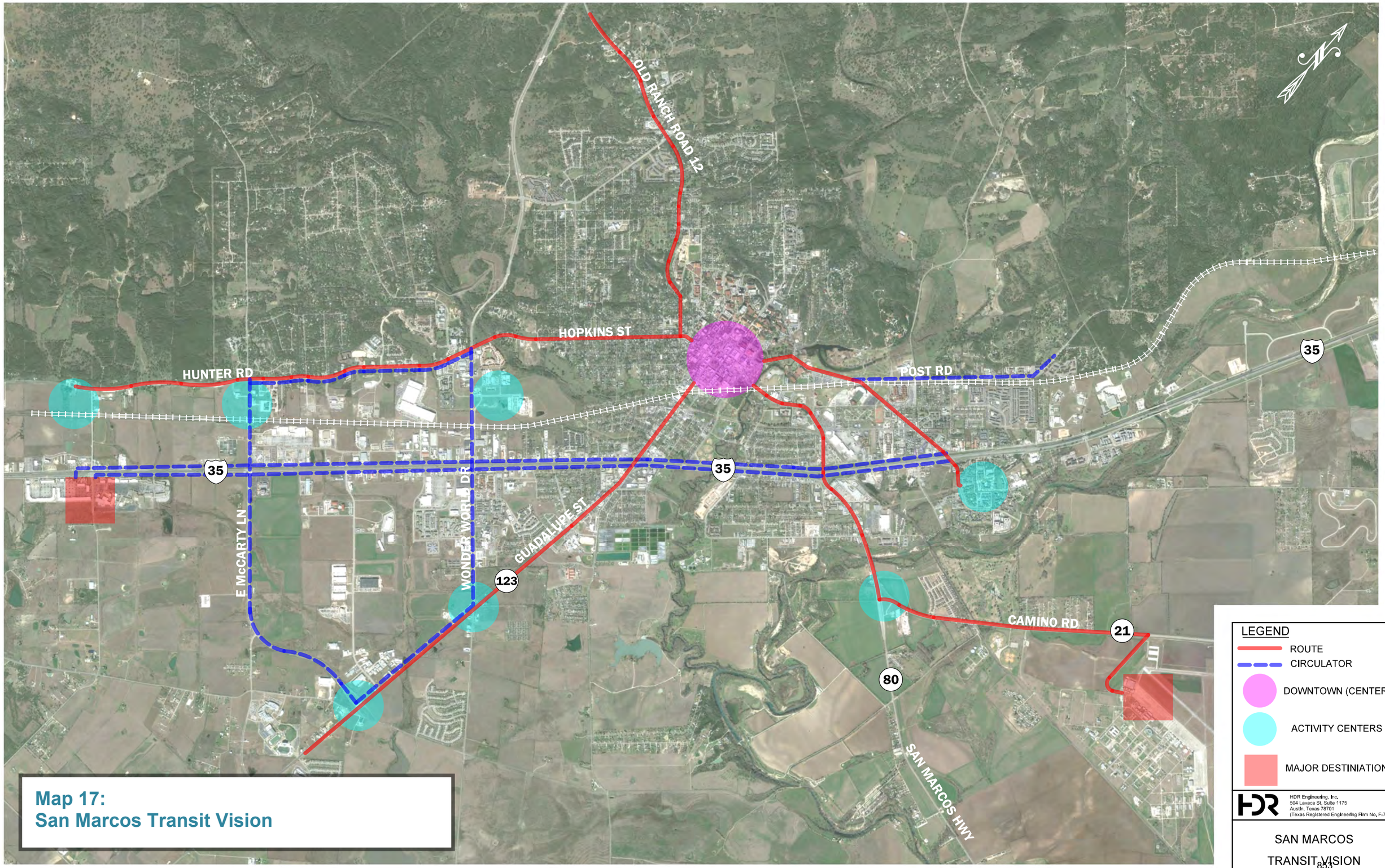
Preferred Scenario



Map 16: Locations of Activity Centers

"This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries."

Texas Local Government Code - Sec. 213.005
"A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries."



Map 17:
San Marcos Transit Vision

CONCLUSIONS

The 2035 Preferred Scenario model demonstrates that the trip distributions in the network are conducive to convert short trips to alternate modes (pedestrian and bicycle) to fulfil the Comprehensive Plan's goals. With appropriate infrastructure investments in these modes, the trip captures by these modes from single occupant vehicles can be achieved. Moreover, the trip distribution between the activity centers also signifies the importance of transit's role in the future transportation plan for the City. With high capacity and enhanced transit service, the activity centers can easily be connected through transit with ped and bike facilities complimenting the end trips. With these investments in alternate transportation modes and intelligent transportation system technologies, the need to build expensive roadway infrastructure in environmentally sensitive areas and where right-of-way is constrained will be minimized.

APPENDIX A: ISSUES WITH EXTERNAL TRIPS IN THE SAN MARCOS TDM MODEL RUNS

Issues with External Trips in San Marcos TDM Model Runs

During the application of the CAMPO model, an issue with external trips was uncovered. The following text provides a technical description of the issue and explains how it was rectified.

The external trips from the travel demand model on IH 35 were compared against the TxDOT 2010 AADT of 92,000. The External-Local model input table (**Table 5**) compares favorably to the TxDOT 2010 AADT number. However, the assigned trip on the IH 35 external links totaled about 12,000. This discrepancy spurred a closer examination of the TDM. **Map 18** shows the 24hr assigned traffic volumes for the San Marcos area. As seen in this map, the external trips assigned to SH 123 are much higher than the trips assigned IH 35, while the external-local inputs indicate that IH 35 should be much higher.

Investigation into the model code uncovered the source of this issue. The trip generation code in the model copies the external-local trips from the input file unsorted into the TAZ file external zones (see commented code sample in **Figure 5**). The consequence of this is that any irregularity in the input file, such as out-of-order or missing records, will cause external trips to be loaded into the network at the wrong location.

Figure 5:

2TripGeneration.rsc Code Sample

```
//fill in the exlo trips from the dbf file to the TAZ file

//Select the External zones within the TAZ file
ext_qry = "Select * where SECTOR = 6"
e1 = SelectByQuery("externals", "Several", ext_qry, )
//Sort the External zones in ID order
SortSet("externals", "ID")
//Open the External-Local trip input table
vwtbl = OpenTable("EXLO's", "DBASE",{Args.[EXLO]}, {{"Read Only", "True"}})
//Copy the Auto and Truck ExLo trip columns from the input table
t = GetDataVectors(vwtbl+"|", {"SGPEXLOA" + sht_year, "SGPEXLOT" + sht_year}, )
//Paste the Auto and Truck ExLo trip columns into the TAZ file External zones
vtaz = SetDataVectors(taz_lyr + "|externals", {{"SGPEXLOA" + sht_year, t[1]}, {"SGPEXLOT" + sht_year,
t[2]}}, )
```

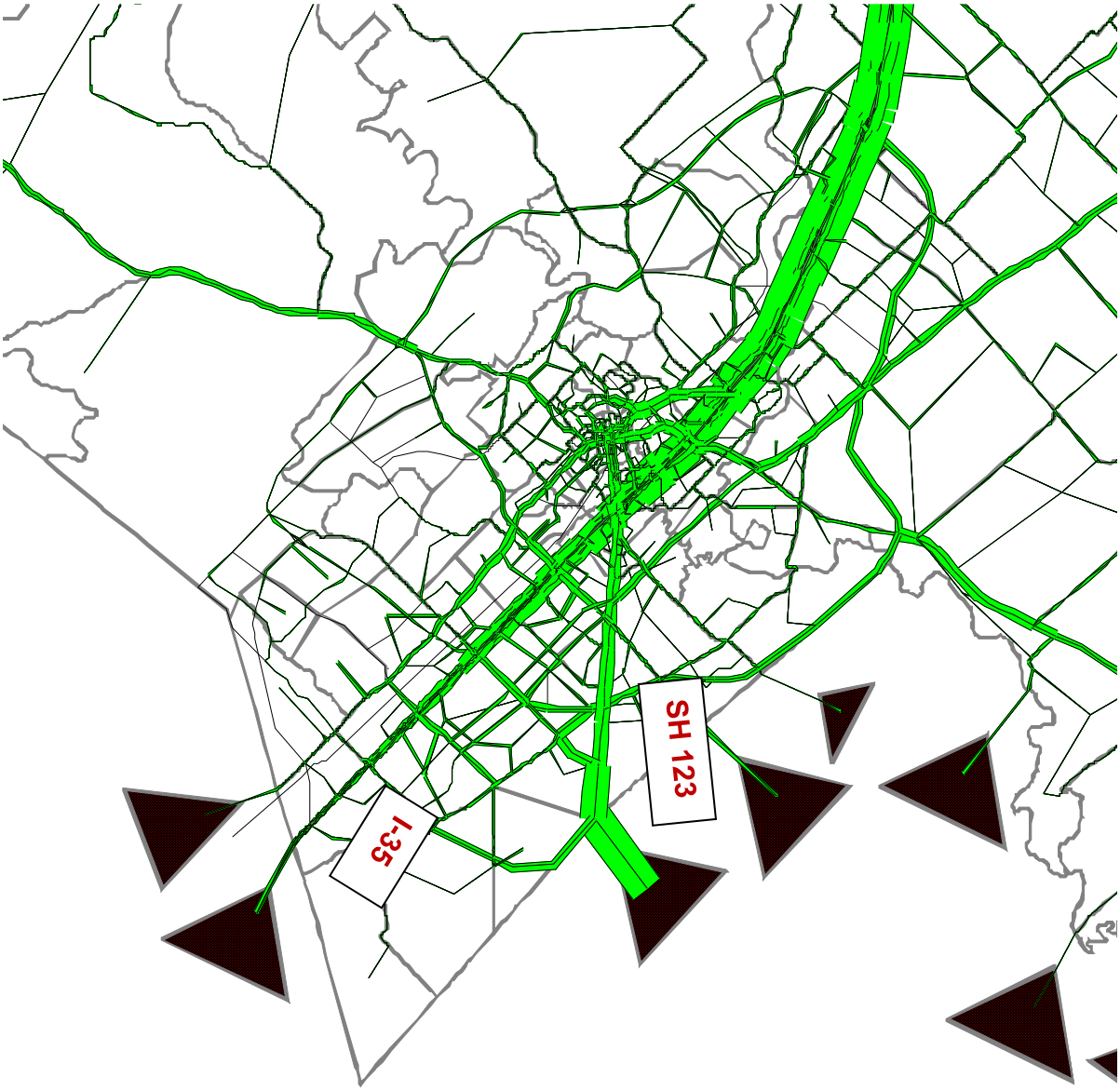
In the case of these model runs zone 1450 in the input file is out-of-order following zone 1469, as is shown in **Table 5**. This caused external zones 1450 to 1469 to receive the wrong inputs. FM 2439 external trips were assigned to IH 35, IH 35 trips were assigned to SH 123, SH 123 trips were assigned to Redwood Rd, and so on for all of the external trips.

This problem was corrected in this case by insuring that the external-local input file is pre-sorted in the correct order. However, a more comprehensive solution would be to modify the model scripts to link the

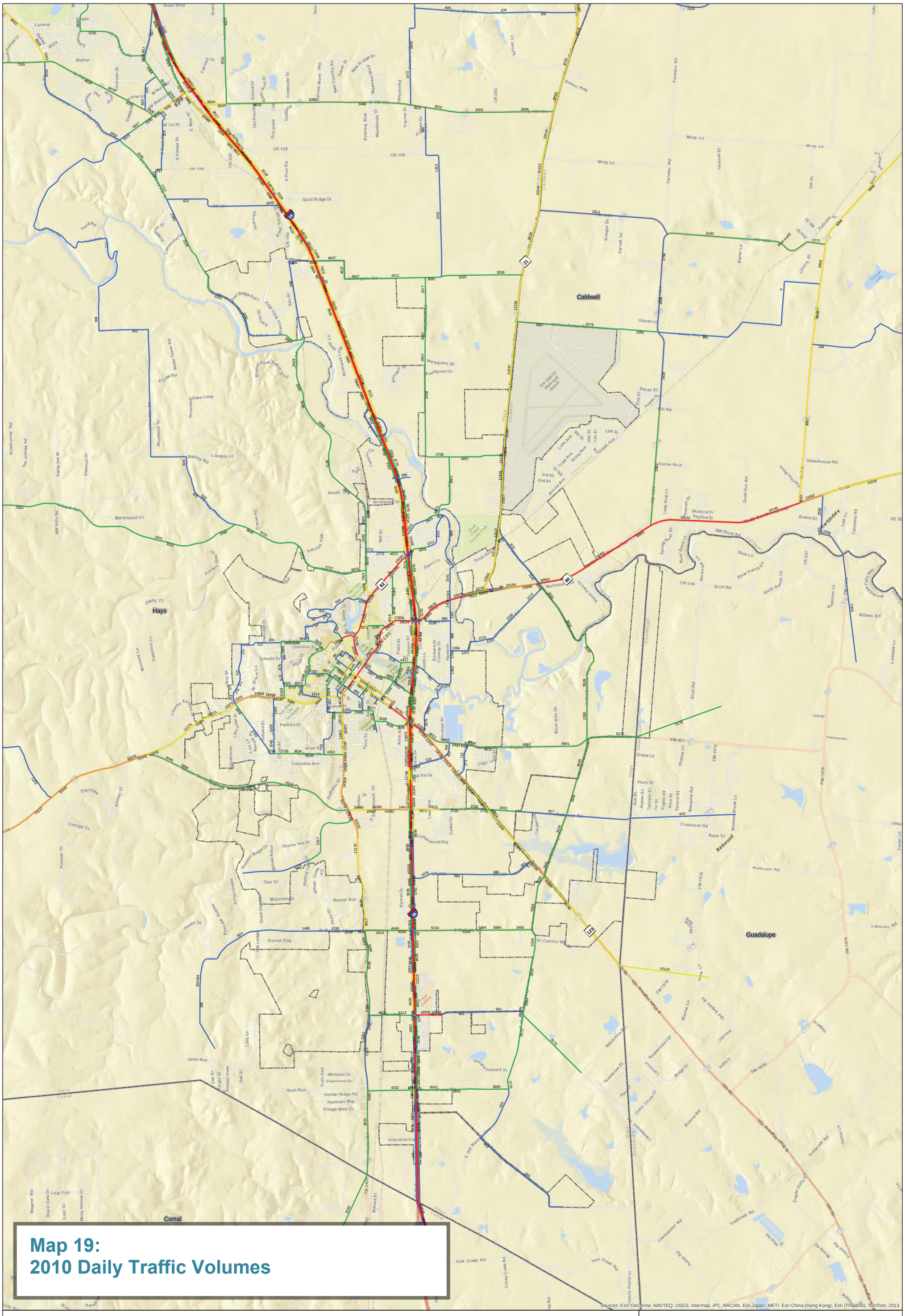
input file to the TAZ file by ID before copying the trip values into the TAZ file thus insuring that each zone receives the correct input.

Table 5:
2010 External-Local Inputs

ID	SGPEXLOA10	SGPEXLOT10	Location
1449	2012	732	
1451	441	49	
1452	1372	116	
1453	4894	244	FM 621
1454	610	0	Redwood Rd
1455	9034	942	SH 123
1456	68170	11298	IH 35 S
1457	2590	630	FM 2439
1458	2188	172	
1459	890	0	
1460	832	98	
1461	1598	140	
1462	5968	394	
1463	1080	0	
1464	200	0	
1465	6314	1914	
1466	1752	196	
1467	626	74	
1468	6928	1194	
1469	4773	227	
1450	0	0	



Map 18: 2010 Daily Congestion in the Study Area



Map 19:
2010 Daily Traffic Volumes

Legend

24 hour Total Flow

- Less than 2,500
- 2,501 to 7,500
- 7,501 to 12,500
- 12,501 to 17,500
- Greater than 17,500

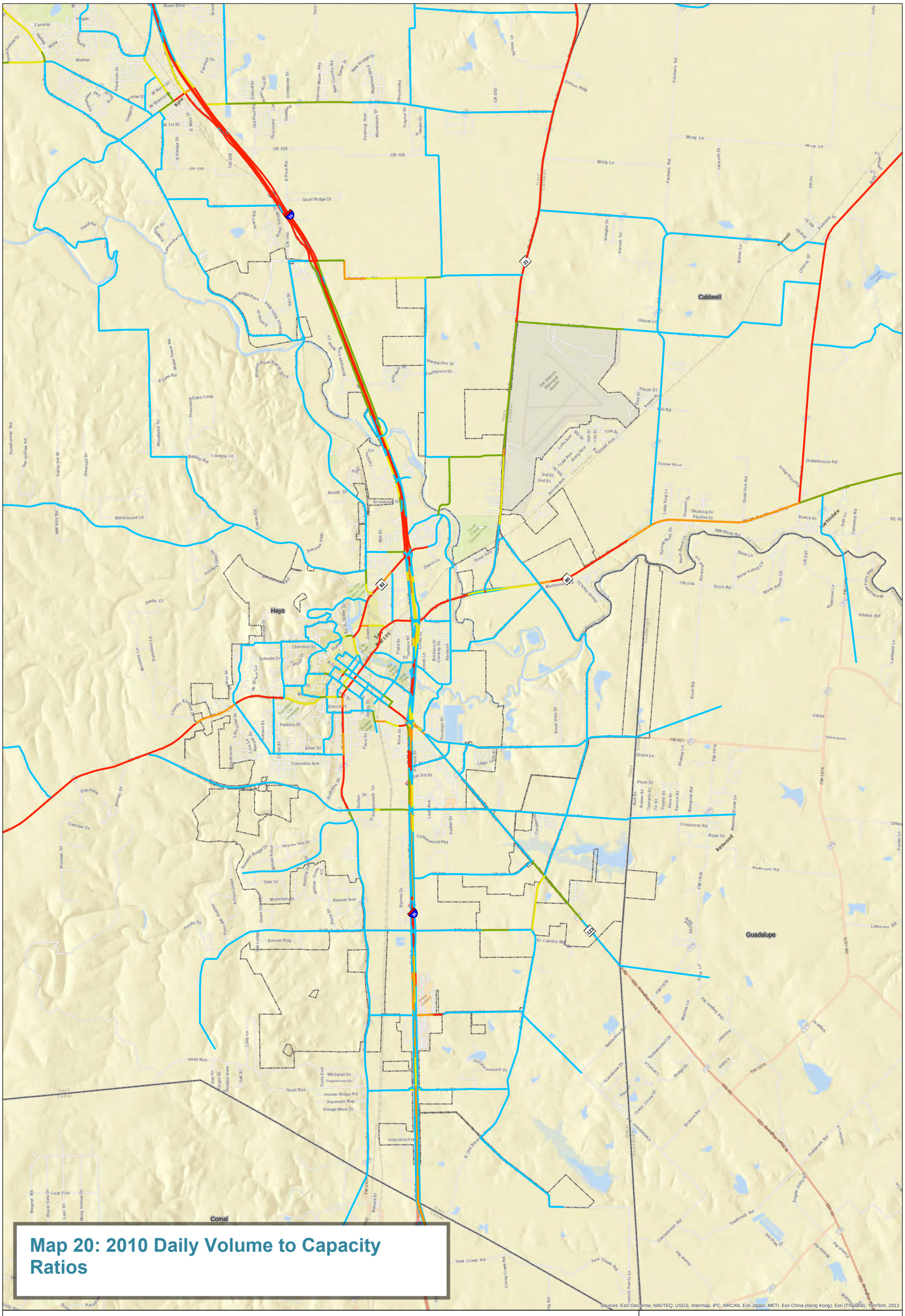
County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2010

Total Flows (24 Hour)



Map 20: 2010 Daily Volume to Capacity Ratios

Legend

Level of Service

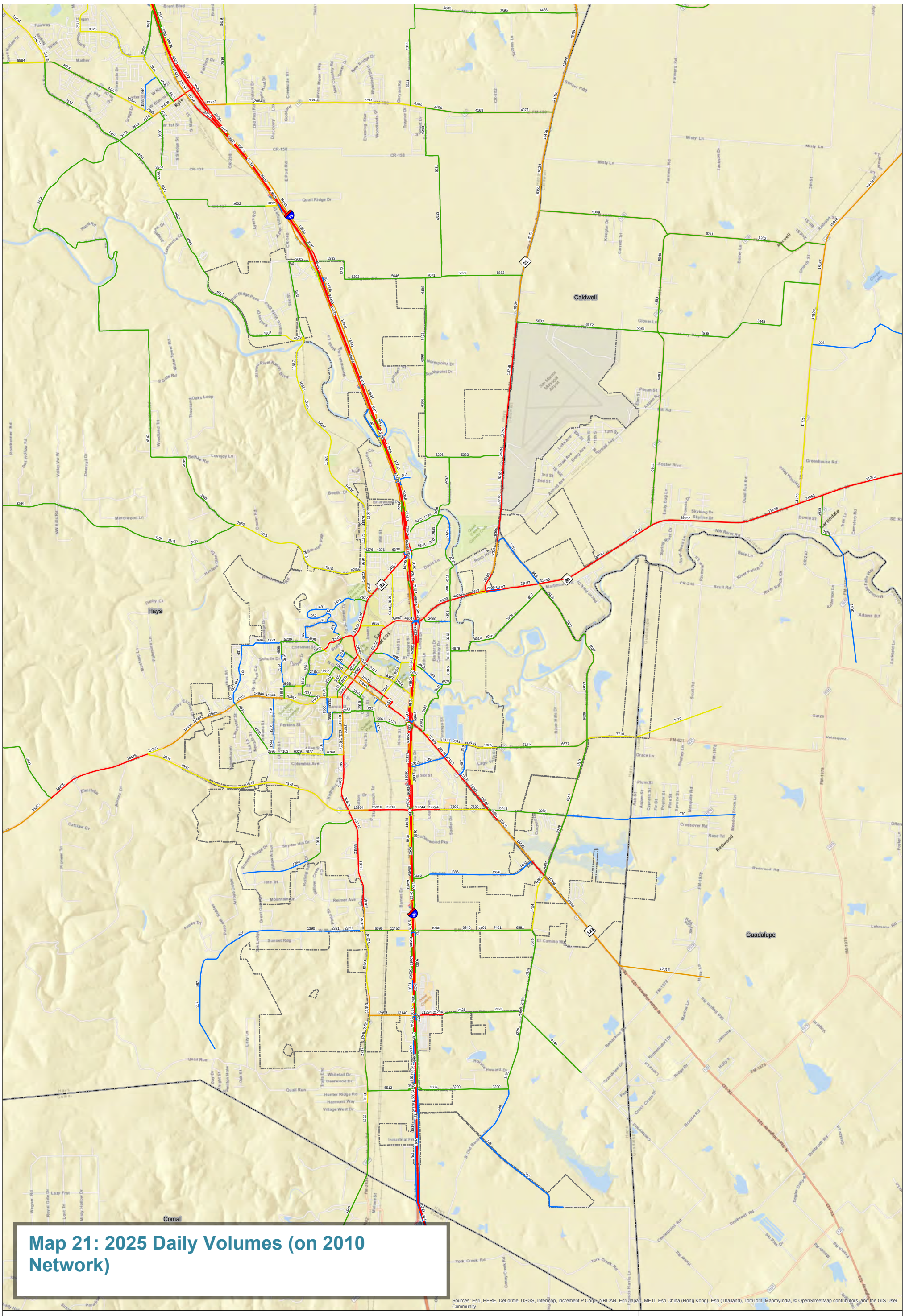
- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2010

Volume/Capacity (24 Hour)



Map 21: 2025 Daily Volumes (on 2010 Network)

Legend

MasterNet
24 Hour Total Flow

- Less than 2,500
- 2,501 to 7,500
- 7,501 to 12,500
- 12,501 to 17,500
- Greater than 17,500

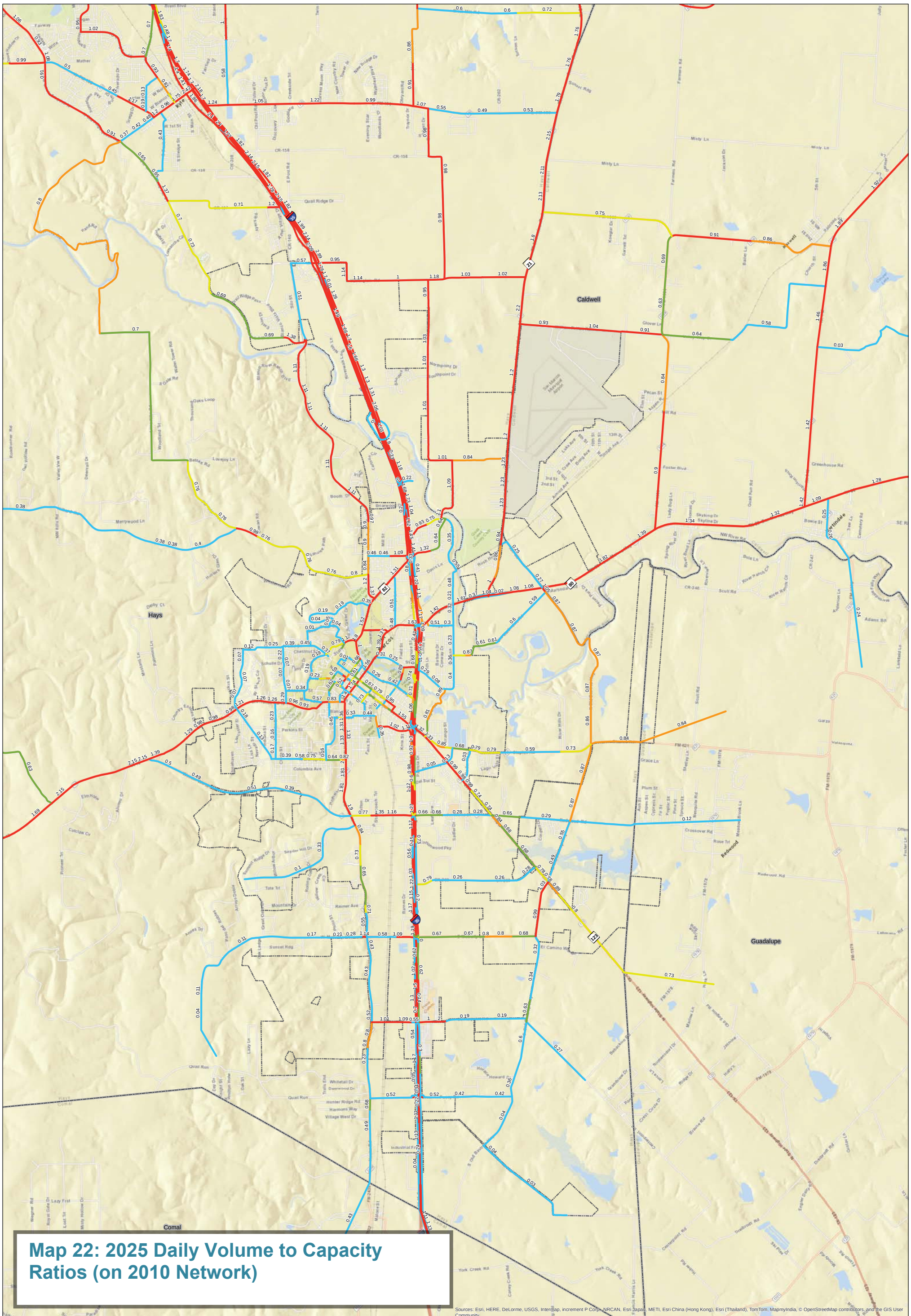
- San Marcos City Limits
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2025 on 2010 Network

Total Flows (24 Hour)



Map 22: 2025 Daily Volume to Capacity Ratios (on 2010 Network)

Legend

Level of Service

- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)

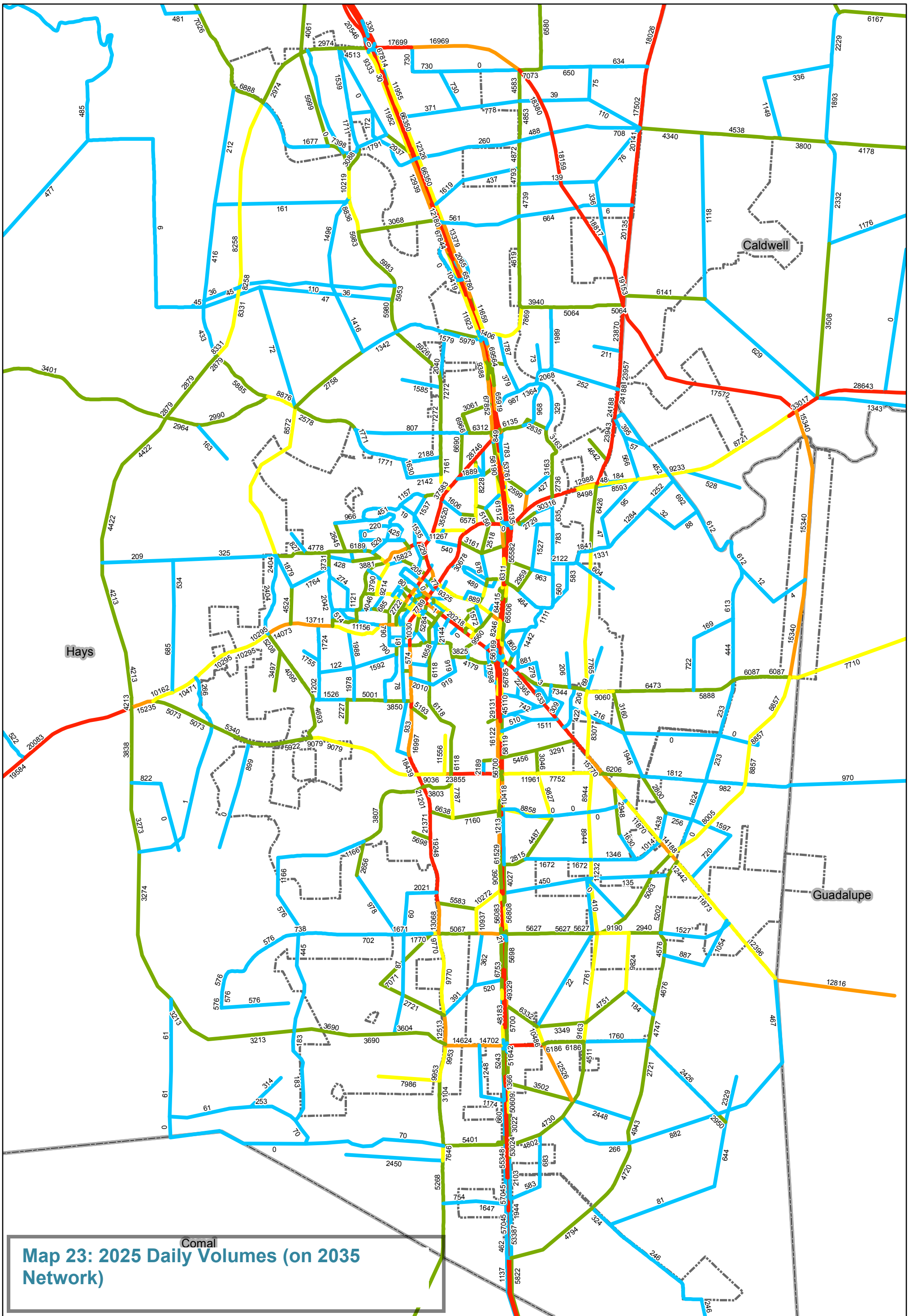
- San Marcos City Limits
- County Boundary

0 1 2 4 Miles

San Marcos RPM

Year 2025 on 2010 Network

Volume/Capacity (24 Hour)



Map 23: 2025 Daily Volumes (on 2035 Network)

Legend

San Marcos Hwy Links
Total Flow
- Less than 2,500
- 2,501 to 7,500
- 7,501 to 12,500
- 12,501 to 17,500
- Greater than 17,500

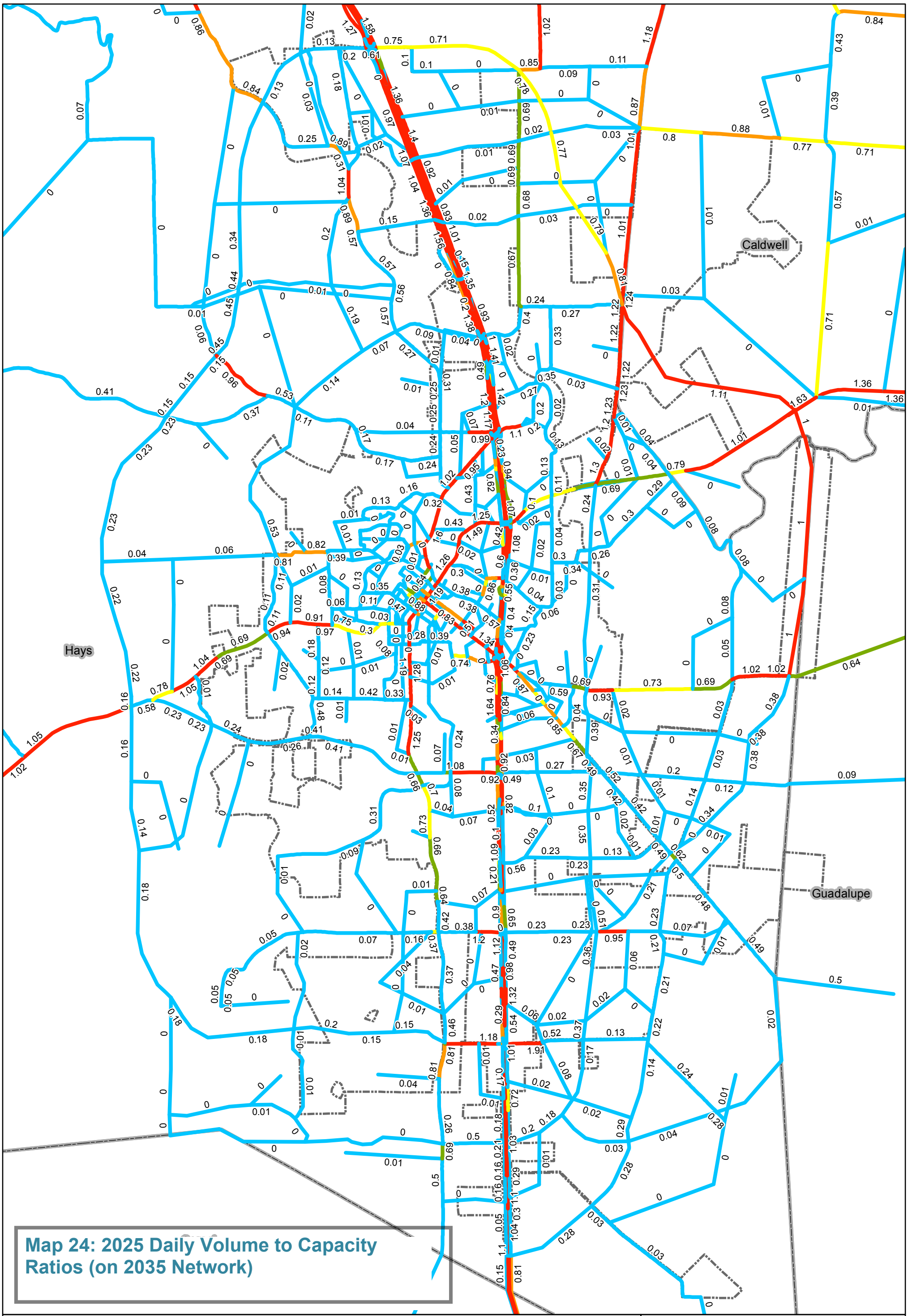
- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

Year 2025 on 2035 Preferred Build Network

Total Flows (24 Hour)



Map 24: 2025 Daily Volume to Capacity Ratios (on 2035 Network)

Legend

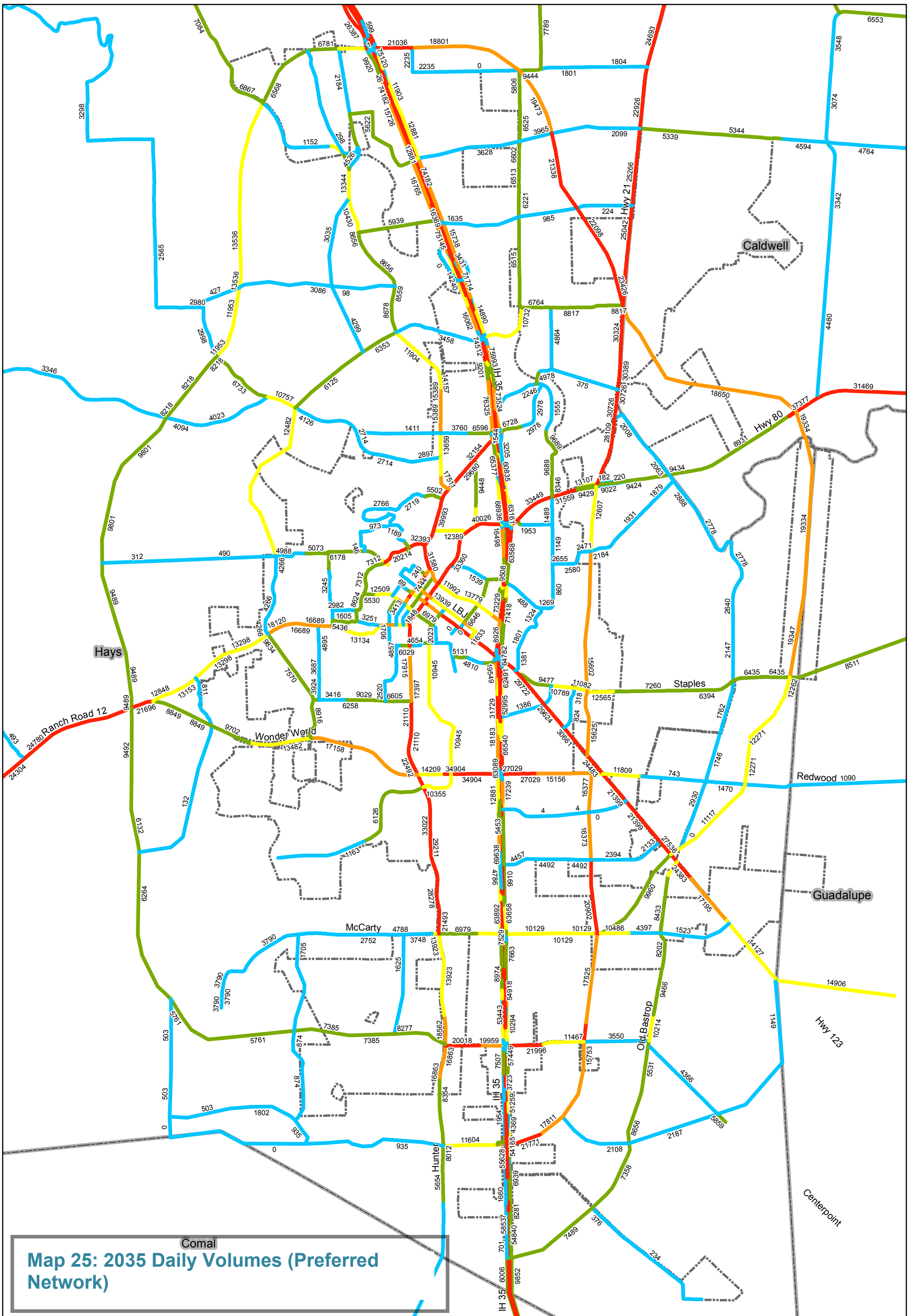
San Marcos Hwy Links
Max VOC
- LOS A (0.00 to 0.60)
- LOS B (0.61 to 0.70)
- LOS C (0.71 to 0.80)
- LOS D (0.81 to 0.90)
- LOS F (Over 0.90)
- San Marco City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

Year 2025 on
2035 Preferred Build Network

Volume/Capacity
(24 Hour)



Map 25: 2035 Daily Volumes (Preferred Network)

Legend

San Marcos Hwy Links
Total Flow
- Less than 5,000
- 5,001 to 10,000
- 10,001 to 15,000
- 15,001 to 20,000
- Greater than 20,000

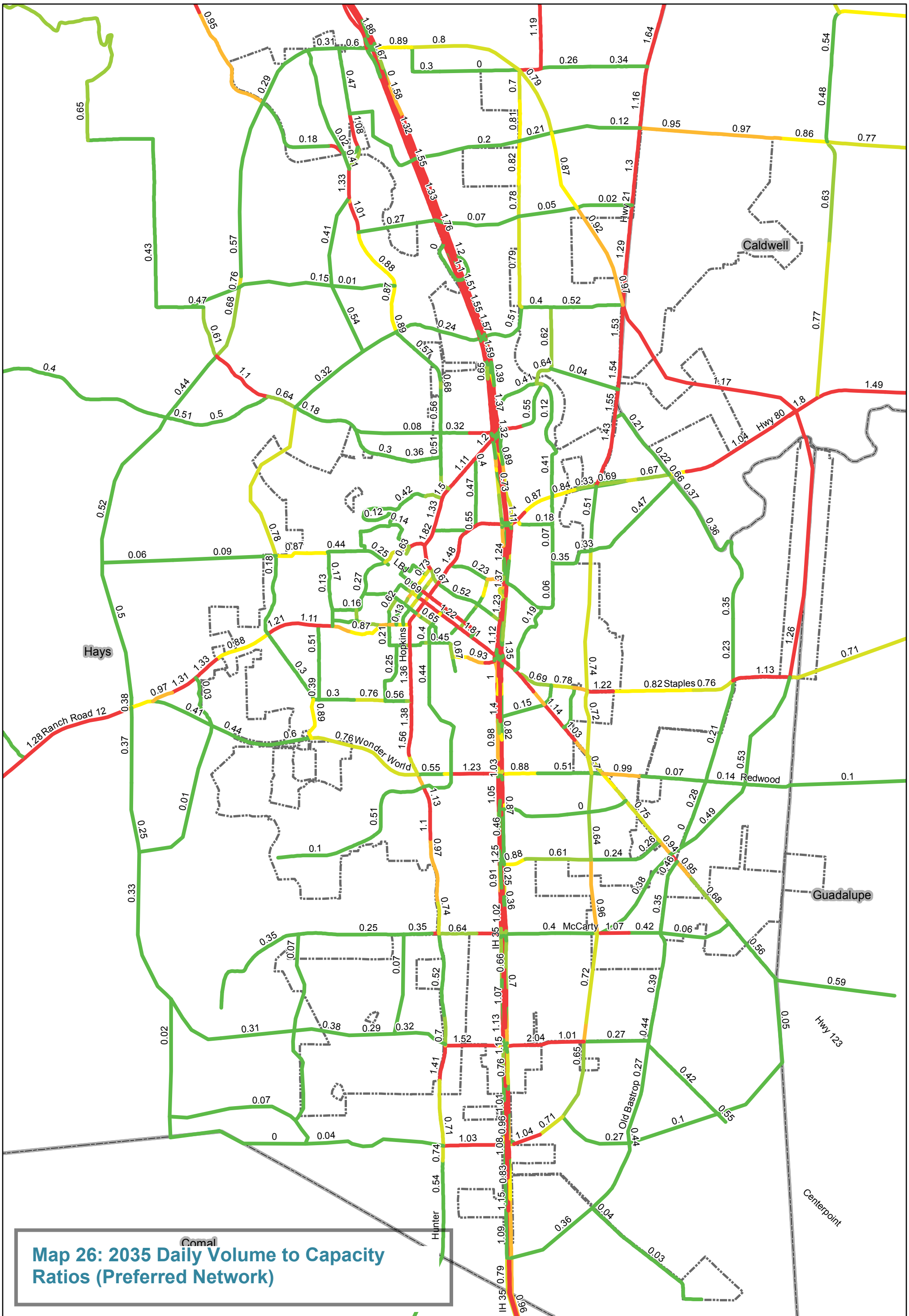
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Total Flows (24 Hour)



Map 26: 2035 Daily Volume to Capacity Ratios (Preferred Network)

Legend

Max VOC

- LOS A (0.00 - 0.60)
- LOS B (0.61 - 0.70)
- LOS C (0.71 - 0.80)
- LOS D (0.81 - 0.90)
- LOS E (0.91 - 1.00)
- LOS F (Over 0.90)
- San Marcos City Limits
- County Boundary

0 0.75 1.5 3 Miles

San Marcos Sub Area Planning Model

2035

Volume/Capacity (24 Hour)

866

Appendix C: Future Scenario

No Build Conditions Intersection Operations Analysis

Intersection Analysis
2035 Improvement Summary

Intersection	Recommended 2035 Improvement
Aquarena Springs Drive and Thorpe Lane	Construct an additional southbound left-turn lane to provide dual left-turn lanes
	Construct an additional westbound left-turn lane to provide dual left-turn lanes
	Optimize signal timing and phasing
Aquarena Springs Drive and Charles Austin Drive	Construct an additional northbound left-turn lane to provide dual left-turn lanes
	Construct an eastbound right-turn lane
	Optimize signal timing and phasing
Aquarena Springs Drive and Sessom Drive	Optimize signal timing and phasing
University Drive and CM Allen Pkwy	Implement a road repurposing on CM Allen Pkwy to reduce through lane and add bike facilities. The following configuration is assumed:
	EB (one left-turn lane and one left-turn/through/right-turn lane)
	WB (one left-turn/through/right-turn lane)
	NB (one left-turn lane and one through/right-turn lane)
	SB (one left-turn lane and one through/right-turn lane)
	Implement a southbound right-turn overlap phase
	Optimize signal timing and phasing
SH 123 and Staples Street (FM 621)	Construct a westbound right-turn lane
	Implement a westbound right-turn overlap phase
	Optimize signal timing and phasing
SH 123 and Broadway Street	Construct a westbound left-turn lane
	Construct a northbound right-turn lane
	Construct an additional southbound left-turn lane to provide dual left-turn lanes
	Remove split-phased operations
	Optimize signal timing and phasing
SH 123 and Old Bastrop	Optimize signal timing and phasing
Hunter Road and McCarty Lane	Optimize signal timing and phasing
Hopkins Street and Bishop Street	Construct a northbound left-turn lane
	Construct a southbound left-turn lane
	Remove split-phased operations
	Optimize signal timing and phasing
Hopkins Street and Moore Street	Remove split-phased operations
	Create a protected easbound left-turn phase
	Optimize signal timing and phasing
Hopkins Street and LBJ Street	TBD based on Downtown Study
Hopkins Street and Guadalupe Street	TBD based on Downtown Study
Loop 80 and Clarewood Drive	Widen Loop 80 to a six-lane section
	Remove split-phased operations
	Optimize signal timing and phasing
SH 21 and SH 80 WB	Install a traffic signal
SH 21 and SH 80 EB	Install a traffic signal
	Construct an additional eastbound left-turn lane to provide dual left-turn lanes
Old RR 12 and Holland Street	Construct an additional eastbound left-turn lane to provide dual left-turn lanes
	Construct a westbound right-turn lane
	Optimize signal timing and phasing
N LBJ and Sessom Street	Implement a road repurposing on Sessom to reduce through lane and add bike facilities. The following configuration is assumed:
	EB (one left-turn lane, one through lane, and one through/right-turn lane)
	WB (one left-turn lane, one through lane, and one right-turn lane)
	NB (one left/through lane and one right-turn lane)
	SB (one left-turn lane, one left/through lane, and one right-turn lane)
	Construct a southbounnd right-turn lane.
	Optimize signal timing and phasing
Wonder World Drive and Leah Ave	Optimize signal timing and phasing
Wonder World Drive and Sadler Drive	Optimize signal timing and phasing
McCarty and IH 35 SB	Install a traffic signal
	Construct an eastbound right-turn lane
	Construct an additional southbound left-turn lane to provide dual left-turn lanes
McCarty and IH 35 NB	Install a traffic signal
	Construct an additional northbound left-turn lane to provide dual left-turn lanes
Wonder World and IH 35 SB	Reconfigure as innovative intersection (i.e. DDI, CFI) or consider grade separation- *Analysis on-going*
Wonder World and IH 35 NB	Reconfigure as innovative intersection (i.e. DDI, CFI) or consider grade separation - *Analysis on-going*
SH 123 and FM 110 WB	Install a traffic signal
	Construct southbound right-turn lane
	Construct additional westbound through lane
SH 123 and FM 110 EB	Install a traffic signal
	Construct additional eastbound through lane
Hopkins Street and North Street	No improvements

Intersection Analysis

	2015 Existing Traffic Conditions				2035 No Build Traffic Conditions				2035 Build Traffic Conditions (No Multimodal Reduction)				2035 Build Traffic Conditions (15% Multimodal Reduction)			
	AM		PM		AM		PM		AM		PM		AM		PM	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Aquarena Springs Drive and Thorpe Lane	17.4	B	28.2	C	75.7	E	178.1	F	57.0	E	142.9	F	33.8	C	88.5	F
Aquarena Springs Drive and Charles Austin Drive	35.5	D	20.6	C	143.5	F	121.8	F	29.8	C	49.5	D				
Aquarena Springs Drive and Sessom Drive	21.1	C	22.0	C	128.4	F	102.2	F	128.8	F	103.4	F	70.8	E	57.3	E
University Drive and CM Allen Pkwy	9.6	A	18.1	B	15.3	B	36.5	D	16.4	B	40.9	D				
SH 123 and Staples Street (FM 621)	21.4	C	16.1	B	119.5	F	94.7	F	65.1	E	41.3	D				
SH 123 and Broadway Street	29.2	C	20.1	C	107.1	F	39.5	D	37.5	D	26.6	C				
SH 123 and Old Bastrop	30.7	C	28.5	C	106.1	F	79.9	E	116.7	F	84.9	F				
Hunter Road and McCarty Lane	16.2	B	14.4	B	48.5	D	49.1	D	51.3	D	50.1	D				
Hopkins Street and Bishop Street	31.3	C	47.8	D	29.5	C	116.1	F	32.0	C	50.1	D				
Hopkins Street and Moore Street	26.2	C	26.1	C	41.2	D	82.7	F	36.6	D	82.9	F	19.5	B	40.0	D
Hopkins Street and LBJ Street	12.7	B	13.0	B	17.2	B	59.0	E	25.4	C	132.1	F	19.7	B	73.6	E
Hopkins Street and Guadalupe Street	14.2	B	44.5	D	94.5	F	249.1	F	37.4	D	163.7	F	25.1	C	105.8	F
Loop 80 and Clarewood Drive	7.0	A	34.5	C	8.6	A	139.6	F	5.7	A	26.8	C				
SH 21 and SH 80 WB SH 21 and SH 80 EB	17.6	C	16.6	C	49.0	E	41.2	D	92.9	F	68.7	E	70.9	E	52.5	D
Old RR 12 and Holland Street	12.4	B	21.6	C	74.3	E	152.0	F	17.4	B	49.2	D	7.5	A	49.2	D
N LBJ and Sessom Street	17.9	B	26.4	C	39.7	D	84.0	F	32.6	C	92.5	F	28.2	C	54.4	D
Wonder World Drive and Leah Ave	22.0	C	21.2	C	52.0	D	41.7	D	52.0	D	46.1	D				
Wonder World Drive and Sadler Drive	17.5	B	21.3	C	25.3	C	32.4	C	25.3	C	31.5	C				
McCarty and IH 35 SB McCarty and IH 35 NB	38.1	E	17.0	C	153.5	F	70.7	F	46.6	D	81.2	F				
Wonder World and IH 35 SB Wonder World and IH 35 NB	53.6	D	78.6	E	253.3	F	327.3	F	**	**	**	**				
SH 123 and FM 110 WB SH 123 and FM 110 EB	33.5	C	3.4	A	1644.9	F	105.5	F	149.4	F	103.4	F				
Hopkins Street and North Street	4.4	A	5.6	A	0.8	A	1.5	A	0.8	A	1.5	A				

* Unsignalized
** Final configuration to be discussed and finalized at 8/13 meeting

2035 No Build Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	512	10	97	1101	45	68	50	69	94	50	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.994				0.850		0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3428	0	1719	3417	0	1719	1810	1538	1719	1730	0
Flt Permitted	0.045			0.950			0.421			0.950		
Satd. Flow (perm)	81	3428	0	1719	3417	0	762	1810	1538	1719	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4				145		12	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	42	1078	21	204	2317	95	143	105	145	198	105	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	1099	0	204	2412	0	143	105	145	198	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2						8		8			
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	84.0		18.0	87.0		15.0	33.0	33.0	15.0	33.0	
Total Split (%)	10.0%	56.0%		12.0%	58.0%		10.0%	22.0%	22.0%	10.0%	22.0%	
Maximum Green (s)	10.5	78.0		13.5	81.0		10.5	27.0	27.0	10.5	27.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	96.1	88.9		13.5	98.5		28.0	16.1	16.1	10.5	16.3	
Actuated g/C Ratio	0.64	0.59		0.09	0.66		0.19	0.11	0.11	0.07	0.11	
v/c Ratio	0.37	0.54		1.32	1.07		0.69	0.54	0.49	1.65	0.75	
Control Delay	21.2	20.2		233.6	68.7		67.6	72.5	14.2	366.4	81.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	21.2	20.2		233.6	68.7		67.6	72.5	14.2	366.4	81.4	
LOS	C	C		F	E		E	E	B	F	F	
Approach Delay		20.2			81.6			49.2			244.1	
Approach LOS		C			F			D			F	
Queue Length 50th (ft)	11	326		~257	~1400		121	99	0	~280	132	
Queue Length 95th (ft)	32	404		#399	#1507		170	149	55	#420	191	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100			
Base Capacity (vph)	169	2031		154	2246		209	325	395	120	321	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.54		1.32	1.07		0.68	0.32	0.37	1.65	0.46	

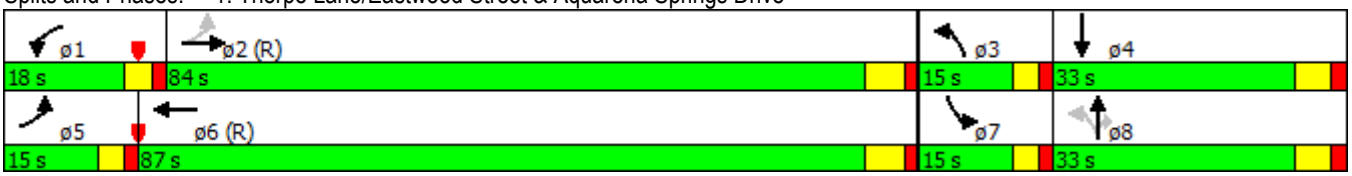
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.65
Intersection Signal Delay: 75.7 Intersection LOS: E
Intersection Capacity Utilization 94.6% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



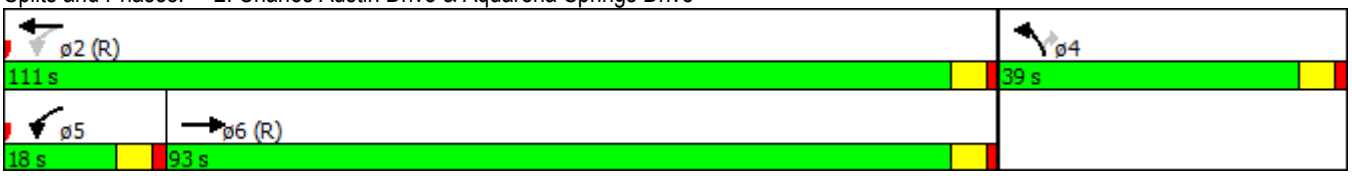
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	437	143	97	1050	437	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	130
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.963					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3280	0	1703	3406	1703	1524
Flt Permitted			0.169		0.950	
Satd. Flow (perm)	3280	0	303	3406	1703	1524
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51					63
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	869	284	193	2088	869	284
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1153	0	193	2088	869	284
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	24.5		12.5	21.5	27.5	27.5
Total Split (s)	93.0		18.0	111.0	39.0	39.0
Total Split (%)	62.0%		12.0%	74.0%	26.0%	26.0%
Maximum Green (s)	87.5		12.5	105.5	33.5	33.5
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	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	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0		1.0	1.0	1.0	1.0
Recall Mode	C-Max		None	C-Max	None	None
Walk Time (s)	7.0				7.0	7.0
Flash Dont Walk (s)	12.0				15.0	15.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	90.7		105.5	105.5	33.5	33.5
Actuated g/C Ratio	0.60		0.70	0.70	0.22	0.22
v/c Ratio	0.58		0.64	0.87	2.29	0.73
Control Delay	38.8		17.7	22.4	613.3	53.8
Queue Delay	0.0		0.0	7.2	0.1	0.0
Total Delay	38.8		17.7	29.6	613.4	53.8
LOS	D		B	C	F	D
Approach Delay	38.8			28.6	475.5	
Approach LOS	D			C	F	
Queue Length 50th (ft)	589		58	759	~1377	205
Queue Length 95th (ft)	m502		88	886	#1635	318
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)			100			130
Base Capacity (vph)	2002		329	2395	380	389
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	286	3	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.58		0.59	0.99	2.31	0.73

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.29	
Intersection Signal Delay: 143.5	Intersection LOS: F
Intersection Capacity Utilization 105.5%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	107	183	389	930	475	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1671	3343	3343	1495	3242	1495
Flt Permitted	0.331				0.950	
Satd. Flow (perm)	582	3343	3343	1495	3242	1495
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				947		76
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	204	349	741	1772	905	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	349	741	1772	905	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

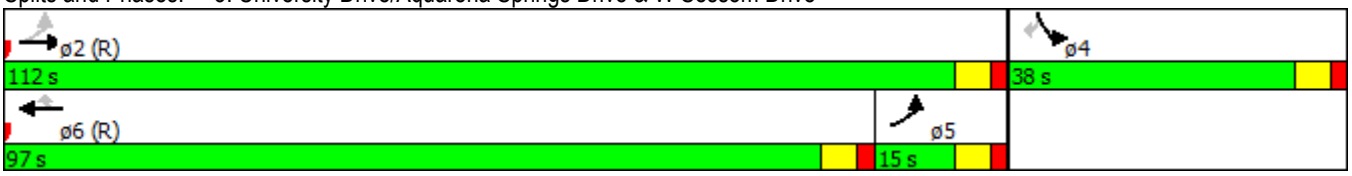
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	112.0	97.0	97.0	38.0	38.0
Total Split (%)	10.0%	74.7%	64.7%	64.7%	25.3%	25.3%
Maximum Green (s)	9.0	106.0	91.0	91.0	32.0	32.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	106.0	106.0	91.0	91.0	32.0	32.0
Actuated g/C Ratio	0.71	0.71	0.61	0.61	0.21	0.21
v/c Ratio	0.43	0.15	0.37	1.39	1.31	0.39
Control Delay	8.5	3.0	12.6	189.7	194.8	28.0
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	8.5	3.0	12.6	189.8	194.8	28.0
LOS	A	A	B	F	F	C
Approach Delay		5.1	137.6		171.2	
Approach LOS		A	F		F	
Queue Length 50th (ft)	24	22	163	~2101	~584	60
Queue Length 95th (ft)	46	28	m181	m#1700	#717	130
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	476	2362	2028	1279	691	378
Starvation Cap Reductn	0	0	0	35	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.15	0.37	1.42	1.31	0.39

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 128.4 Intersection LOS: F
Intersection Capacity Utilization 125.0% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	4	14	0	1	1	60	159	2	0	155	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.968			0.932			0.998				0.850
Flt Protected	0.950	0.965					0.950					
Satd. Flow (prot)	1496	1471	0	0	1489	0	1631	3255	0	0	3374	1509
Flt Permitted	0.950	0.965					0.527					
Satd. Flow (perm)	1496	1471	0	0	1489	0	905	3255	0	0	3374	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			2			1				761
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	253	9	31	0	2	2	131	347	4	0	338	761
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	149	144	0	0	4	0	131	351	0	0	338	761
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA			NA		Perm	NA			NA	pm+ov

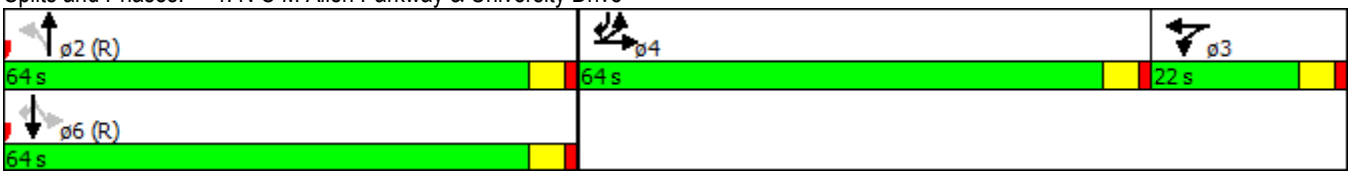
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		3	3			2			6	4
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	64.0	64.0		22.0	22.0		64.0	64.0		64.0	64.0	64.0
Total Split (%)	42.7%	42.7%		14.7%	14.7%		42.7%	42.7%		42.7%	42.7%	42.7%
Maximum Green (s)	58.5	58.5		16.5	16.5		58.5	58.5		58.5	58.5	58.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	58.5	58.5			5.2		78.2	78.2			78.2	146.6
Actuated g/C Ratio	0.39	0.39			0.03		0.52	0.52			0.52	0.98
v/c Ratio	0.26	0.25			0.08		0.28	0.21			0.19	0.51
Control Delay	32.5	29.8			58.7		23.1	20.2			18.8	3.8
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	32.5	29.8			58.7		23.1	20.2			18.8	3.8
LOS	C	C			E		C	C			B	A
Approach Delay		31.2			58.7			21.0			8.4	
Approach LOS		C			E			C			A	
Queue Length 50th (ft)	103	91			2		68	91			77	121
Queue Length 95th (ft)	148	135			15		121	130			91	148
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	583	580			165		471	1698			1759	1492
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.26	0.25			0.02		0.28	0.21			0.19	0.51

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 15.3 Intersection LOS: B
Intersection Capacity Utilization 69.5% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	2	5	23	17	321	7	880	6	126	552	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	70		0	145		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.977			0.880			0.999			0.983	
Flt Protected		0.963			0.997		0.950			0.950		
Satd. Flow (prot)	0	1702	0	0	1588	0	1719	3435	0	1719	3380	0
Flt Permitted		0.212			0.973		0.153			0.053		
Satd. Flow (perm)	0	375	0	0	1549	0	277	3435	0	96	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			138			1			19	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	51	4	11	51	38	717	16	1966	13	282	1233	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	806	0	16	1979	0	282	1392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		12.5	21.5		12.5	21.5	
Total Split (s)	31.0	31.0		31.0	31.0		15.0	75.0		19.0	79.0	
Total Split (%)	24.8%	24.8%		24.8%	24.8%		12.0%	60.0%		15.2%	63.2%	
Maximum Green (s)	25.5	25.5		25.5	25.5		9.5	69.5		13.5	73.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		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	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		25.5			25.5		76.5	69.5		88.5	83.5	
Actuated g/C Ratio		0.20			0.20		0.61	0.56		0.71	0.67	
v/c Ratio		0.80			1.90		0.06	1.04		1.16	0.61	
Control Delay		100.2			436.5		10.6	63.0		142.4	13.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		100.2			436.5		10.6	63.0		142.4	13.9	
LOS		F			F		B	E		F	B	
Approach Delay		100.2			436.5			62.6			35.5	
Approach LOS		F			F			E			D	
Queue Length 50th (ft)		46			~912		6	~888		~221	260	
Queue Length 95th (ft)		#115			#998		m5	m735		#333	367	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)							70			145		
Base Capacity (vph)		82			425		284	1910		243	2264	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.80			1.90		0.06	1.04		1.16	0.61	

Intersection Summary

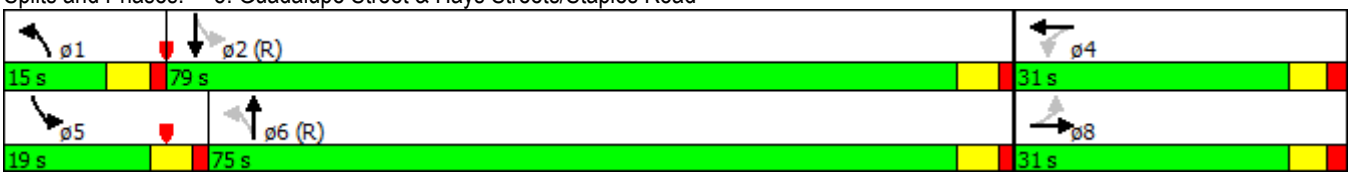
Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 95 (76%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.90
Intersection Signal Delay: 119.5 Intersection LOS: F
Intersection Capacity Utilization 109.8% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	75	34	156	59	179	48	735	113	189	597	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		0	100		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.932			0.980			0.991	
Flt Protected	0.950				0.981		0.950			0.950		
Satd. Flow (prot)	1736	1827	1553	0	3174	0	1736	3402	0	1736	3440	0
Flt Permitted	0.129				0.734		0.125			0.950		
Satd. Flow (perm)	236	1827	1553	0	2375	0	228	3402	0	1736	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		154			19			8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	66	160	72	332	126	381	102	1565	241	402	1271	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	160	72	0	839	0	102	1806	0	402	1356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4			6					
Detector Phase	8	8	8	4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0		12.0	26.0		12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0		16.0	66.0		22.0	72.0	
Total Split (%)	29.6%	29.6%	29.6%	29.6%	29.6%		12.8%	52.8%		17.6%	57.6%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0		9.0	59.0		15.0	65.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.5		1.0	2.5	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	31.0	31.0	31.0		31.0		65.5	59.0		15.0	67.5	
Actuated g/C Ratio	0.25	0.25	0.25		0.25		0.52	0.47		0.12	0.54	
v/c Ratio	1.14	0.35	0.16		1.19		0.52	1.12		1.93	0.73	
Control Delay	204.9	41.4	4.1		133.9		19.9	94.0		467.7	16.3	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	204.9	41.4	4.1		133.9		19.9	94.0		467.7	16.3	
LOS	F	D	A		F		B	F		F	B	
Approach Delay		68.6			133.9			90.0			119.5	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	~62	107	0		~379		29	~881		~495	423	
Queue Length 95th (ft)	#148	162	18		#462		47	#924		m#657	m293	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100						70			100		
Base Capacity (vph)	58	453	457		704		232	1615		208	1861	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	1.14	0.35	0.16		1.19		0.44	1.12		1.93	0.73	

Intersection Summary

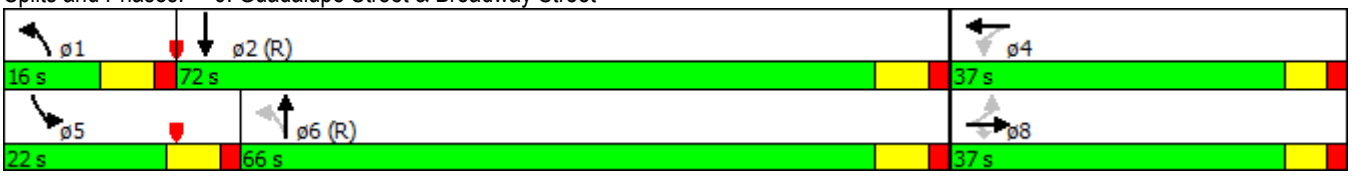
Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.93
Intersection Signal Delay: 107.1 Intersection LOS: F
Intersection Capacity Utilization 112.6% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Guadalupe Street & Broadway Street



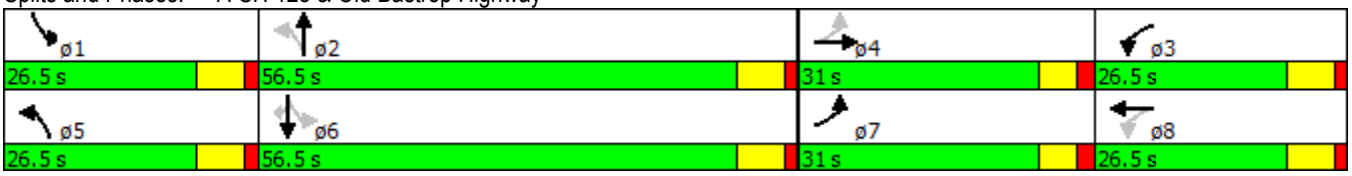
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	178	11	32	66	17	32	58	925	59	15	679	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.888			0.963			0.991				0.850
Flt Protected	0.950				0.972		0.950			0.950		
Satd. Flow (prot)	1805	1687	0	0	1778	0	1805	3578	0	1805	3610	1615
Flt Permitted	0.581				0.772		0.068			0.076		
Satd. Flow (perm)	1104	1687	0	0	1413	0	129	3578	0	144	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			11			5				128
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	375	23	67	139	36	67	122	1947	124	32	1429	524
Shared Lane Traffic (%)												
Lane Group Flow (vph)	375	90	0	0	242	0	122	2071	0	32	1429	524
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		17.0	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	31.0	31.0		26.5	26.5		26.5	56.5		26.5	56.5	56.5
Total Split (%)	22.1%	22.1%		18.9%	18.9%		18.9%	40.2%		18.9%	40.2%	40.2%
Maximum Green (s)	25.0	25.0		20.0	20.0		20.0	50.0		20.0	50.0	50.0
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Act Effct Green (s)	51.5	51.5			20.0		66.6	59.3		57.3	50.0	50.0
Actuated g/C Ratio	0.39	0.39			0.15		0.51	0.45		0.44	0.38	0.38
v/c Ratio	0.66	0.13			1.08		0.60	1.28		0.21	1.04	0.76
Control Delay	38.0	9.7			132.9		35.4	163.9		19.8	75.8	34.9
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	38.0	9.7			132.9		35.4	163.9		19.8	75.8	34.9
LOS	D	A			F		D	F		B	E	C
Approach Delay		32.5			132.9			156.7			64.1	
Approach LOS		C			F			F			E	
Queue Length 50th (ft)	241	12			~220		53	~1250		13	~685	297
Queue Length 95th (ft)	341	45			#385		107	#1314		29	#811	431
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	565	701			224		321	1615		326	1372	693
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.66	0.13			1.08		0.38	1.28		0.10	1.04	0.76

Intersection Summary

Area Type: Other
Cycle Length: 140.5
Actuated Cycle Length: 131.6
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 106.1 Intersection LOS: F
Intersection Capacity Utilization 95.9% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	97	30	21	20	211	8	277	58	291	200	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975				0.850		0.974			0.990	
Flt Protected		0.989			0.975		0.950			0.950		
Satd. Flow (prot)	0	1696	0	0	1715	1495	1671	3256	0	1671	3309	0
Flt Permitted		0.897			0.537		0.473			0.144		
Satd. Flow (perm)	0	1539	0	0	945	1495	832	3256	0	253	3309	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				483		21			10	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	82	222	69	48	46	483	18	635	133	667	458	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	373	0	0	94	483	18	768	0	667	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	34.0	34.0		34.0	34.0	34.0	13.0	41.0		45.0	73.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%	28.3%	10.8%	34.2%		37.5%	60.8%	
Maximum Green (s)	28.0	28.0		28.0	28.0	28.0	7.0	35.0		39.0	67.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		28.0			28.0	28.0	42.0	35.0		80.0	74.8	
Actuated g/C Ratio		0.23			0.23	0.23	0.35	0.29		0.67	0.62	
v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	
Control Delay		96.8			46.3	8.6	13.4	45.3		82.7	10.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		96.8			46.3	8.6	13.4	45.3		82.7	10.9	
LOS		F			D	A	B	D		F	B	
Approach Delay		96.8			14.7			44.6			52.3	
Approach LOS		F			B			D			D	
Queue Length 50th (ft)		~301			62	0	4	282		~497	70	
Queue Length 95th (ft)		#397			101	34	11	300		#569	109	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		366			220	719	340	964		629	2066	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	

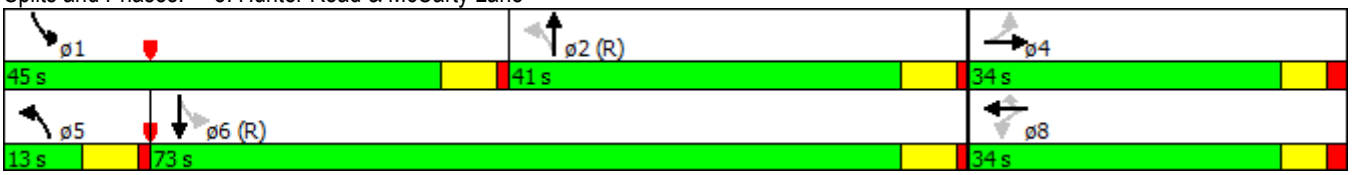
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 48.5 Intersection LOS: D
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 8: Hunter Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	38	170	21	25	5	71	434	9	4	206	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987			0.998			0.974	
Flt Protected		0.968			0.980			0.993			0.999	
Satd. Flow (prot)	0	1803	1583	0	1802	0	0	1846	0	0	1812	0
Flt Permitted		0.729			0.630			0.854			0.985	
Satd. Flow (perm)	0	1358	1583	0	1158	0	0	1588	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212		4			2			26	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	150	77	346	43	51	10	144	883	18	8	419	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	346	0	104	0	0	1045	0	0	527	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	27.0	27.0	27.0	27.0	27.0		83.0	83.0		83.0	83.0	
Total Split (%)	24.5%	24.5%	24.5%	24.5%	24.5%		75.5%	75.5%		75.5%	75.5%	
Maximum Green (s)	22.0	22.0	22.0	22.0	22.0		78.0	78.0		78.0	78.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		22.0	22.0		22.0			78.0			78.0	
Actuated g/C Ratio		0.20	0.20		0.20			0.71			0.71	
v/c Ratio		0.84	0.71		0.44			0.93			0.41	
Control Delay		68.9	24.6		44.1			29.4			13.2	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		68.9	24.6		44.1			29.4			13.2	
LOS		E	C		D			C			B	
Approach Delay		42.2			44.1			29.4			13.2	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)		155	86		62			551			301	
Queue Length 95th (ft)		#283	191		117			#941			m349	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60									
Base Capacity (vph)		271	486		234			1126			1274	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.84	0.71		0.44			0.93			0.41	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 105.0% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	94	26	20	34	3	76	442	15	3	197	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.993			0.995				0.850
Flt Protected	0.950				0.983		0.950				0.999	
Satd. Flow (prot)	1770	1801	0	0	1818	0	1770	1853	0	0	1861	1583
Flt Permitted	0.505				0.781		0.285				0.613	
Satd. Flow (perm)	941	1801	0	0	1445	0	531	1853	0	0	1142	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			2				408
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	364	215	60	46	78	7	174	1013	34	7	451	408
Shared Lane Traffic (%)												
Lane Group Flow (vph)	364	275	0	0	131	0	174	1047	0	0	458	408
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	24.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	24.0	45.0		21.0	21.0		15.0	65.0		50.0	50.0	50.0
Total Split (%)	21.8%	40.9%		19.1%	19.1%		13.6%	59.1%		45.5%	45.5%	45.5%
Maximum Green (s)	19.0	40.0		16.0	16.0		10.0	60.0		45.0	45.0	45.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0						0		0	0	0
Act Effct Green (s)	40.0	40.0			16.0		60.0	60.0			46.0	46.0
Actuated g/C Ratio	0.36	0.36			0.15		0.55	0.55			0.42	0.42
v/c Ratio	0.75	0.41			0.62		0.45	1.04			0.96	0.45
Control Delay	39.4	27.2			57.4		11.7	53.7			65.2	3.9
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	39.4	27.2			57.4		11.7	53.7			65.2	3.9
LOS	D	C			E		B	D			E	A
Approach Delay		34.2			57.4			47.7			36.3	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)	204	136			87		42	~802			313	0
Queue Length 95th (ft)	253	178			131		m51	#823			#423	27
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	485	663			211		402	1011			477	898
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.75	0.41			0.62		0.43	1.04			0.96	0.45

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 20 (18%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 41.7 Intersection LOS: D
Intersection Capacity Utilization 101.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	385	0	0	533	62	185	137	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.984			0.982				
Flt Protected		0.998						0.975				
Satd. Flow (prot)	0	3603	0	0	3552	0	0	4966	0	0	0	0
Flt Permitted		0.870						0.975				
Satd. Flow (perm)	0	3141	0	0	3552	0	0	4966	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			24				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)							21		20			
Adj. Flow (vph)	29	850	0	0	1176	137	408	302	97	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	879	0	0	1313	0	0	807	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0			10.0		10.0	10.0				
Minimum Split (s)	24.5	24.5			24.5		24.5	24.5				
Total Split (s)	69.0	69.0			69.0		32.5	32.5				
Total Split (%)	68.0%	68.0%			68.0%		32.0%	32.0%				
Maximum Green (s)	64.5	64.5			64.5		28.0	28.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		4.5			4.5			4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2			0.2		0.2	0.2				
Recall Mode	C-Max	C-Max			C-Max		Max	Max				
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		64.5			64.5			28.0				
Actuated g/C Ratio		0.64			0.64			0.28				
v/c Ratio		0.44			0.58			0.58				
Control Delay		10.2			11.7			32.7				
Queue Delay		0.8			0.0			0.0				
Total Delay		11.0			11.7			32.7				
LOS		B			B			C				
Approach Delay		11.0			11.7			32.7				
Approach LOS		B			B			C				
Queue Length 50th (ft)		138			231			160				
Queue Length 95th (ft)		156			246			180				
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)												
Base Capacity (vph)		1996			2265			1387				
Starvation Cap Reductn		747			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.70			0.58			0.58				

Intersection Summary

Area Type: Other
Cycle Length: 101.5
Actuated Cycle Length: 101.5
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of 1st Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 17.2 Intersection LOS: B
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 11: N LBJ Drive & Hopkins Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	403	67	83	662	0	0	0	0	23	85	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.981									0.983	
Flt Protected					0.994						0.991	
Satd. Flow (prot)	0	1827	0	0	3518	0	0	0	0	0	4954	0
Flt Permitted					0.495						0.991	
Satd. Flow (perm)	0	1827	0	0	1752	0	0	0	0	0	4954	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13									22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Parking (#/hr)										6		6
Adj. Flow (vph)	0	868	144	179	1426	0	0	0	0	50	183	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1012	0	0	1605	0	0	0	0	0	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Detector Phase		4		3	8					6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		10.0		5.0	10.0					10.0	10.0	
Minimum Split (s)		23.5		10.5	23.5					23.5	23.5	
Total Split (s)		54.0		15.0	69.0					26.0	26.0	
Total Split (%)		56.8%		15.8%	72.6%					27.4%	27.4%	
Maximum Green (s)		48.5		9.5	63.5					20.5	20.5	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.5			5.5						5.5	
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		5.0		4.0	5.0					5.0	5.0	
Recall Mode		C-Max		Max	C-Max					Max	Max	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		11.0			11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		48.5			63.5						20.5	
Actuated g/C Ratio		0.51			0.67						0.22	
v/c Ratio		1.08			1.19						0.24	
Control Delay		77.1			115.6						28.9	
Queue Delay		0.0			0.6						0.0	
Total Delay		77.1			116.2						28.9	
LOS		E			F						C	
Approach Delay		77.1			116.2						28.9	
Approach LOS		E			F						C	
Queue Length 50th (ft)		~684			~408						44	
Queue Length 95th (ft)		#825			#487						63	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)												
Base Capacity (vph)		939			1347						1086	
Starvation Cap Reductn		0			181						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		1.08			1.38						0.24	

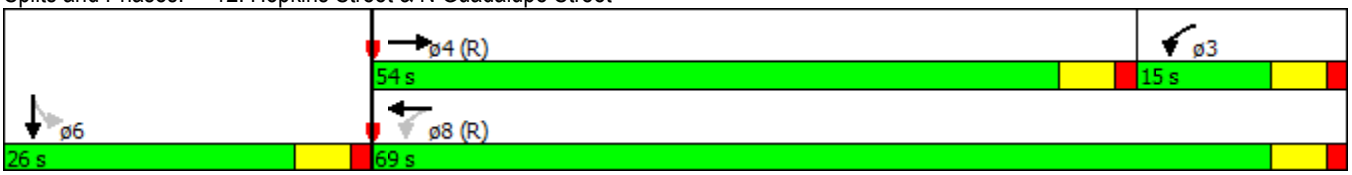
Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBTL, Start of 1st Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 94.5 Intersection LOS: F
Intersection Capacity Utilization 105.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



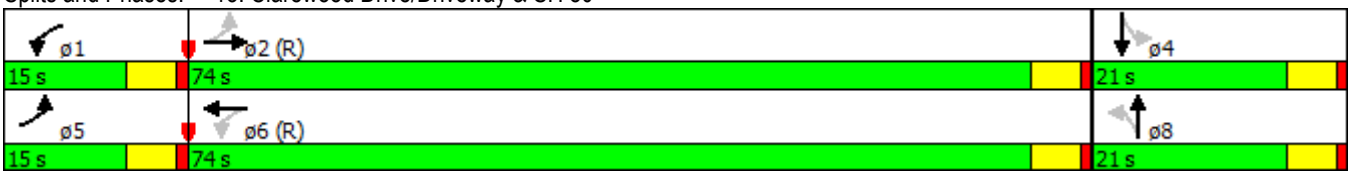
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	703	11	37	961	8	8	2	12	8	3	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.999			0.928			0.964	
Flt Protected	0.950			0.950				0.982			0.974	
Satd. Flow (prot)	1641	3275	0	1641	3279	0	0	1574	0	0	1622	0
Flt Permitted	0.081			0.165				0.865			0.901	
Satd. Flow (perm)	140	3275	0	285	3279	0	0	1387	0	0	1500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1			23			8	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Adj. Flow (vph)	45	1368	21	72	1870	16	16	4	23	16	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1389	0	72	1886	0	0	43	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		21.0	21.0		20.0	20.0	
Total Split (s)	15.0	74.0		15.0	74.0		21.0	21.0		21.0	21.0	
Total Split (%)	13.6%	67.3%		13.6%	67.3%		19.1%	19.1%		19.1%	19.1%	
Maximum Green (s)	10.0	69.0		10.0	69.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							5.0	5.0				
Flash Dont Walk (s)							11.0	11.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	92.5	88.6		93.0	88.9			7.4			7.5	
Actuated g/C Ratio	0.84	0.81		0.85	0.81			0.07			0.07	
v/c Ratio	0.23	0.53		0.23	0.71			0.37			0.27	
Control Delay	4.5	6.4		3.3	9.4			36.9			44.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.5	6.4		3.3	9.4			36.9			44.2	
LOS	A	A		A	A			D			D	
Approach Delay		6.3			9.2			36.9			44.2	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)	4	196		6	357			14			15	
Queue Length 95th (ft)	11	294		15	541			49			45	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	258	2639		371	2649			221			225	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.17	0.53		0.19	0.71			0.19			0.13	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 68.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	7	29	0	372	0	0	25	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850					0.872	
Flt Protected												
Satd. Flow (prot)	0	0	0	0	1743	1482	0	3312	0	0	1520	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	1743	1482	0	3312	0	0	1520	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Adj. Flow (vph)	0	0	0	0	17	70	0	898	0	0	60	1105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	17	70	0	898	0	0	1165	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	372	1	0	0	25	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1667	0	0	1583	0
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1667	0	0	1583	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		297	329		121	
Travel Time (s)		6.8	7.5		2.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Adj. Flow (vph)	765	2	0	0	51	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	765	2	0	0	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 104.3%		ICU Level of Service G	
Analysis Period (min) 15			

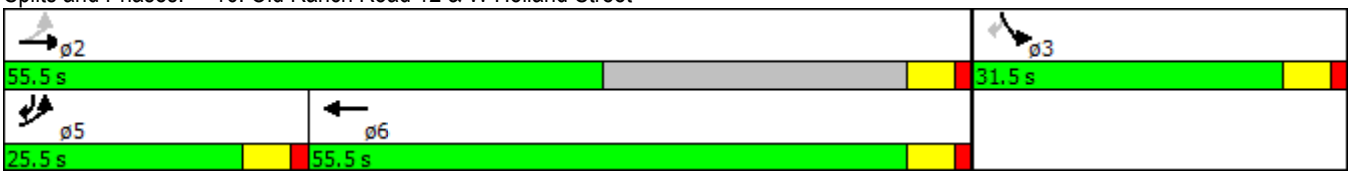
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	430	270	141	50	40	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	1827	1763	0	1736	1553
Flt Permitted	0.224				0.950	
Satd. Flow (perm)	409	1827	1763	0	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			20			378
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	961	603	315	112	89	378
Shared Lane Traffic (%)						
Lane Group Flow (vph)	961	603	427	0	89	378
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	5	2	6		3	5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2					3
Detector Phase	5	2	6		3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0		10.0	5.0
Minimum Split (s)	10.5	25.5	21.5		21.5	10.5
Total Split (s)	25.5	55.5	55.5		31.5	25.5
Total Split (%)	22.7%	49.3%	49.3%		28.0%	22.7%
Maximum Green (s)	20.0	50.0	50.0		26.0	20.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	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			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	Min	Min		None	None
Act Effct Green (s)	45.9	47.6	19.1		10.8	32.7
Actuated g/C Ratio	0.72	0.75	0.30		0.17	0.52
v/c Ratio	1.31	0.44	0.78		0.30	0.38
Control Delay	168.8	5.8	30.8		30.3	2.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	168.8	5.8	30.8		30.3	2.6
LOS	F	A	C		C	A
Approach Delay		105.9	30.8		7.9	
Approach LOS		F	C		A	
Queue Length 50th (ft)	~471	94	150		33	0
Queue Length 95th (ft)	#672	136	216		72	27
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100					
Base Capacity (vph)	734	1818	1386		746	984
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	1.31	0.33	0.31		0.12	0.38

Intersection Summary

Area Type: Other
Cycle Length: 112.5
Actuated Cycle Length: 63.4
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 74.3 Intersection LOS: E
Intersection Capacity Utilization 84.1% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	246	69	135	412	87	6	1	34	203	41	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		0	65		0	0		0	100		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.974				0.850		0.929	
Flt Protected	0.950			0.950				0.958		0.950		
Satd. Flow (prot)	1703	3293	0	1703	3317	0	0	1717	1524	1703	1665	0
Flt Permitted	0.231			0.315				0.643		0.441		
Satd. Flow (perm)	414	3293	0	565	3317	0	0	1153	1524	790	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			23				124		29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	70	524	147	287	877	185	13	2	72	432	87	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	671	0	287	1062	0	0	15	72	432	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	27.0		14.0	21.0		12.0	26.0	26.0	12.0	21.0	
Total Split (s)	15.0	71.0		21.0	77.0		15.0	26.0	26.0	32.0	43.0	
Total Split (%)	10.0%	47.3%		14.0%	51.3%		10.0%	17.3%	17.3%	21.3%	28.7%	
Maximum Green (s)	10.0	66.0		16.0	72.0		10.0	21.0	21.0	27.0	38.0	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.8	1.8		1.8	1.8		1.8	1.8	1.8	1.8	1.8	
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			5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		4.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	86.5	79.1		100.8	90.8			7.2	7.2	39.2	39.2	
Actuated g/C Ratio	0.58	0.53		0.67	0.61			0.05	0.05	0.26	0.26	
v/c Ratio	0.23	0.38		0.57	0.53			0.27	0.38	1.17	0.36	
Control Delay	11.5	21.2		14.5	18.4			81.2	5.8	146.1	39.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	11.5	21.2		14.5	18.4			81.2	5.8	146.1	39.5	
LOS	B	C		B	B			F	A	F	D	
Approach Delay		20.2			17.6			18.8			116.6	
Approach LOS		C			B			B			F	
Queue Length 50th (ft)	22	188		103	306			14	0	~436	110	
Queue Length 95th (ft)	38	238		140	351			38	0	#579	167	
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65						100		
Base Capacity (vph)	331	1752		513	2017			161	320	370	457	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.21	0.38		0.56	0.53			0.09	0.23	1.17	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.17
Intersection Signal Delay: 39.7 Intersection LOS: D
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: N LBJ Drive & Sessom Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	673	74	36	467	39	76	12	24	121	8	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.988			0.899			0.869	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3452	0	1752	3463	0	1752	1658	0	1752	1603	0
Flt Permitted	0.137			0.100			0.641			0.709		
Satd. Flow (perm)	253	3452	0	184	3463	0	1182	1658	0	1308	1603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			49			108	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	71	1369	150	73	950	79	155	24	49	246	16	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	1519	0	73	1029	0	155	73	0	246	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	41.0		21.0	46.0		20.5	25.5		15.5	20.5	
Total Split (%)	15.5%	39.8%		20.4%	44.7%		19.9%	24.8%		15.0%	19.9%	
Maximum Green (s)	10.0	35.0		15.0	40.1		15.0	20.0		10.0	15.0	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max		None	Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.2	40.2		46.0	40.2		32.8	22.1		31.3	21.3	
Actuated g/C Ratio	0.46	0.40		0.46	0.40		0.33	0.22		0.31	0.21	
v/c Ratio	0.31	1.09		0.36	0.73		0.34	0.18		0.54	0.29	
Control Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
LOS	B	F		B	C		C	B		C	B	
Approach Delay		78.8			28.8			22.1			24.4	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)	22	~600		23	296		69	13		116	8	
Queue Length 95th (ft)	44	#743		45	381		120	50		186	59	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	271	1397		329	1400		525	404		455	427	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	1.09		0.22	0.73		0.30	0.18		0.54	0.29	

Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 99.9	
Natural Cycle: 100	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 52.0	Intersection LOS: D
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

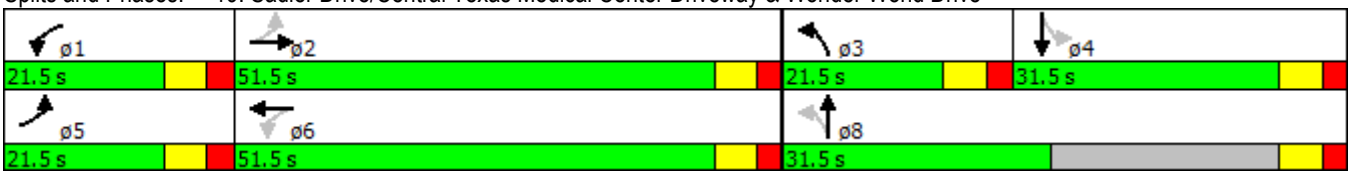
Splits and Phases: 18: Leah Avenue & Wonder World Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	436	118	19	458	14	74	3	21	1	1	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.996			0.869			0.874	
Flt Protected	0.950			0.950			0.950				0.998	
Satd. Flow (prot)	1829	3426	0	1829	3525	0	1770	1619	0	0	1625	0
Flt Permitted	0.170			0.145			0.568				0.990	
Satd. Flow (perm)	327	3426	0	279	3525	0	1058	1619	0	0	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			3			42			58	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			3027			240			186	
Travel Time (s)		23.2			45.9			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	90	867	235	38	911	28	147	6	42	2	2	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	1102	0	38	939	0	147	48	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	21.5	51.5		21.5	51.5		21.5	31.5		31.5	31.5	
Total Split (%)	17.1%	40.9%		17.1%	40.9%		17.1%	25.0%		25.0%	25.0%	
Maximum Green (s)	15.0	45.0		15.0	45.0		15.0	25.0		25.0	25.0	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	47.2	42.0		43.4	37.7		30.4	30.4			16.1	
Actuated g/C Ratio	0.50	0.45		0.46	0.40		0.32	0.32			0.17	
v/c Ratio	0.28	0.71		0.15	0.66		0.32	0.09			0.19	
Control Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
LOS	B	C		B	C		C	A			B	
Approach Delay		24.8			27.0			23.5			14.4	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	27	318		11	264		72	3			2	
Queue Length 95th (ft)	53	422		27	358		131	30			42	
Internal Link Dist (ft)		1451			2947			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	430	1794		410	1816		464	880			502	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.21	0.61		0.09	0.52		0.32	0.05			0.12	

Intersection Summary	
Area Type:	Other
Cycle Length: 126	
Actuated Cycle Length: 93.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	307	64	71	236	0	0	0	0	335	66	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.977									0.974	
Flt Protected				0.950							0.967	
Satd. Flow (prot)	0	1768	0	1719	1810	0	0	0	0	0	3238	0
Flt Permitted				0.950							0.967	
Satd. Flow (perm)	0	1768	0	1719	1810	0	0	0	0	0	3238	0
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	686	143	159	527	0	0	0	0	749	147	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	829	0	159	527	0	0	0	0	0	1086	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 115.0%	ICU Level of Service H
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	515	0	0	240	253	67	177	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.956				
Flt Protected	0.950							0.990				
Satd. Flow (prot)	1736	1827	0	0	1827	1553	0	3285	0	0	0	0
Flt Permitted	0.950							0.990				
Satd. Flow (perm)	1736	1827	0	0	1827	1553	0	3285	0	0	0	0
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	274	1110	0	0	517	545	144	381	220	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	1110	0	0	517	545	0	745	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 114.0%		ICU Level of Service H	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1027	284	127	678	0	0	0	0	361	148	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.880	
Flt Protected				0.950	0.999					0.950		
Satd. Flow (prot)	0	5085	1583	1610	3387	0	0	0	0	1770	3115	0
Flt Permitted				0.950	0.840					0.950		
Satd. Flow (perm)	0	5085	1583	1610	2848	0	0	0	0	1770	3115	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212								134	
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	0	2161	598	267	1427	0	0	0	0	760	311	1246
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	2161	598	240	1454	0	0	0	0	760	1557	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	
Permitted Phases			2									

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16
Permitted Phases						

22: S IH 35 Frontage Road & Wonder World Drive

2035 No Build

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		44.0	44.0	26.0								
Total Split (%)		31.9%	31.9%	18.8%								
Maximum Green (s)		38.0	38.0	20.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		38.0	38.0	49.0	87.0					33.0	33.0	
Actuated g/C Ratio		0.28	0.28	0.36	0.63					0.24	0.24	
v/c Ratio		1.54	1.02	0.42	0.98					1.80	2.60dr	
Control Delay		282.9	72.8	15.0	14.0					398.9	410.7	
Queue Delay		1.1	0.0	64.0	42.2					0.0	0.0	
Total Delay		284.0	72.8	79.0	56.2					398.9	410.7	
LOS		F	E	E	E					F	F	
Approach Delay		238.2			59.4						406.8	
Approach LOS		F			E						F	
Queue Length 50th (ft)		~996	~404	62	472					~1021	~1069	
Queue Length 95th (ft)		#1019	#593	m31	m6					#1194	#1137	
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1400	589	571	1491					423	846	
Starvation Cap Reductn		0	0	361	504					0	0	
Spillback Cap Reductn		331	0	0	0					0	0	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		2.02	1.02	1.14	1.47					1.80	1.84	

Intersection Summary

Area Type: Other
Cycle Length: 138
Actuated Cycle Length: 138
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.91
Intersection Signal Delay: 251.2 Intersection LOS: F
Intersection Capacity Utilization 153.5% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	31.0	26.0	33.0	30.0	8.0	8.0
Total Split (%)	22%	19%	24%	22%	6%	6%
Maximum Green (s)	25.0	20.0	27.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

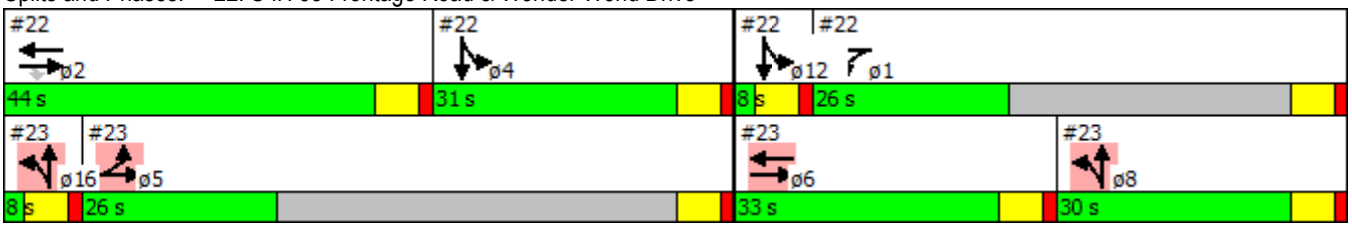
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	611	777	0	0	478	166	327	243	145	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	0.91	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.961			0.970				
Flt Protected	0.950	0.992						0.978				
Satd. Flow (prot)	1579	3298	0	0	4793	0	0	3293	0	0	0	0
Flt Permitted	0.950	0.538						0.978				
Satd. Flow (perm)	1579	1789	0	0	4793	0	0	3293	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					34			21				
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	1271	1617	0	0	994	345	680	506	302	0	0	0
Shared Lane Traffic (%)	26%											
Lane Group Flow (vph)	941	1947	0	0	1339	0	0	1488	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases												
Detector Phase	5	5 6			6		8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	26.0				33.0							
Total Split (%)	18.8%				23.9%							
Maximum Green (s)	20.0				27.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	61.0	61.0			27.0			32.0				
Actuated g/C Ratio	0.44	0.44			0.20			0.23				
v/c Ratio	1.35	1.34			1.39			1.91				
Control Delay	179.6	173.0			220.7			443.4				
Queue Delay	3.0	1.7			1.1			0.2				
Total Delay	182.6	174.6			221.8			443.6				
LOS	F	F			F			F				
Approach Delay		177.2			221.8			443.6				
Approach LOS		F			F			F				
Queue Length 50th (ft)	~1216	~1251			~578			~1078				
Queue Length 95th (ft)	m513	m530			#642			#1165				
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	697	1457			965			779				
Starvation Cap Reductn	227	479			0			0				
Spillback Cap Reductn	0	0			180			21				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	2.00	1.99			1.71			1.96				

Intersection Summary	
Area Type:	Other
Cycle Length: 138	
Actuated Cycle Length: 138	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 257.0	Intersection LOS: F
Intersection Capacity Utilization 153.5%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	26.0	44.0	31.0	30.0	8.0	8.0
Total Split (%)	19%	32%	22%	22%	6%	6%
Maximum Green (s)	20.0	38.0	25.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

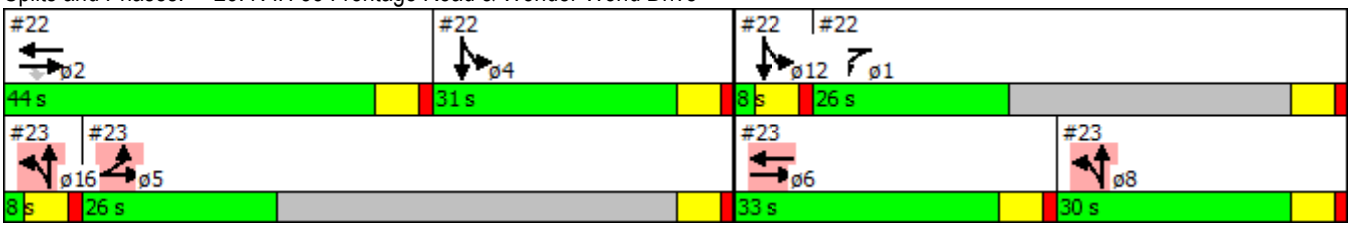
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	104	30	55	57	841	0	0	778	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		230	85		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.996	
Flt Protected					0.963		0.950					
Satd. Flow (prot)	0	0	0	0	1759	1553	1736	3471	0	0	3457	0
Flt Permitted					0.963		0.950					
Satd. Flow (perm)	0	0	0	0	1759	1553	1736	3471	0	0	3457	0
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	248	71	131	136	2003	0	0	1853	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	319	131	136	2003	0	0	1898	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	6	62	0	0	0	0	893	69	8	874	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.989				
Flt Protected		0.978								0.950		
Satd. Flow (prot)	0	1822	1583	0	0	0	0	3500	0	1770	3539	0
Flt Permitted		0.978								0.950		
Satd. Flow (perm)	0	1822	1583	0	0	0	0	3500	0	1770	3539	0
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		618			489			309			305	
Travel Time (s)		14.0			11.1			3.5			3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	10	12	122	0	0	0	0	1757	136	16	1720	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	122	0	0	0	0	1893	0	16	1720	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	529	26	13	367	80	5	21	30	23	7	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.974			0.928			0.934	
Flt Protected		0.996			0.999			0.996			0.981	
Satd. Flow (prot)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Flt Permitted		0.996			0.999			0.996			0.981	
Satd. Flow (perm)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	113	1197	59	29	830	181	11	48	68	52	16	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1369	0	0	1040	0	0	127	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 104.8%	ICU Level of Service G
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1240	52	150	904	79	104	179	271	127	68	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.988				0.850		0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3497	0	1770	1863	1583	1770	1792	0
Flt Permitted	0.061			0.950			0.476			0.950		
Satd. Flow (perm)	114	3518	0	1770	3497	0	887	1863	1583	1770	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10				140		11	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	64	2466	103	298	1798	157	207	356	539	253	135	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	2569	0	298	1955	0	207	356	539	253	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2						8		8			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	78.0		15.0	78.0		15.0	32.0	32.0	15.0	32.0	
Total Split (%)	10.7%	55.7%		10.7%	55.7%		10.7%	22.9%	22.9%	10.7%	22.9%	
Maximum Green (s)	10.5	72.0		10.5	72.0		10.5	26.0	26.0	10.5	26.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	73.5	72.0		10.5	77.4		38.0	26.0	26.0	10.5	26.0	
Actuated g/C Ratio	0.52	0.51		0.08	0.55		0.27	0.19	0.19	0.08	0.19	
v/c Ratio	0.45	1.42		2.26	1.01		0.68	1.03	1.32	1.92	0.53	
Control Delay	26.9	221.0		616.9	54.0		52.6	111.7	194.5	471.9	54.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	26.9	221.0		616.9	54.0		52.6	111.7	194.5	471.9	54.7	
LOS	C	F		F	D		D	F	F	F	D	
Approach Delay		216.3			128.5			141.1			297.9	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	28	~1664		~438	~1001		149	~346	~526	~353	141	
Queue Length 95th (ft)	55	#1789		#627	#1167		224	#546	#758	#530	222	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100			
Base Capacity (vph)	184	1811		132	1938		306	345	407	132	341	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.35	1.42		2.26	1.01		0.68	1.03	1.32	1.92	0.53	

Intersection Summary

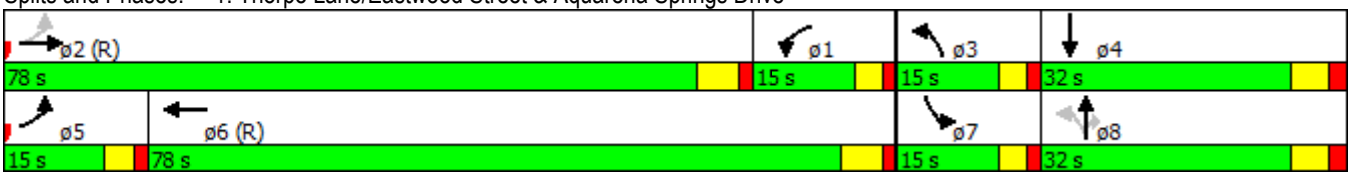
Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.26
Intersection Signal Delay: 178.1 Intersection LOS: F
Intersection Capacity Utilization 127.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



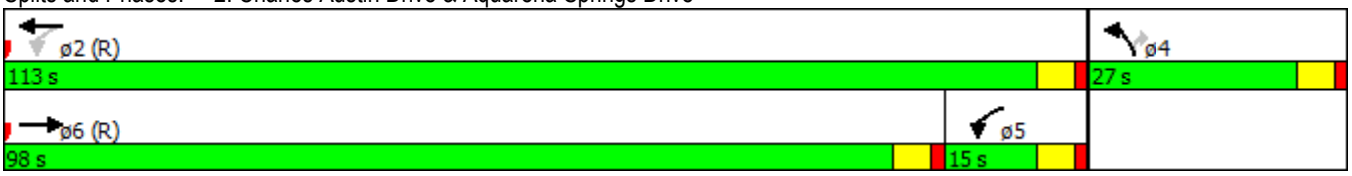
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1270	193	102	1121	241	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	130
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.980					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3435	0	1752	3505	1752	1568
Flt Permitted			0.041		0.950	
Satd. Flow (perm)	3435	0	76	3505	1752	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					106
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	2583	393	207	2280	490	293
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2976	0	207	2280	490	293
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	24.5		12.5	21.5	27.5	27.5
Total Split (s)	98.0		15.0	113.0	27.0	27.0
Total Split (%)	70.0%		10.7%	80.7%	19.3%	19.3%
Maximum Green (s)	92.5		9.5	107.5	21.5	21.5
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	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			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0		1.0	1.0	1.0	1.0
Recall Mode	C-Max		None	C-Max	None	None
Walk Time (s)	7.0				7.0	7.0
Flash Dont Walk (s)	12.0				15.0	15.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	92.5		107.5	107.5	21.5	21.5
Actuated g/C Ratio	0.66		0.77	0.77	0.15	0.15
v/c Ratio	1.31		1.20	0.85	1.82	0.89
Control Delay	156.8		175.5	14.8	416.7	64.8
Queue Delay	0.0		0.0	0.5	0.0	0.0
Total Delay	156.8		175.5	15.3	416.7	64.8
LOS	F		F	B	F	E
Approach Delay	156.8			28.6	285.0	
Approach LOS	F			C	F	
Queue Length 50th (ft)	~1854		~178	632	~672	174
Queue Length 95th (ft)	m#1476		#339	721	#881	#335
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)			100			130
Base Capacity (vph)	2278		172	2691	269	330
Starvation Cap Reductn	4		0	0	0	0
Spillback Cap Reductn	0		0	112	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.31		1.20	0.88	1.82	0.89

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 97 (69%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.82	
Intersection Signal Delay: 121.8	Intersection LOS: F
Intersection Capacity Utilization 122.8%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



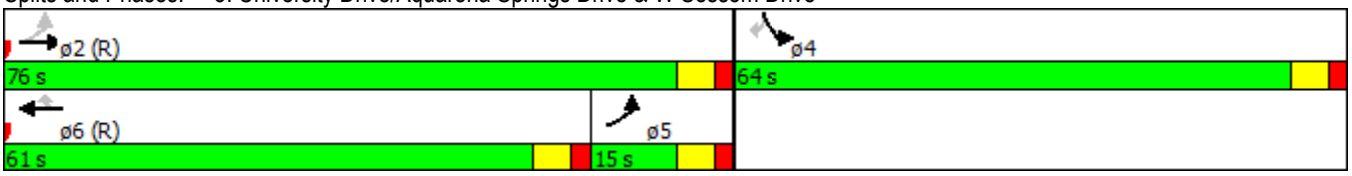
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	134	569	601	774	915	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3471	1553	3367	1553
Flt Permitted	0.090				0.950	
Satd. Flow (perm)	164	3471	3471	1553	3367	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				950		170
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	261	1107	1170	1506	1781	562
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	1107	1170	1506	1781	562
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	76.0	61.0	61.0	64.0	64.0
Total Split (%)	10.7%	54.3%	43.6%	43.6%	45.7%	45.7%
Maximum Green (s)	9.0	70.0	55.0	55.0	58.0	58.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	70.0	70.0	55.0	55.0	58.0	58.0
Actuated g/C Ratio	0.50	0.50	0.39	0.39	0.41	0.41
v/c Ratio	1.43	0.64	0.86	1.27	1.28	0.76
Control Delay	246.7	22.1	35.7	136.5	165.9	31.4
Queue Delay	0.0	1.0	0.0	0.3	1.2	0.0
Total Delay	246.7	23.0	35.7	136.8	167.1	31.4
LOS	F	C	D	F	F	C
Approach Delay		65.7	92.6		134.6	
Approach LOS		E	F		F	
Queue Length 50th (ft)	~270	417	520	~1532	~1055	314
Queue Length 95th (ft)	m#315	m429	m508	m#1616	#1190	473
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	183	1735	1363	1186	1394	742
Starvation Cap Reductn	0	0	0	79	0	0
Spillback Cap Reductn	0	347	0	0	358	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.80	0.86	1.36	1.72	0.76

Intersection Summary	
Area Type: Other	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 136 (97%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 102.2	Intersection LOS: F
Intersection Capacity Utilization 110.2%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	478	2	77	9	2	1	31	255	1	0	398	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.958			0.989			0.999				0.850
Flt Protected	0.950	0.966			0.964		0.950					
Satd. Flow (prot)	1569	1528	0	0	1598	0	1711	3418	0	0	3539	1583
Flt Permitted	0.950	0.966			0.964		0.265					
Satd. Flow (perm)	1569	1528	0	0	1598	0	477	3418	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			2							1012
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	972	4	157	18	4	2	63	519	2	0	809	1088
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	573	560	0	0	24	0	63	521	0	0	809	1088
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA			NA	pm+ov
Protected Phases	4	4		3	3			2			6	4

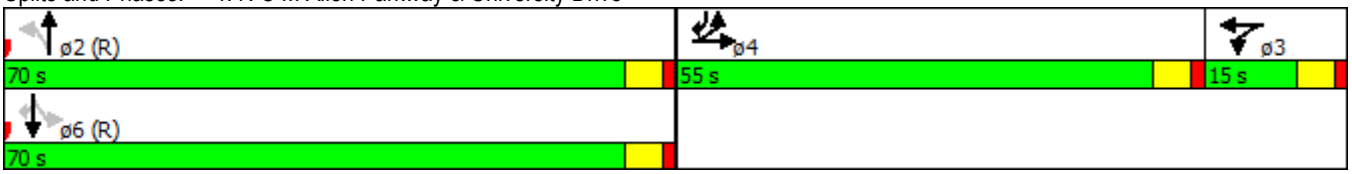
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	55.0	55.0		15.0	15.0		70.0	70.0		70.0	70.0	55.0
Total Split (%)	39.3%	39.3%		10.7%	10.7%		50.0%	50.0%		50.0%	50.0%	39.3%
Maximum Green (s)	49.5	49.5		9.5	9.5		64.5	64.5		64.5	64.5	49.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	49.5	49.5			6.6		71.6	71.6			71.6	128.8
Actuated g/C Ratio	0.35	0.35			0.05		0.51	0.51			0.51	0.92
v/c Ratio	1.03	1.02			0.31		0.26	0.30			0.45	0.71
Control Delay	91.4	86.8			70.1		25.2	21.2			10.7	8.1
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.1
Total Delay	91.4	86.8			70.1		25.2	21.2			10.7	8.3
LOS	F	F			E		C	C			B	A
Approach Delay		89.1			70.1			21.7			9.3	
Approach LOS		F			E			C			A	
Queue Length 50th (ft)	~588	~556			20		34	148			124	248
Queue Length 95th (ft)	#816	#787			50		73	196			157	215
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	554	549			110		243	1747			1809	1537
Starvation Cap Reductn	0	0			0		0	0			0	49
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.03	1.02			0.22		0.26	0.30			0.45	0.73

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 36.5	Intersection LOS: D
Intersection Capacity Utilization 90.7%	ICU Level of Service E
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	11	9	25	15	248	6	950	4	280	890	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	70		0	145		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981			0.884			0.999			0.989	
Flt Protected		0.967			0.996		0.950			0.950		
Satd. Flow (prot)	0	1767	0	0	1640	0	1770	3536	0	1770	3500	0
Flt Permitted		0.222			0.959		0.112			0.048		
Satd. Flow (perm)	0	406	0	0	1579	0	209	3536	0	89	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			167						14	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	89	22	18	49	30	488	12	1869	8	551	1751	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	567	0	12	1877	0	551	1895	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	8	8		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		12.5	21.5		12.5	21.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	83.0		45.0	113.0	
Total Split (%)	14.7%	14.7%		14.7%	14.7%		10.0%	55.3%		30.0%	75.3%	
Maximum Green (s)	16.5	16.5		16.5	16.5		9.5	77.5		39.5	107.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		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	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		16.5			16.5		84.5	77.5		122.5	117.5	
Actuated g/C Ratio		0.11			0.11		0.56	0.52		0.82	0.78	
v/c Ratio		2.69			1.76		0.06	1.03		1.07	0.69	
Control Delay		837.5			380.0		4.7	40.8		103.7	10.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		837.5			380.0		4.7	40.8		103.7	10.1	
LOS		F			F		A	D		F	B	
Approach Delay		837.5			380.0			40.6			31.2	
Approach LOS		F			F			D			C	
Queue Length 50th (ft)		~211			~675		1	~1013		~545	322	
Queue Length 95th (ft)		#355			#914		m2	m#1122		#781	590	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)							70			145		
Base Capacity (vph)		48			322		220	1826		515	2744	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		2.69			1.76		0.05	1.03		1.07	0.69	

Intersection Summary

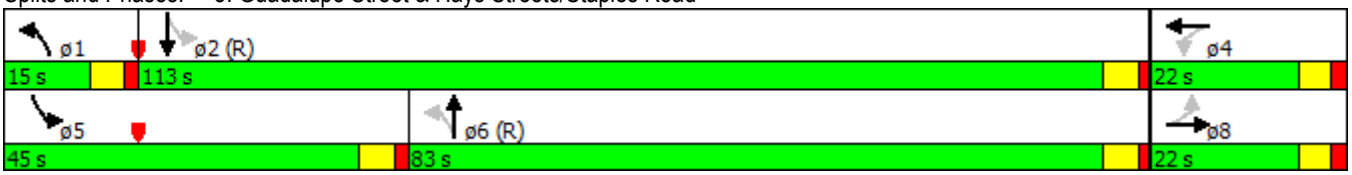
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.69
Intersection Signal Delay: 94.7 Intersection LOS: F
Intersection Capacity Utilization 120.6% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	62	35	68	39	71	56	901	45	104	868	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		0	100		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.940			0.993			0.991	
Flt Protected	0.950				0.981		0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	0	3232	0	1752	3480	0	1752	3473	0
Flt Permitted	0.343				0.737		0.053			0.950		
Satd. Flow (perm)	633	1845	1568	0	2428	0	98	3480	0	1752	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80		95			6			8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	102	126	71	138	79	144	114	1832	92	212	1765	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	126	71	0	361	0	114	1924	0	212	1883	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4			6					
Detector Phase	8	8	8	4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0		12.0	26.0		12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0		17.0	94.0		19.0	96.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%		11.3%	62.7%		12.7%	64.0%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0		10.0	87.0		12.0	89.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.5		1.0	2.5	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	24.5	24.5	24.5		24.5		95.3	87.0		18.5	97.3	
Actuated g/C Ratio	0.16	0.16	0.16		0.16		0.64	0.58		0.12	0.65	
v/c Ratio	0.99	0.42	0.22		0.76		0.75	0.95		0.98	0.84	
Control Delay	148.1	59.1	9.3		53.8		57.2	41.3		111.5	19.5	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	148.1	59.1	9.3		53.8		57.2	41.3		111.5	19.5	
LOS	F	E	A		D		E	D		F	B	
Approach Delay		77.6			53.8			42.2			28.8	
Approach LOS		E			D			D			C	
Queue Length 50th (ft)	100	111	0		132		51	893		~233	616	
Queue Length 95th (ft)	#198	168	36		181		#126	#1016		m#457	m430	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100						70			100		
Base Capacity (vph)	130	381	387		577		173	2020		216	2255	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.78	0.33	0.18		0.63		0.66	0.95		0.98	0.84	

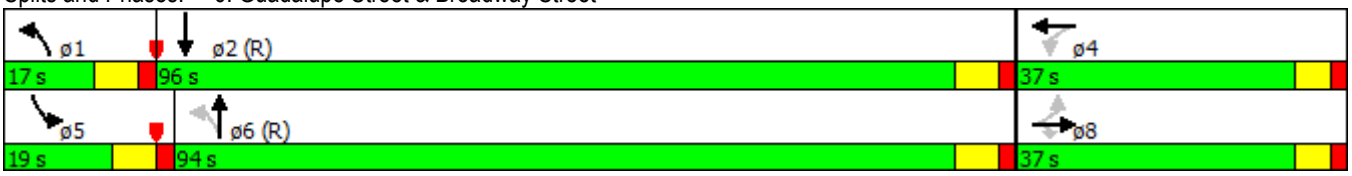
Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 39.5	Intersection LOS: D
Intersection Capacity Utilization 95.3%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Guadalupe Street & Broadway Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	34	95	34	25	11	44	661	81	28	967	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.890			0.979			0.984				0.850
Flt Protected	0.950				0.976		0.950			0.950		
Satd. Flow (prot)	1752	1642	0	0	1763	0	1752	3449	0	1752	3505	1568
Flt Permitted	0.571				0.313		0.050			0.078		
Satd. Flow (perm)	1053	1642	0	0	565	0	92	3449	0	144	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			5			15				125
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	362	71	198	71	52	23	92	1375	169	58	2012	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	362	269	0	0	146	0	92	1544	0	58	2012	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		16.5	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	25.0	25.0		16.0	16.0		15.0	84.0		15.0	84.0	84.0
Total Split (%)	17.9%	17.9%		11.4%	11.4%		10.7%	60.0%		10.7%	60.0%	60.0%
Maximum Green (s)	19.0	19.0		9.5	9.5		8.5	77.5		8.5	77.5	77.5
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	35.0	35.0			9.5		87.8	81.2		85.5	78.1	78.1
Actuated g/C Ratio	0.25	0.25			0.07		0.63	0.58		0.61	0.56	0.56
v/c Ratio	1.01	0.57			3.40		0.61	0.77		0.34	1.03	0.33
Control Delay	104.0	36.6			1151.8		39.9	26.2		14.0	59.1	10.5
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	104.0	36.6			1151.8		39.9	26.2		14.0	59.1	10.5
LOS	F	D			F		D	C		B	E	B
Approach Delay		75.2			1151.8			26.9			51.8	
Approach LOS		E			F			C			D	
Queue Length 50th (ft)	~318	149			~234		32	557		17	~1033	81
Queue Length 95th (ft)	#518	232			#366		89	631		33	#1100	132
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	358	472			43		158	2007		186	1954	929
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	1.01	0.57			3.40		0.58	0.77		0.31	1.03	0.33

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 3.40
Intersection Signal Delay: 79.9 Intersection LOS: E
Intersection Capacity Utilization 101.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	72	14	52	109	445	28	254	58	291	350	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983				0.850		0.972			0.983	
Flt Protected		0.988			0.984		0.950			0.950		
Satd. Flow (prot)	0	1792	0	0	1815	1568	1752	3407	0	1752	3445	0
Flt Permitted		0.739			0.773		0.357			0.229		
Satd. Flow (perm)	0	1340	0	0	1426	1568	659	3407	0	422	3445	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				467		23			15	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	55	142	28	102	214	875	55	500	114	573	689	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	316	875	55	614	0	573	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	46.0	46.0		46.0	46.0	46.0	15.0	42.0		32.0	59.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%	38.3%	12.5%	35.0%		26.7%	49.2%	
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	9.0	36.0		26.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		41.0			41.0	41.0	42.2	35.0		67.0	56.4	
Actuated g/C Ratio		0.34			0.34	0.34	0.35	0.29		0.56	0.47	
v/c Ratio		0.49			0.65	1.04	0.19	0.61		1.10	0.48	
Control Delay		34.7			40.8	60.2	16.5	38.2		92.4	23.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		34.7			40.8	60.2	16.5	38.2		92.4	23.2	
LOS		C			D	E	B	D		F	C	
Approach Delay		34.7			55.1			36.4			52.5	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)		133			206	~476	19	207		~383	215	
Queue Length 95th (ft)		212			310	#726	38	270		#607	276	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		461			487	843	323	1038		523	1627	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.49			0.65	1.04	0.17	0.59		1.10	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 13 (11%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 49.1 Intersection LOS: D
Intersection Capacity Utilization 105.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 8: Hunter Road & McCarty Lane

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	35	138	20	25	8	164	373	0	7	497	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980						0.986	
Flt Protected		0.966			0.981			0.985			0.999	
Satd. Flow (prot)	0	1799	1583	0	1791	0	0	1835	0	0	1835	0
Flt Permitted		0.724			0.608			0.508			0.986	
Satd. Flow (perm)	0	1349	1583	0	1110	0	0	946	0	0	1811	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169		8						14	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	164	66	260	38	47	15	309	703	0	13	937	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	260	0	100	0	0	1012	0	0	1057	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	23.0	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%	23.0%		77.0%	77.0%		77.0%	77.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		72.0	72.0		72.0	72.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		18.0	18.0		18.0			72.0			72.0	
Actuated g/C Ratio		0.18	0.18		0.18			0.72			0.72	
v/c Ratio		0.95	0.61		0.49			1.49			0.81	
Control Delay		88.8	20.8		42.8			246.1			27.9	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		88.8	20.8		42.8			246.1			27.9	
LOS		F	C		D			F			C	
Approach Delay		52.7			42.8			246.1			27.9	
Approach LOS		D			D			F			C	
Queue Length 50th (ft)		146	51		53			~896			684	
Queue Length 95th (ft)		#294	135		107			#1137			m566	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60									
Base Capacity (vph)		242	423		206			681			1307	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.95	0.61		0.49			1.49			0.81	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.49
Intersection Signal Delay: 116.1 Intersection LOS: F
Intersection Capacity Utilization 137.5% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	111	91	16	23	3	61	450	11	8	577	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.990			0.996				0.850
Flt Protected	0.950				0.982		0.950				0.999	
Satd. Flow (prot)	1787	1753	0	0	1829	0	1787	1874	0	0	1879	1599
Flt Permitted	0.590				0.739		0.079				0.985	
Satd. Flow (perm)	1110	1753	0	0	1376	0	149	1874	0	0	1853	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			3			2				334
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	530	211	173	30	44	6	116	857	21	15	1099	526
Shared Lane Traffic (%)												
Lane Group Flow (vph)	530	384	0	0	80	0	116	878	0	0	1114	526
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	9.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	15.0	36.0		21.0	21.0		15.0	64.0		49.0	49.0	49.0
Total Split (%)	15.0%	36.0%		21.0%	21.0%		15.0%	64.0%		49.0%	49.0%	49.0%
Maximum Green (s)	10.0	31.0		16.0	16.0		10.0	59.0		44.0	44.0	44.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)		7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)		12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)		0						0		0	0	0
Act Effct Green (s)	31.0	31.0			13.8		59.0	59.0			46.6	46.6
Actuated g/C Ratio	0.31	0.31			0.14		0.59	0.59			0.47	0.47
v/c Ratio	1.21	0.67			0.42		0.56	0.79			1.29	0.57
Control Delay	144.9	33.3			43.6		14.9	17.0			166.2	9.5
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	144.9	33.3			43.6		14.9	17.0			166.2	9.5
LOS	F	C			D		B	B			F	A
Approach Delay		98.0			43.6			16.8			116.0	
Approach LOS		F			D			B			F	
Queue Length 50th (ft)	~432	189			44		30	361			~909	73
Queue Length 95th (ft)	#634	294			90		m25	m255			#1189	183
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	439	573			222		251	1106			863	923
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.21	0.67			0.36		0.46	0.79			1.29	0.57

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 82.7 Intersection LOS: F
Intersection Capacity Utilization 134.6% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	713	0	0	775	95	193	170	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.984			0.962				
Flt Protected		0.997						0.980				
Satd. Flow (prot)	0	3564	0	0	3517	0	0	4842	0	0	0	0
Flt Permitted		0.608						0.980				
Satd. Flow (perm)	0	2173	0	0	3517	0	0	4842	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38			79				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)							21		20			
Adj. Flow (vph)	106	1403	0	0	1525	187	380	334	238	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1509	0	0	1712	0	0	952	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0			10.0		10.0	10.0				
Minimum Split (s)	24.5	24.5			24.5		24.5	24.5				
Total Split (s)	65.0	65.0			65.0		20.0	20.0				
Total Split (%)	76.5%	76.5%			76.5%		23.5%	23.5%				
Maximum Green (s)	60.5	60.5			60.5		15.5	15.5				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		4.5			4.5			4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2			0.2		0.2	0.2				
Recall Mode	C-Max	C-Max			None		Max	Max				
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	15.0	15.0			15.0		15.0	15.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		60.5			60.5			15.5				
Actuated g/C Ratio		0.71			0.71			0.18				
v/c Ratio		0.98			0.68			1.01				
Control Delay		14.8			8.4			63.8				
Queue Delay		41.1			49.2			2.6				
Total Delay		55.9			57.6			66.4				
LOS		E			E			E				
Approach Delay		55.9			57.6			66.4				
Approach LOS		E			E			E				
Queue Length 50th (ft)		381			219			~175				
Queue Length 95th (ft)		m96			285			#268				
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)												
Base Capacity (vph)		1546			2514			947				
Starvation Cap Reductn		247			0			0				
Spillback Cap Reductn		0			1354			9				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		1.16			1.48			1.01				

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 6 (7%), Referenced to phase 4:EBTL, Start of 1st Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 59.0 Intersection LOS: E
Intersection Capacity Utilization 113.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: N LBJ Drive & Hopkins Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	602	106	119	858	0	0	0	0	188	479	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.980									0.984	
Flt Protected					0.994						0.988	
Satd. Flow (prot)	0	1844	0	0	3553	0	0	0	0	0	4993	0
Flt Permitted					0.506						0.988	
Satd. Flow (perm)	0	1844	0	0	1809	0	0	0	0	0	4993	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10									17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)										6		6
Adj. Flow (vph)	0	1238	218	245	1765	0	0	0	0	387	985	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1456	0	0	2010	0	0	0	0	0	1541	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0					10.0	10.0	
Minimum Split (s)		23.5		23.5	23.5					23.5	23.5	
Total Split (s)		55.0		55.0	55.0					30.0	30.0	
Total Split (%)		64.7%		64.7%	64.7%					35.3%	35.3%	
Maximum Green (s)		49.5		49.5	49.5					24.5	24.5	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.5			5.5						5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		5.0		5.0	5.0					5.0	5.0	
Recall Mode		C-Max		C-Max	C-Max					Max	Max	
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		49.5			49.5						24.5	
Actuated g/C Ratio		0.58			0.58						0.29	
v/c Ratio		1.35			2.78dl						1.06	
Control Delay		185.1			430.1						72.5	
Queue Delay		1.0			0.0						0.0	
Total Delay		186.1			430.1						72.5	
LOS		F			F						E	
Approach Delay		186.1			430.1						72.5	
Approach LOS		F			F						E	
Queue Length 50th (ft)		~1040			~898						~334	
Queue Length 95th (ft)		#1252			m#970						#412	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)												
Base Capacity (vph)		1078			1053						1451	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		199			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		1.66			1.91						1.06	

Intersection Summary

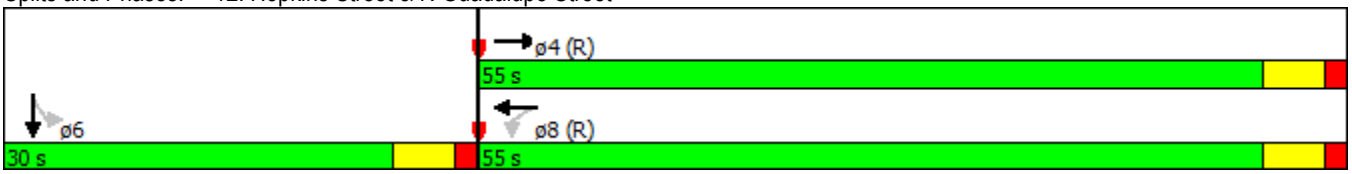
Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.91
Intersection Signal Delay: 249.1 Intersection LOS: F
Intersection Capacity Utilization 158.9% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	1250	33	36	1079	19	40	40	26	81	39	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.967			0.946	
Flt Protected	0.950			0.950				0.982			0.980	
Satd. Flow (prot)	1719	3424	0	1719	3428	0	0	1718	0	0	1678	0
Flt Permitted	0.076			0.084				0.645			0.704	
Satd. Flow (perm)	138	3424	0	152	3428	0	0	1129	0	0	1205	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			15			30	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	341	2433	64	70	2100	37	78	78	51	158	76	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	2497	0	70	2137	0	0	207	0	0	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	13.0	24.0		13.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	25.0	61.0		15.0	51.0		24.0	24.0		24.0	24.0	
Total Split (%)	25.0%	61.0%		15.0%	51.0%		24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	20.0	56.0		10.0	46.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	71.0	61.2		54.8	47.9			19.0			19.0	
Actuated g/C Ratio	0.71	0.61		0.55	0.48			0.19			0.19	
v/c Ratio	0.89	1.19		0.37	1.30			0.92			1.55	
Control Delay	51.6	112.8		15.9	166.4			80.2			294.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	51.6	112.8		15.9	166.4			80.2			294.5	
LOS	D	F		B	F			F			F	
Approach Delay		105.5			161.6			80.2			294.5	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	158	~1045		12	~954			122			~341	
Queue Length 95th (ft)	#305	#1211		34	#1095			#262			#526	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	414	2097		244	1642			226			253	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.82	1.19		0.29	1.30			0.92			1.55	

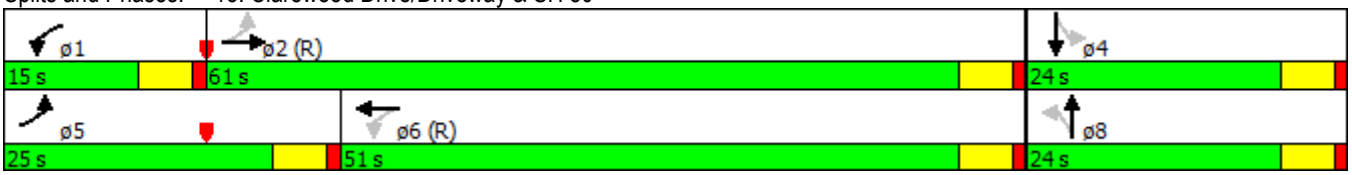
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.55
Intersection Signal Delay: 139.6 Intersection LOS: F
Intersection Capacity Utilization 112.6% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	6	24	0	446	0	0	56	473
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850					0.879	
Flt Protected												
Satd. Flow (prot)	0	0	0	0	1810	1538	0	3438	0	0	1591	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	1810	1538	0	3438	0	0	1591	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	0	0	12	48	0	897	0	0	113	951
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	12	48	0	897	0	0	1064	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 111.6%	ICU Level of Service H
Analysis Period (min) 15	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	446	3	0	0	56	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1687	1776	0	0	1687	0
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1687	1776	0	0	1687	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		297	329		121	
Travel Time (s)		6.8	7.5		2.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	939	6	0	0	118	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	939	6	0	0	118	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 116.3%		ICU Level of Service H	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	351	338	432	72	114	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.981			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1827	0	1770	1583
Flt Permitted	0.070				0.950	
Satd. Flow (perm)	130	1863	1827	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			8			54
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	722	695	889	148	234	930
Shared Lane Traffic (%)						
Lane Group Flow (vph)	722	695	1037	0	234	930
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	5	2	6		3	5
Permitted Phases	2					3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6		3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0		10.0	5.0
Minimum Split (s)	10.5	25.5	21.5		21.5	10.5
Total Split (s)	29.0	86.0	57.0		44.0	29.0
Total Split (%)	22.3%	66.2%	43.8%		33.8%	22.3%
Maximum Green (s)	23.5	80.5	51.5		38.5	23.5
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	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			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	Min	Min		None	None
Act Effct Green (s)	80.6	80.6	51.6		18.8	47.9
Actuated g/C Ratio	0.73	0.73	0.47		0.17	0.43
v/c Ratio	1.63	0.51	1.21		0.78	1.30
Control Delay	318.8	8.8	134.0		61.4	172.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	318.8	8.8	134.0		61.4	172.3
LOS	F	A	F		E	F
Approach Delay		166.7	134.0		150.0	
Approach LOS		F	F		F	
Queue Length 50th (ft)	~694	184	~900		160	~827
Queue Length 95th (ft)	#979	323	#1226		239	#1055
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100					
Base Capacity (vph)	444	1359	857		617	716
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	1.63	0.51	1.21		0.38	1.30

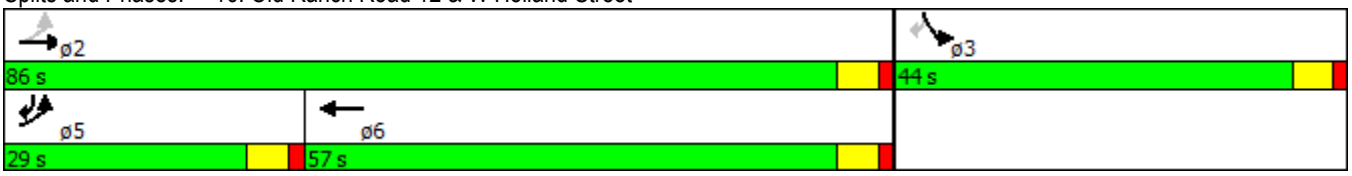
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 110.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.63
Intersection Signal Delay: 152.0 — Intersection LOS: F
Intersection Capacity Utilization 109.4% — ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	583	32	152	456	280	79	16	45	252	26	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		0	65		0	0		0	100		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.943				0.850		0.890	
Flt Protected	0.950			0.950				0.960		0.950		
Satd. Flow (prot)	1736	3443	0	1736	3273	0	0	1754	1553	1736	1626	0
Flt Permitted	0.089			0.080				0.635		0.325		
Satd. Flow (perm)	163	3443	0	146	3273	0	0	1160	1553	594	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			138				155		106	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	259	1199	66	313	938	576	162	33	93	518	53	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	259	1265	0	313	1514	0	0	195	93	518	197	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	27.0		14.0	21.0		12.0	26.0	26.0	12.0	21.0	
Total Split (s)	15.0	50.0		22.0	57.0		15.0	26.0	26.0	22.0	33.0	
Total Split (%)	12.5%	41.7%		18.3%	47.5%		12.5%	21.7%	21.7%	18.3%	27.5%	
Maximum Green (s)	10.0	45.0		17.0	52.0		10.0	21.0	21.0	17.0	28.0	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.8	1.8		1.8	1.8		1.8	1.8	1.8	1.8	1.8	
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			5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		4.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	56.1	45.0		68.1	52.0			19.9	19.9	41.9	41.9	
Actuated g/C Ratio	0.47	0.38		0.57	0.43			0.17	0.17	0.35	0.35	
v/c Ratio	1.17	0.98		0.97	1.01			1.02	0.24	1.40	0.31	
Control Delay	146.2	57.4		78.4	57.4			118.4	2.0	227.3	14.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	146.2	57.4		78.4	57.4			118.4	2.0	227.3	14.1	
LOS	F	E		E	E			F	A	F	B	
Approach Delay		72.5			61.0			80.8			168.5	
Approach LOS		E			E			F			F	
Queue Length 50th (ft)	~202	502		~207	~589			151	0	~425	48	
Queue Length 95th (ft)	#361	#634		#374	#725			#291	2	#623	101	
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65						100		
Base Capacity (vph)	221	1294		322	1496			203	399	369	636	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	1.17	0.98		0.97	1.01			0.96	0.23	1.40	0.31	

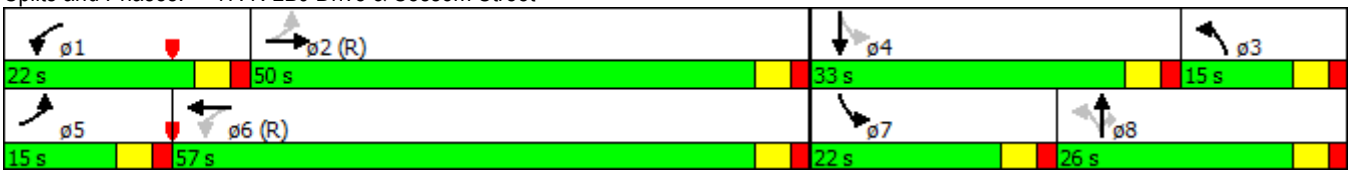
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 84.0 Intersection LOS: F
Intersection Capacity Utilization 103.1% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: N LBJ Drive & Sessom Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	570	188	65	625	73	162	71	101	29	32	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.984			0.912			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3408	0	1770	3483	0	1770	1699	0	1770	1654	0
Flt Permitted	0.058			0.059			0.188			0.514		
Satd. Flow (perm)	108	3408	0	110	3483	0	350	1699	0	957	1654	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			11			46			84	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	143	1134	374	129	1243	145	322	141	201	58	64	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	1508	0	129	1388	0	322	342	0	58	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	76.0		15.0	75.0		31.0	44.0		15.0	28.0	
Total Split (%)	10.7%	50.7%		10.0%	50.0%		20.7%	29.3%		10.0%	18.7%	
Maximum Green (s)	10.0	70.0		9.0	69.1		25.5	38.5		9.5	22.5	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	79.9	70.2		78.1	69.3		53.5	42.5		31.5	23.5	
Actuated g/C Ratio	0.53	0.47		0.52	0.46		0.36	0.28		0.21	0.16	
v/c Ratio	0.87	0.93		0.84	0.86		0.90	0.67		0.24	0.78	
Control Delay	58.5	30.5		77.4	38.4		67.7	49.3		36.5	57.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	58.5	30.5		77.4	38.4		67.7	49.3		36.5	57.2	
LOS	E	C		E	D		E	D		D	E	
Approach Delay		32.9			41.7			58.2			53.4	
Approach LOS		C			D			E			D	
Queue Length 50th (ft)	108	307		85	673		247	265		38	166	
Queue Length 95th (ft)	m66	m221		m#177	770		#414	390		72	#304	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	168	1615		156	1616		366	513		261	329	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.85	0.93		0.83	0.86		0.88	0.67		0.22	0.78	

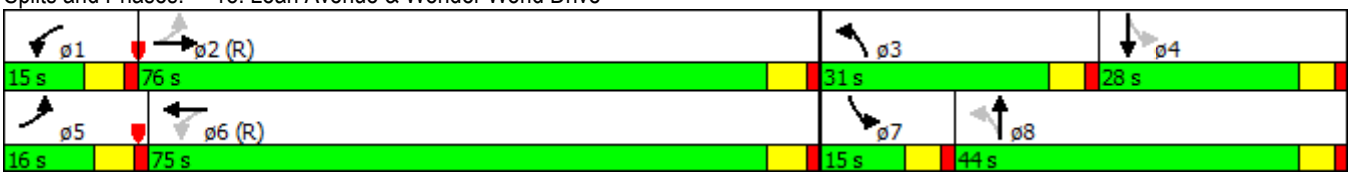
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 41.7 Intersection LOS: D
Intersection Capacity Utilization 95.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Leah Avenue & Wonder World Drive



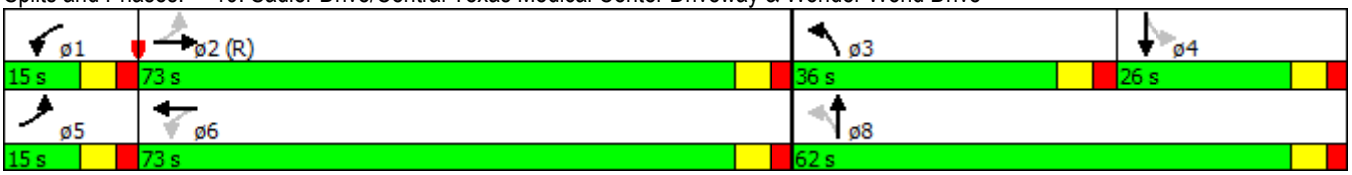
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	538	115	30	394	3	179	3	43	10	1	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.999			0.860			0.897	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1829	3447	0	1829	3536	0	1770	1602	0	0	1653	0
Flt Permitted	0.280			0.097			0.451				0.904	
Satd. Flow (perm)	539	3447	0	187	3536	0	840	1602	0	0	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			1			86			72	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			3027			240			186	
Travel Time (s)		23.2			45.9			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	36	1070	229	60	784	6	356	6	86	20	2	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1299	0	60	790	0	356	92	0	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	15.0	73.0		15.0	73.0		36.0	62.0		26.0	26.0	
Total Split (%)	10.0%	48.7%		10.0%	48.7%		24.0%	41.3%		17.3%	17.3%	
Maximum Green (s)	8.5	66.5		8.5	66.5		29.5	55.5		19.5	19.5	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	C-Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	81.9	75.4		83.5	76.2		49.1	49.1			15.0	
Actuated g/C Ratio	0.55	0.50		0.56	0.51		0.33	0.33			0.10	
v/c Ratio	0.10	0.75		0.30	0.44		0.80	0.16			0.44	
Control Delay	18.4	33.1		18.2	25.5		56.6	8.1			26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	18.4	33.1		18.2	25.5		56.6	8.1			26.9	
LOS	B	C		B	C		E	A			C	
Approach Delay		32.7			25.0			46.7			26.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	16	353		26	273		284	4			20	
Queue Length 95th (ft)	m17	m375		47	331		398	44			79	
Internal Link Dist (ft)		1451			2947			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	369	1743		203	1796		459	646			258	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.10	0.75		0.30	0.44		0.78	0.14			0.36	

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 32.4	Intersection LOS: C
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	218	116	108	320	0	0	0	0	145	160	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.953									0.942	
Flt Protected				0.950							0.986	
Satd. Flow (prot)	0	1758	0	1752	1845	0	0	0	0	0	3255	0
Flt Permitted				0.950							0.986	
Satd. Flow (perm)	0	1758	0	1752	1845	0	0	0	0	0	3255	0
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	420	223	208	616	0	0	0	0	279	308	372
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	643	0	208	616	0	0	0	0	0	959	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 112.5%	ICU Level of Service H
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	226	0	0	300	137	128	141	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.972				
Flt Protected	0.950							0.981				
Satd. Flow (prot)	1752	1845	0	0	1845	1568	0	3342	0	0	0	0
Flt Permitted	0.950							0.981				
Satd. Flow (perm)	1752	1845	0	0	1845	1568	0	3342	0	0	0	0
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	288	476	0	0	631	288	269	297	128	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	476	0	0	631	288	0	694	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 111.5%	ICU Level of Service H
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1191	335	224	723	0	0	0	0	588	115	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.872	
Flt Protected				0.950	0.998					0.950		
Satd. Flow (prot)	0	5036	1568	1595	3351	0	0	0	0	1752	3056	0
Flt Permitted				0.950	0.674					0.950		
Satd. Flow (perm)	0	5036	1568	1595	2263	0	0	0	0	1752	3056	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189								223	
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	2369	666	446	1438	0	0	0	0	1170	229	1305
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	2369	666	401	1483	0	0	0	0	1170	1534	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		42.0	42.0	57.0								
Total Split (%)		28.0%	28.0%	38.0%								
Maximum Green (s)		36.0	36.0	51.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		36.0	36.0	51.0	87.0					45.0	45.0	
Actuated g/C Ratio		0.24	0.24	0.34	0.58					0.30	0.30	
v/c Ratio		1.96	1.28	0.74	1.19					2.23	2.08dr	
Control Delay		465.3	173.9	21.3	103.7					584.4	232.3	
Queue Delay		0.9	0.0	60.2	2.4					0.0	0.0	
Total Delay		466.3	173.9	81.5	106.0					584.4	232.3	
LOS		F	F	F	F					F	F	
Approach Delay		402.1			100.8						384.6	
Approach LOS		F			F						F	
Queue Length 50th (ft)		~1311	~678	257	~878					~1840	~986	
Queue Length 95th (ft)		#1397	#927	m70	m47					#2106	#1127	
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1208	519	542	1250					525	1072	
Starvation Cap Reductn		0	0	306	478					0	0	
Spillback Cap Reductn		230	0	0	0					0	0	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		2.42	1.28	1.70	1.92					2.23	1.43	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.23
Intersection Signal Delay: 321.4 Intersection LOS: F
Intersection Capacity Utilization 193.1% ICU Level of Service H
Analysis Period (min) 15

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	43.0	77.0	37.0	28.0	8.0	8.0
Total Split (%)	29%	51%	25%	19%	5%	5%
Maximum Green (s)	37.0	71.0	31.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	C-Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

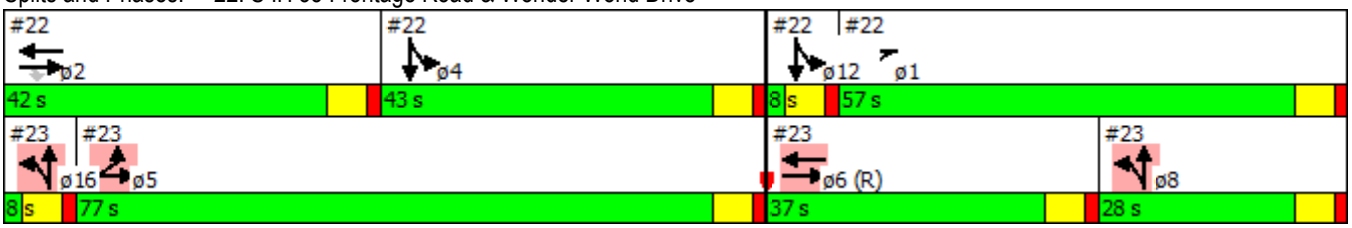
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	836	943	0	0	592	356	355	421	57	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	0.91	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.944			0.990				
Flt Protected	0.950	0.989						0.979				
Satd. Flow (prot)	1610	3353	0	0	4801	0	0	3430	0	0	0	0
Flt Permitted	0.950	0.545						0.979				
Satd. Flow (perm)	1610	1848	0	0	4801	0	0	3430	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11			4				
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	1544	1742	0	0	1093	658	656	778	105	0	0	0
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	1065	2221	0	0	1751	0	0	1539	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				
Permitted Phases												

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16
Permitted Phases						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	5 6			6		8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	77.0				37.0							
Total Split (%)	51.3%				24.7%							
Maximum Green (s)	71.0				31.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				C-Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	71.0	102.0			31.0			30.0				
Actuated g/C Ratio	0.47	0.68			0.21			0.20				
v/c Ratio	1.40	1.39			1.93dr			2.23				
Control Delay	201.8	198.0			371.4			586.6				
Queue Delay	4.0	0.0			1.8			0.0				
Total Delay	205.7	198.0			373.2			586.6				
LOS	F	F			F			F				
Approach Delay		200.5			373.2			586.6				
Approach LOS		F			F			F				
Queue Length 50th (ft)	~1531	~1587			~935			~1285				
Queue Length 95th (ft)	m364	m38			#1032			#1427				
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	762	1597			1000			689				
Starvation Cap Reductn	315	0			0			0				
Spillback Cap Reductn	0	0			276			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	2.38	1.39			2.42			2.23				

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.23
Intersection Signal Delay: 336.9 Intersection LOS: F
Intersection Capacity Utilization 193.1% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	57.0	42.0	43.0	28.0	8.0	8.0
Total Split (%)	38%	28%	29%	19%	5%	5%
Maximum Green (s)	51.0	36.0	37.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

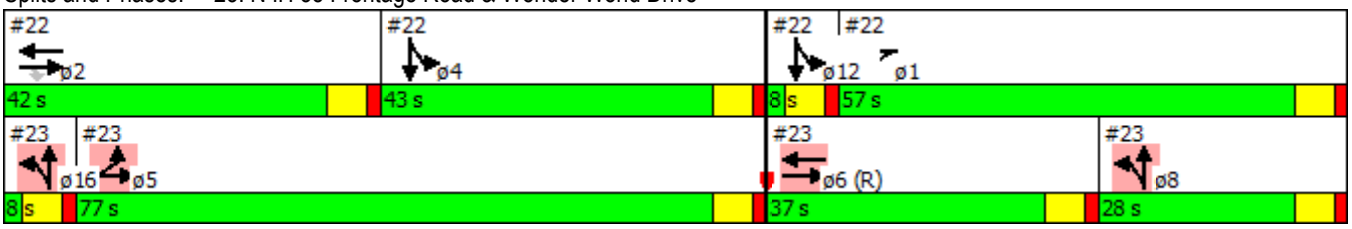
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	41	23	14	43	665	0	0	745	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		230	85		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.989	
Flt Protected					0.969		0.950					
Satd. Flow (prot)	0	0	0	0	1770	1553	1736	3471	0	0	3433	0
Flt Permitted					0.969		0.950					
Satd. Flow (perm)	0	0	0	0	1770	1553	1736	3471	0	0	3433	0
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	87	49	30	92	1416	0	0	1586	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	136	30	92	1416	0	0	1707	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	60	84	0	0	0	0	695	76	39	747	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.985				
Flt Protected		0.991								0.950		
Satd. Flow (prot)	0	1810	1553	0	0	0	0	3419	0	1736	3471	0
Flt Permitted		0.991								0.950		
Satd. Flow (perm)	0	1810	1553	0	0	0	0	3419	0	1736	3471	0
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		618			489			309			305	
Travel Time (s)		14.0			11.1			3.5			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	25	117	163	0	0	0	0	1353	148	76	1454	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	163	0	0	0	0	1501	0	76	1454	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	701	10	11	730	73	4	8	13	39	28	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.987			0.930			0.934	
Flt Protected		0.999			0.999			0.992			0.985	
Satd. Flow (prot)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Flt Permitted		0.999			0.999			0.992			0.985	
Satd. Flow (perm)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	34	1394	20	22	1452	145	8	16	26	78	56	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1448	0	0	1619	0	0	50	0	0	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 119.8%	ICU Level of Service H
Analysis Period (min) 15	

Appendix C: Future Scenario

Build Conditions Intersection Operations Analysis

2035 Build Conditions

(No Multimodal Reduction)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	512	10	97	1101	45	68	50	69	94	50	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	100		0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.997			0.994				0.850		0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3428	0	3335	3417	0	1719	1810	1538	3335	1730	0
Flt Permitted	0.044			0.950			0.418			0.950		
Satd. Flow (perm)	80	3428	0	3335	3417	0	756	1810	1538	3335	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4				145		12	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	42	1078	21	204	2317	95	143	105	145	198	105	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	1099	0	204	2412	0	143	105	145	198	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2						8		8			
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	84.0		18.0	87.0		15.0	33.0	33.0	15.0	33.0	
Total Split (%)	10.0%	56.0%		12.0%	58.0%		10.0%	22.0%	22.0%	10.0%	22.0%	
Maximum Green (s)	10.5	78.0		13.5	81.0		10.5	27.0	27.0	10.5	27.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	97.2	90.0		12.4	98.6		28.0	16.2	16.2	10.4	16.3	
Actuated g/C Ratio	0.65	0.60		0.08	0.66		0.19	0.11	0.11	0.07	0.11	
v/c Ratio	0.37	0.53		0.74	1.07		0.69	0.54	0.49	0.86	0.75	
Control Delay	21.5	19.7		83.7	68.6		67.7	72.4	14.2	99.8	81.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	21.5	19.7		83.7	68.6		67.7	72.4	14.2	99.8	81.6	
LOS	C	B		F	E		E	E	B	F	F	
Approach Delay		19.8			69.8			49.2			92.0	
Approach LOS		B			E			D			F	
Queue Length 50th (ft)	11	326		101	~1400		121	99	0	100	132	
Queue Length 95th (ft)	32	404		139	#1507		170	149	55	#157	191	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100	100		
Base Capacity (vph)	168	2057		300	2246		209	325	395	233	321	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.53		0.68	1.07		0.68	0.32	0.37	0.85	0.46	

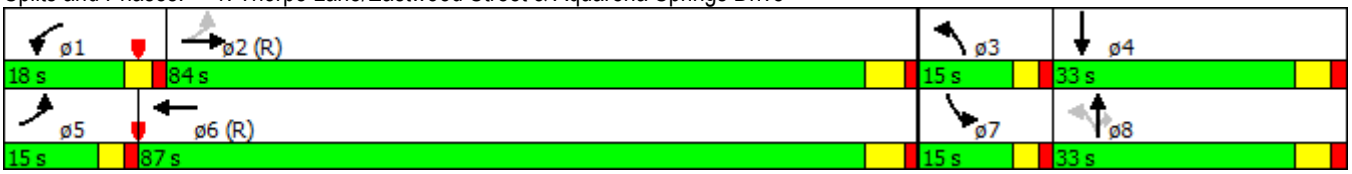
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 57.0 Intersection LOS: E
Intersection Capacity Utilization 93.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



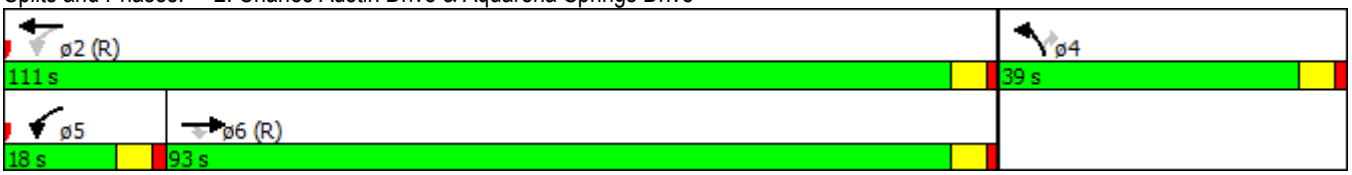
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	437	143	97	1050	437	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	100		100	130
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3406	1524	1703	3406	3303	1524
Flt Permitted			0.266		0.950	
Satd. Flow (perm)	3406	1524	477	3406	3303	1524
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		179				122
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	122%	122%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	869	284	193	2088	586	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	869	284	193	2088	586	192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	7.0	12.0	7.0	7.0
Minimum Split (s)	24.5	24.5	12.5	21.5	27.5	27.5
Total Split (s)	93.0	93.0	18.0	111.0	39.0	39.0
Total Split (%)	62.0%	62.0%	12.0%	74.0%	26.0%	26.0%
Maximum Green (s)	87.5	87.5	12.5	105.5	33.5	33.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	12.0	12.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	95.0	95.0	109.6	109.6	29.4	29.4
Actuated g/C Ratio	0.63	0.63	0.73	0.73	0.20	0.20
v/c Ratio	0.40	0.28	0.46	0.84	0.91	0.48
Control Delay	29.5	16.0	10.2	18.9	77.3	23.5
Queue Delay	0.0	0.0	0.0	2.0	0.0	0.0
Total Delay	29.5	16.0	10.2	20.9	77.3	23.5
LOS	C	B	B	C	E	C
Approach Delay	26.2			20.0	64.0	
Approach LOS	C			C	E	
Queue Length 50th (ft)	444	186	53	692	290	58
Queue Length 95th (ft)	m360	m166	88	886	353	136
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)		100	100		100	130
Base Capacity (vph)	2157	1030	450	2488	737	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	254	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.28	0.43	0.93	0.80	0.44

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 76.9%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	107	183	389	930	475	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1671	3343	3343	1495	3242	1495
Flt Permitted	0.331				0.950	
Satd. Flow (perm)	582	3343	3343	1495	3242	1495
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				947		76
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	204	349	741	1772	905	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	349	741	1772	905	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

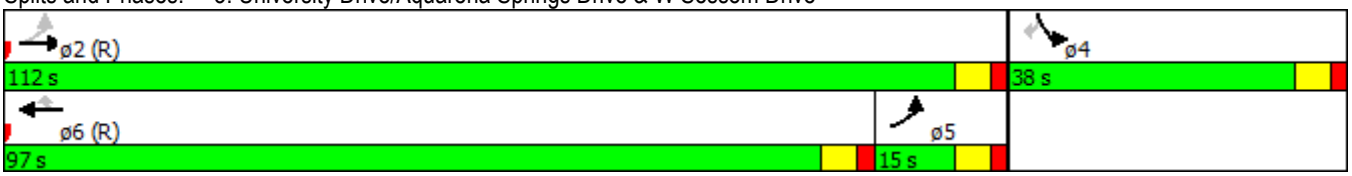
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	112.0	97.0	97.0	38.0	38.0
Total Split (%)	10.0%	74.7%	64.7%	64.7%	25.3%	25.3%
Maximum Green (s)	9.0	106.0	91.0	91.0	32.0	32.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	106.0	106.0	91.0	91.0	32.0	32.0
Actuated g/C Ratio	0.71	0.71	0.61	0.61	0.21	0.21
v/c Ratio	0.43	0.15	0.37	1.39	1.31	0.39
Control Delay	6.9	3.0	13.0	191.3	194.8	28.0
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	6.9	3.0	13.0	191.4	194.8	28.0
LOS	A	A	B	F	F	C
Approach Delay		4.4	138.8		171.2	
Approach LOS		A	F		F	
Queue Length 50th (ft)	24	21	156	~2107	~584	60
Queue Length 95th (ft)	34	28	212	#2374	#717	130
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	476	2362	2028	1279	691	378
Starvation Cap Reductn	0	0	0	35	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.15	0.37	1.42	1.31	0.39

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 129.1	Intersection LOS: F
Intersection Capacity Utilization 125.0%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	4	14	0	1	1	60	159	2	0	155	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.932			0.998				0.850
Flt Protected	0.950	0.965					0.950					
Satd. Flow (prot)	1496	1471	0	0	1489	0	1631	1713	0	0	1776	1509
Flt Permitted	0.950	0.965					0.466					
Satd. Flow (perm)	1496	1471	0	0	1489	0	800	1713	0	0	1776	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			1							761
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	253	9	31	0	1	1	131	347	4	0	338	761
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	149	144	0	0	2	0	131	351	0	0	338	761
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA			NA		Perm	NA			NA	pm+ov

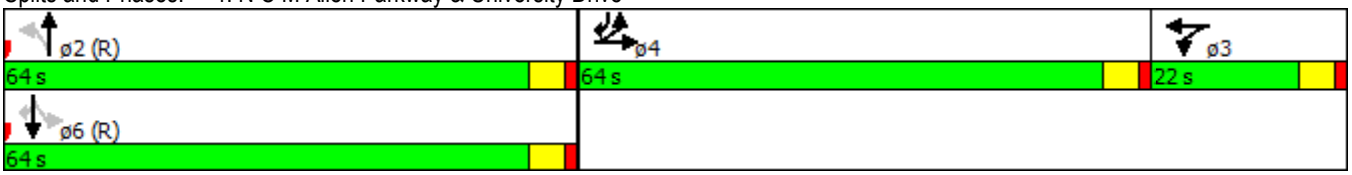
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		3	3			2			6	4
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	64.0	64.0		22.0	22.0		64.0	64.0		64.0	64.0	64.0
Total Split (%)	42.7%	42.7%		14.7%	14.7%		42.7%	42.7%		42.7%	42.7%	42.7%
Maximum Green (s)	58.5	58.5		16.5	16.5		58.5	58.5		58.5	58.5	58.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	58.5	58.5			5.1		78.3	78.3			78.3	146.7
Actuated g/C Ratio	0.39	0.39			0.03		0.52	0.52			0.52	0.98
v/c Ratio	0.26	0.25			0.04		0.31	0.39			0.36	0.51
Control Delay	32.5	29.8			60.5		24.1	23.9			22.0	3.4
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	32.5	29.8			60.5		24.1	23.9			22.0	3.4
LOS	C	C			E		C	C			C	A
Approach Delay		31.2			60.5			23.9			9.1	
Approach LOS		C			E			C			A	
Queue Length 50th (ft)	103	91			1		69	195			156	106
Queue Length 95th (ft)	148	135			10		124	285			215	126
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	583	580			164		417	894			927	1493
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.26	0.25			0.01		0.31	0.39			0.36	0.51

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 16.4 Intersection LOS: B
Intersection Capacity Utilization 72.4% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	2	5	23	17	321	7	880	6	126	552	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	70		0	145		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.977				0.850		0.999			0.983	
Flt Protected		0.963			0.972		0.950			0.950		
Satd. Flow (prot)	0	1702	0	0	1759	1538	1719	3435	0	1719	3380	0
Flt Permitted		0.695			0.819		0.193			0.053		
Satd. Flow (perm)	0	1229	0	0	1482	1538	349	3435	0	96	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				22		1			19	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	51	4	11	51	38	717	16	1966	13	282	1233	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	89	717	16	1979	0	282	1392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		8			4	5	1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5	12.5	12.5	21.5		12.5	21.5	
Total Split (s)	31.0	31.0		31.0	31.0	19.0	15.0	75.0		19.0	79.0	
Total Split (%)	24.8%	24.8%		24.8%	24.8%	15.2%	12.0%	60.0%		15.2%	63.2%	
Maximum Green (s)	25.5	25.5		25.5	25.5	13.5	9.5	69.5		13.5	73.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	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	0.0	
Total Lost Time (s)		5.5			5.5	5.5	5.5	5.5		5.5	5.5	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		12.2			12.2	44.5	76.5	69.5		101.8	96.8	
Actuated g/C Ratio		0.10			0.10	0.36	0.61	0.56		0.81	0.77	
v/c Ratio		0.53			0.62	1.28	0.06	1.04		0.66	0.53	
Control Delay		61.7			71.7	172.3	9.5	72.2		40.0	7.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		61.7			71.7	172.3	9.5	72.2		40.0	7.5	
LOS		E			E	F	A	E		D	A	
Approach Delay		61.7			161.2			71.7			13.0	
Approach LOS		E			F			E			B	
Queue Length 50th (ft)		46			70	~725	4	~883		156	145	
Queue Length 95th (ft)		81			108	#819	m6	#807		233	299	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)						100	70			145		
Base Capacity (vph)		256			302	561	324	1910		426	2622	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.26			0.29	1.28	0.05	1.04		0.66	0.53	

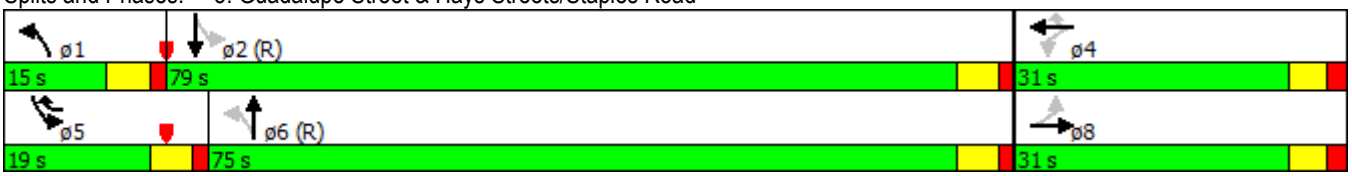
Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 95 (76%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 65.8 Intersection LOS: E
Intersection Capacity Utilization 99.9% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	75	34	156	59	179	48	735	113	189	597	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		100	100		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	0.95
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1827	1553	1736	1827	1553	1736	3471	1553	3367	3440	0
Flt Permitted	0.702			0.576			0.137			0.950		
Satd. Flow (perm)	1282	1827	1553	1052	1827	1553	250	3471	1553	3367	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			154			87		8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	122%	122%	122%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	66	160	72	224	85	257	102	1565	241	402	1271	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	160	72	224	85	257	102	1565	241	402	1356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	
Protected Phases		8			4		1	6		5	2	

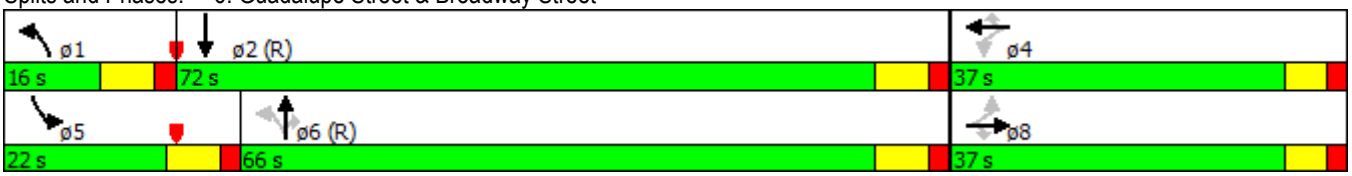
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4		4	6		6			
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	12.0	26.0	26.0	12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	16.0	66.0	66.0	22.0	72.0	
Total Split (%)	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	12.8%	52.8%	52.8%	17.6%	57.6%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0	31.0	9.0	59.0	59.0	15.0	65.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.5	2.5	1.0	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0	24.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	
Act Effct Green (s)	28.3	28.3	28.3	28.3	28.3	28.3	66.9	60.4	60.4	16.2	70.2	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.23	0.54	0.48	0.48	0.13	0.56	
v/c Ratio	0.23	0.39	0.17	0.94	0.21	0.55	0.49	0.93	0.30	0.92	0.70	
Control Delay	40.4	43.2	4.3	92.7	39.4	20.8	17.8	42.1	13.6	83.0	19.2	
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	40.4	43.2	4.3	92.7	39.4	20.8	17.8	42.1	13.6	83.0	19.2	
LOS	D	D	A	F	D	C	B	D	B	F	B	
Approach Delay		33.1			52.0			37.2			33.8	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	43	107	0	174	54	68	29	625	72	170	426	
Queue Length 95th (ft)	79	162	18	#290	93	137	47	672	119	#247	486	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100			80			70		100	100		
Base Capacity (vph)	317	453	457	260	453	500	245	1678	795	437	1936	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.35	0.16	0.86	0.19	0.51	0.42	0.93	0.30	0.92	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 37.5 Intersection LOS: D
Intersection Capacity Utilization 85.9% ICU Level of Service E
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Guadalupe Street & Broadway Street



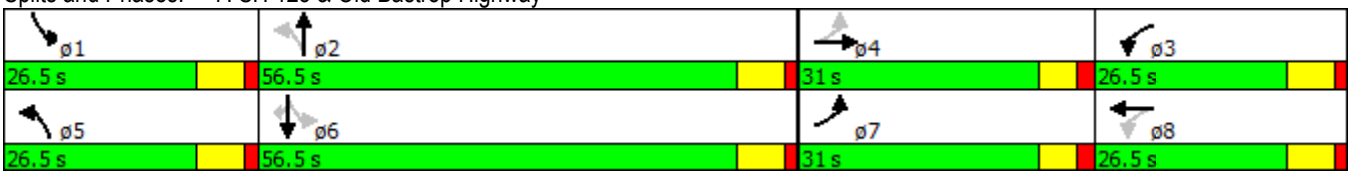
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	178	11	32	66	17	32	58	925	59	15	679	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.888			0.963			0.991				0.850
Flt Protected	0.950				0.972		0.950			0.950		
Satd. Flow (prot)	1805	1687	0	0	1778	0	1805	3578	0	1805	3610	1615
Flt Permitted	0.622				0.772		0.068			0.076		
Satd. Flow (perm)	1182	1687	0	0	1413	0	129	3578	0	144	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			11			5				128
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	375	23	67	77	20	37	122	1947	124	32	1429	524
Shared Lane Traffic (%)												
Lane Group Flow (vph)	375	90	0	0	134	0	122	2071	0	32	1429	524
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		17.0	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	31.0	31.0		26.5	26.5		26.5	56.5		26.5	56.5	56.5
Total Split (%)	22.1%	22.1%		18.9%	18.9%		18.9%	40.2%		18.9%	40.2%	40.2%
Maximum Green (s)	25.0	25.0		20.0	20.0		20.0	50.0		20.0	50.0	50.0
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Act Effct Green (s)	51.5	51.5			20.0		66.6	59.3		57.3	50.0	50.0
Actuated g/C Ratio	0.39	0.39			0.15		0.51	0.45		0.44	0.38	0.38
v/c Ratio	0.65	0.13			0.60		0.60	1.28		0.21	1.04	0.76
Control Delay	37.3	9.7			60.4		35.4	163.9		19.8	75.8	34.9
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	25.2	53.1
Total Delay	37.3	9.7			60.4		35.4	163.9		19.8	101.0	88.0
LOS	D	A			E		D	F		B	F	F
Approach Delay		32.0			60.4			156.7			96.3	
Approach LOS		C			E			F			F	
Queue Length 50th (ft)	241	12			98		53	~1250		13	~685	297
Queue Length 95th (ft)	341	45			168		107	#1314		29	#811	431
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	581	701			224		321	1615		326	1372	693
Starvation Cap Reductn	0	0			0		0	0		0	507	235
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.65	0.13			0.60		0.38	1.28		0.10	1.65	1.14

Intersection Summary

Area Type: Other
Cycle Length: 140.5
Actuated Cycle Length: 131.6
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 116.7 Intersection LOS: F
Intersection Capacity Utilization 95.9% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	97	30	21	20	211	8	277	58	291	200	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975				0.850		0.974			0.990	
Flt Protected		0.989			0.975		0.950			0.950		
Satd. Flow (prot)	0	1696	0	0	1715	1495	1671	3256	0	1671	3309	0
Flt Permitted		0.897			0.537		0.473			0.144		
Satd. Flow (perm)	0	1539	0	0	945	1495	832	3256	0	253	3309	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				483		21			10	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	82	222	69	48	46	483	18	635	133	667	458	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	373	0	0	94	483	18	768	0	667	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	34.0	34.0		34.0	34.0	34.0	13.0	41.0		45.0	73.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%	28.3%	10.8%	34.2%		37.5%	60.8%	
Maximum Green (s)	28.0	28.0		28.0	28.0	28.0	7.0	35.0		39.0	67.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		28.0			28.0	28.0	42.0	35.0		80.0	74.8	
Actuated g/C Ratio		0.23			0.23	0.23	0.35	0.29		0.67	0.62	
v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	
Control Delay		96.8			61.1	22.5	13.4	45.3		82.7	10.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		96.8			61.1	22.5	13.4	45.3		82.7	10.9	
LOS		F			E	C	B	D		F	B	
Approach Delay		96.8			28.8			44.6			52.3	
Approach LOS		F			C			D			D	
Queue Length 50th (ft)		~301			77	179	4	282		~497	70	
Queue Length 95th (ft)		#397			m108	m174	11	300		#569	109	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		366			220	719	340	964		629	2066	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	

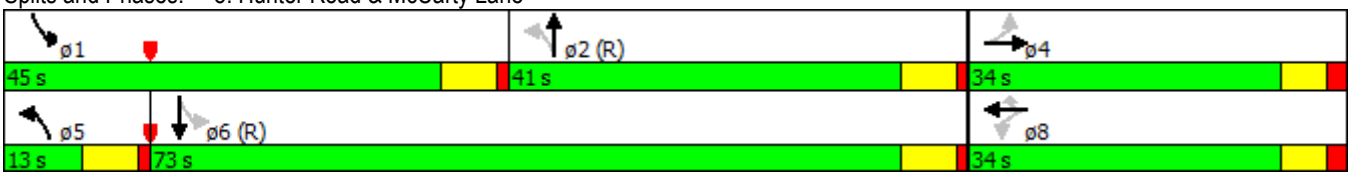
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 51.3 Intersection LOS: D
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Hunter Road & McCarty Lane



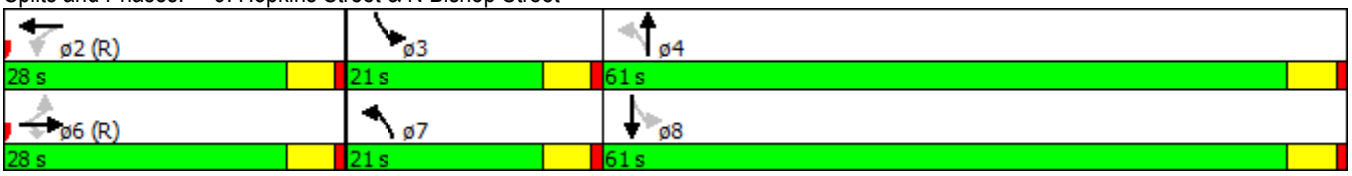
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	38	170	21	25	5	71	434	9	4	206	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987			0.997			0.971	
Flt Protected		0.968			0.980		0.950			0.950		
Satd. Flow (prot)	0	1803	1583	0	1802	0	1770	1857	0	1770	1809	0
Flt Permitted		0.745			0.815		0.231			0.087		
Satd. Flow (perm)	0	1388	1583	0	1498	0	430	1857	0	162	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			214		4			1			16	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	150	77	346	43	51	10	144	883	18	8	419	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	346	0	104	0	144	901	0	8	519	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0		21.0	61.0		21.0	61.0	
Total Split (%)	25.5%	25.5%	25.5%	25.5%	25.5%		19.1%	55.5%		19.1%	55.5%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		16.0	56.0		16.0	56.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		38.1	38.1		38.1		60.9	57.9		56.9	41.9	
Actuated g/C Ratio		0.35	0.35		0.35		0.55	0.53		0.52	0.38	
v/c Ratio		0.47	0.50		0.20		0.34	0.92		0.03	0.74	
Control Delay		34.9	15.0		28.6		12.8	40.0		6.1	34.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		34.9	15.0		28.6		12.8	40.0		6.1	34.9	
LOS		C	B		C		B	D		A	C	
Approach Delay		22.9			28.6			36.2			34.5	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)		115	61		46		51	570		2	361	
Queue Length 95th (ft)		#269	186		111		49	#844		m2	m378	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		481	688		521		433	982		319	931	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.50		0.20		0.33	0.92		0.03	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 32.1 Intersection LOS: C
Intersection Capacity Utilization 85.0% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	94	26	20	34	3	76	442	15	3	197	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.993			0.995				0.850
Flt Protected	0.950				0.983		0.950				0.999	
Satd. Flow (prot)	1770	1801	0	0	1818	0	1770	1853	0	0	1861	1583
Flt Permitted	0.505				0.781		0.285				0.613	
Satd. Flow (perm)	941	1801	0	0	1445	0	531	1853	0	0	1142	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			2				408
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	364	215	60	46	78	7	174	1013	34	7	451	408
Shared Lane Traffic (%)												
Lane Group Flow (vph)	364	275	0	0	131	0	174	1047	0	0	458	408
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			24			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	24.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	24.0	45.0		21.0	21.0		15.0	65.0		50.0	50.0	50.0
Total Split (%)	21.8%	40.9%		19.1%	19.1%		13.6%	59.1%		45.5%	45.5%	45.5%
Maximum Green (s)	19.0	40.0		16.0	16.0		10.0	60.0		45.0	45.0	45.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0						0		0	0	0
Act Effct Green (s)	40.0	40.0			16.0		60.0	60.0			46.0	46.0
Actuated g/C Ratio	0.36	0.36			0.15		0.55	0.55			0.42	0.42
v/c Ratio	0.75	0.41			0.62		0.45	1.04			0.96	0.45
Control Delay	39.4	27.2			57.4		9.8	51.8			51.8	2.3
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	39.4	27.2			57.4		9.8	51.8			51.8	2.3
LOS	D	C			E		A	D			D	A
Approach Delay		34.2			57.4			45.8			28.5	
Approach LOS		C			E			D			C	
Queue Length 50th (ft)	204	136			87		29	~802			327	0
Queue Length 95th (ft)	253	178			131		m44	#812			#413	12
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	485	663			211		402	1011			477	898
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.75	0.41			0.62		0.43	1.04			0.96	0.45

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 20 (18%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 38.5 Intersection LOS: D
Intersection Capacity Utilization 101.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	712	48	90	920	67	201	149	48	17	62	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.990			0.963			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	3574	0	1435	1830	0	1805	1862	0
Flt Permitted	0.162			0.066			0.520			0.609		
Satd. Flow (perm)	308	1881	0	125	3574	0	785	1830	0	1157	1862	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			10			13			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)							21		20			
Adj. Flow (vph)	12	868	59	110	1122	82	245	182	59	21	76	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	927	0	110	1204	0	245	241	0	21	88	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0		4.0	4.0	
Minimum Split (s)	8.0	24.5		8.0	24.5		8.5	24.5		8.5	20.5	
Total Split (s)	10.0	63.5		10.0	63.5		16.0	26.5		10.0	20.5	
Total Split (%)	9.1%	57.7%		9.1%	57.7%		14.5%	24.1%		9.1%	18.6%	
Maximum Green (s)	6.0	59.0		6.0	59.0		11.5	22.0		5.5	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	1.0		0.5	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	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		15.0			15.0			15.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	65.2	59.0		68.7	67.0		32.0	28.0		18.3	14.0	
Actuated g/C Ratio	0.59	0.54		0.62	0.61		0.29	0.25		0.17	0.13	
v/c Ratio	0.05	0.92		0.65	0.55		0.77	0.51		0.09	0.36	
Control Delay	5.5	14.8		33.2	14.3		51.8	39.0		29.6	44.2	
Queue Delay	0.0	11.8		0.0	0.1		0.0	0.0		0.0	0.0	
Total Delay	5.5	26.6		33.2	14.4		51.8	39.0		29.6	44.2	
LOS	A	C		C	B		D	D		C	D	
Approach Delay		26.3			16.0			45.4			41.4	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	1	148		28	230		148	131		11	52	
Queue Length 95th (ft)	m2	m146		#78	315		#229	209		27	91	
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	265	1011		169	2180		320	475		224	275	
Starvation Cap Reductn	0	87		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	227		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	1.00		0.65	0.62		0.77	0.51		0.09	0.32	

Intersection Summary

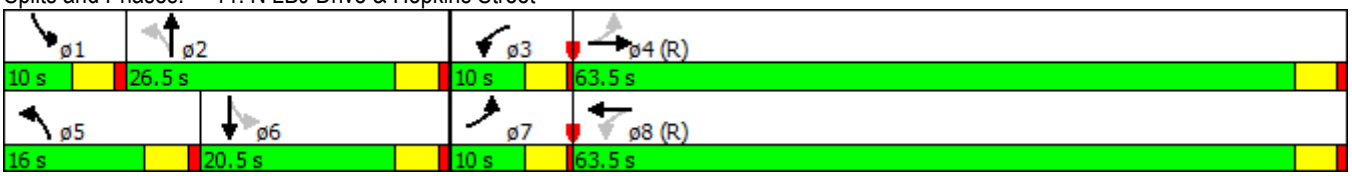
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 74.0% ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: N LBJ Drive & Hopkins Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	763	73	60	1075	45	134	99	32	25	92	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.994			0.963			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	3518	0	1770	1794	0	1540	1824	0
Flt Permitted	0.086			0.075			0.525			0.658		
Satd. Flow (perm)	160	1839	0	140	3518	0	978	1794	0	1066	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			6			13			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Parking (#/hr)										6		6
Adj. Flow (vph)	17	908	87	71	1280	54	160	118	38	30	110	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	995	0	71	1334	0	160	156	0	30	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.19	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	8.0	23.5		10.5	23.5		9.5	23.5		9.5	23.5	
Total Split (s)	10.0	64.0		11.0	65.0		12.0	25.0		10.0	23.0	
Total Split (%)	9.1%	58.2%		10.0%	59.1%		10.9%	22.7%		9.1%	20.9%	
Maximum Green (s)	6.0	58.5		5.5	59.5		6.5	19.5		4.5	17.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	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		0.0	0.0	
Total Lost Time (s)	4.0	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		4.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	C-Max		Max	C-Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	60.0	58.5		65.5	65.5		27.4	23.5		22.0	17.5	
Actuated g/C Ratio	0.55	0.53		0.60	0.60		0.25	0.21		0.20	0.16	
v/c Ratio	0.10	1.01		0.43	0.64		0.55	0.40		0.13	0.43	
Control Delay	16.1	58.9		29.3	12.8		41.9	39.1		31.9	45.0	
Queue Delay	0.0	10.4		0.0	0.2		0.0	0.0		0.0	0.0	
Total Delay	16.1	69.3		29.3	13.0		41.9	39.1		31.9	45.0	
LOS	B	E		C	B		D	D		C	D	
Approach Delay		68.4			13.8			40.5			42.5	
Approach LOS		E			B			D			D	
Queue Length 50th (ft)	7	~724		14	344		91	91		16	79	
Queue Length 95th (ft)	m8	m#737		m40	258		140	145		37	128	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	175	981		164	2096		290	393		232	295	
Starvation Cap Reductn	0	0		0	151		0	0		0	0	
Spillback Cap Reductn	0	30		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	1.05		0.43	0.69		0.55	0.40		0.13	0.43	

Intersection Summary

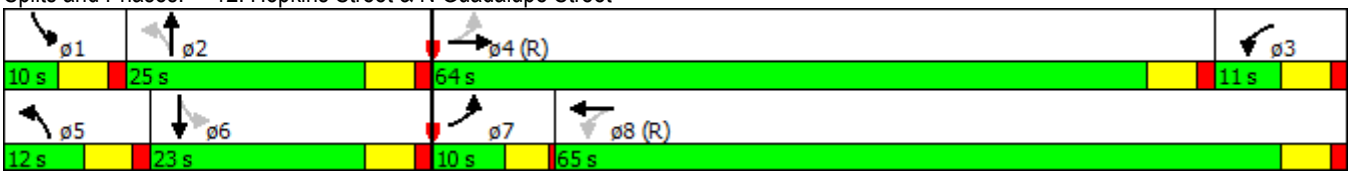
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 37.4 Intersection LOS: D
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



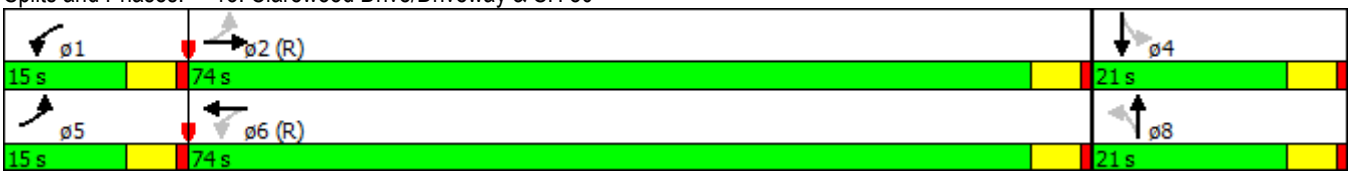
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	703	11	37	961	8	8	2	12	8	3	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.999			0.926			0.964	
Flt Protected	0.950			0.950				0.983			0.974	
Satd. Flow (prot)	1641	4706	0	1641	4711	0	0	1572	0	0	1622	0
Flt Permitted	0.094			0.171				0.873			0.818	
Satd. Flow (perm)	162	4706	0	295	4711	0	0	1396	0	0	1362	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			16			8	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	181%	181%	181%
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Adj. Flow (vph)	45	1368	21	72	1870	16	10	3	16	16	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1389	0	72	1886	0	0	29	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		21.0	21.0		20.0	20.0	
Total Split (s)	15.0	74.0		15.0	74.0		21.0	21.0		21.0	21.0	
Total Split (%)	13.6%	67.3%		13.6%	67.3%		19.1%	19.1%		19.1%	19.1%	
Maximum Green (s)	10.0	69.0		10.0	69.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							5.0	5.0				
Flash Dont Walk (s)							11.0	11.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	92.6	88.8		93.2	89.0			7.3			7.4	
Actuated g/C Ratio	0.84	0.81		0.85	0.81			0.07			0.07	
v/c Ratio	0.21	0.37		0.22	0.49			0.27			0.31	
Control Delay	4.0	4.6		3.2	5.5			35.0			46.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.0	4.6		3.2	5.5			35.0			46.3	
LOS	A	A		A	A			C			D	
Approach Delay		4.6			5.4			35.0			46.3	
Approach LOS		A			A			C			D	
Queue Length 50th (ft)	4	111		6	176			9			15	
Queue Length 95th (ft)	10	156		15	241			38			45	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	275	3799		379	3813			216			204	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.16	0.37		0.19	0.49			0.13			0.15	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	10	30	200	1000	0	0	620	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.976		0.950					
Satd. Flow (prot)	0	0	0	0	1701	1482	1656	3312	0	0	3312	1482
Flt Permitted					0.976		0.950					
Satd. Flow (perm)	0	0	0	0	1701	1482	1656	3312	0	0	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						158						567
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Adj. Flow (vph)	0	0	0	13	13	40	267	1333	0	0	827	1200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	26	40	267	1333	0	0	827	1200
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				16.0	16.0
Total Split (s)							48.0				65.0	65.0
Total Split (%)							33.1%				44.8%	44.8%
Maximum Green (s)							42.0				59.0	59.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							None				None	None
Act Effct Green (s)					24.4	24.4	38.6	103.6			59.0	59.0
Actuated g/C Ratio					0.17	0.17	0.27	0.71			0.41	0.41
v/c Ratio					0.09	0.11	0.61	0.56			0.61	1.28
Control Delay					50.7	0.6	28.6	14.2			36.4	154.0
Queue Delay					0.0	0.0	67.5	50.5			0.0	0.0
Total Delay					50.7	0.6	96.1	64.7			36.4	154.0
LOS					D	A	F	E			D	F
Approach Delay					20.3			69.9			106.0	
Approach LOS					C			E			F	
Queue Length 50th (ft)					21	0	152	440			322	~1099
Queue Length 95th (ft)					41	0	m160	304			306	#927
Internal Link Dist (ft)		215			265			41			235	
Turn Bay Length (ft)												100
Base Capacity (vph)					286	380	479	2366			1347	939
Starvation Cap Reductn					0	0	317	1453			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.09	0.11	1.65	1.46			0.61	1.28

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 88.9 Intersection LOS: F
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

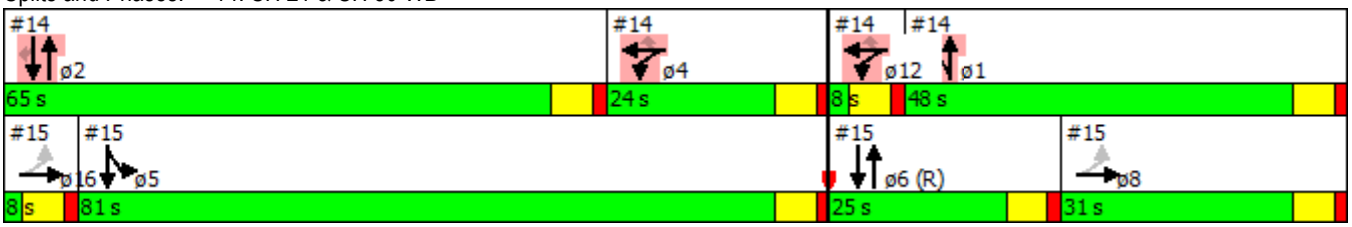
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	24.0	13.0	20.0	22.0	22.0	22.0
Total Split (s)	24.0	81.0	25.0	31.0	8.0	8.0
Total Split (%)	17%	56%	17%	21%	6%	6%
Maximum Green (s)	18.0	75.0	19.0	25.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	2.0	2.0
Recall Mode	None	None	C-Max	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: SH 21 & SH 80 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	600	5	100	0	0	0	0	600	100	80	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.858						0.979				
Flt Protected	0.950										0.950	
Satd. Flow (prot)	3072	1588	0	0	0	0	0	3465	0	0	3008	0
Flt Permitted	0.950										0.138	
Satd. Flow (perm)	3072	1588	0	0	0	0	0	3465	0	0	437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		109						11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			329			187			121	
Travel Time (s)		6.8			7.5			4.3			2.8	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	2%	2%	14%	14%	2%	2%	2%	14%	2%	14%
Adj. Flow (vph)	682	6	109	0	0	0	0	652	109	91	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	115	0	0	0	0	0	761	0	0	91	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8 16											
Detector Phase	8 16	8 16						6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								20.0		13.0		
Total Split (s)								25.0		81.0		
Total Split (%)								17.2%		55.9%		
Maximum Green (s)								19.0		75.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								6.0				
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Max		None		
Act Effct Green (s)	33.0	33.0						30.2			63.8	
Actuated g/C Ratio	0.23	0.23						0.21			0.44	
v/c Ratio	0.98	0.26						1.04			0.07	
Control Delay	83.8	10.4						98.4			0.7	
Queue Delay	12.7	0.0						24.4			0.5	
Total Delay	96.4	10.4						122.8			1.2	
LOS	F	B						F			A	
Approach Delay		84.0						122.8			1.2	
Approach LOS		F						F			A	
Queue Length 50th (ft)	332	4						~444			0	
Queue Length 95th (ft)	#442	54						#576			m0	
Internal Link Dist (ft)		217			249			107			41	
Turn Bay Length (ft)	100											
Base Capacity (vph)	699	445						730			1555	
Starvation Cap Reductn	0	0						0			1196	
Spillback Cap Reductn	35	0						239			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.03	0.26						1.55			0.25	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 97.4 Intersection LOS: F
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

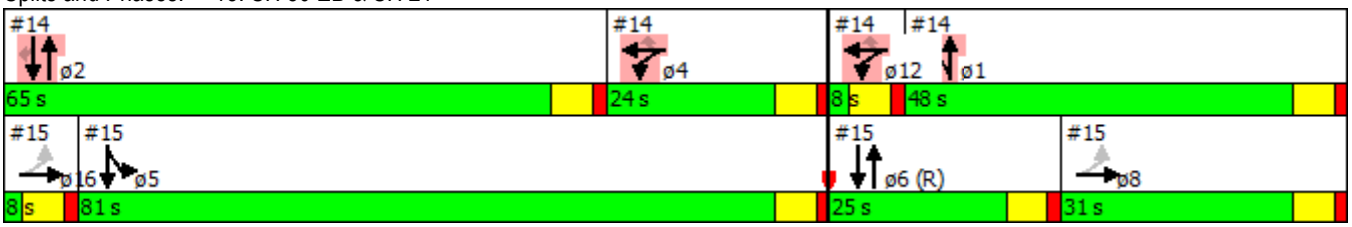
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	16.0	24.0	22.0	22.0	22.0
Total Split (s)	48.0	65.0	24.0	31.0	8.0	8.0
Total Split (%)	33%	45%	17%	21%	6%	6%
Maximum Green (s)	42.0	59.0	18.0	25.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 15: SH 80 EB & SH 21



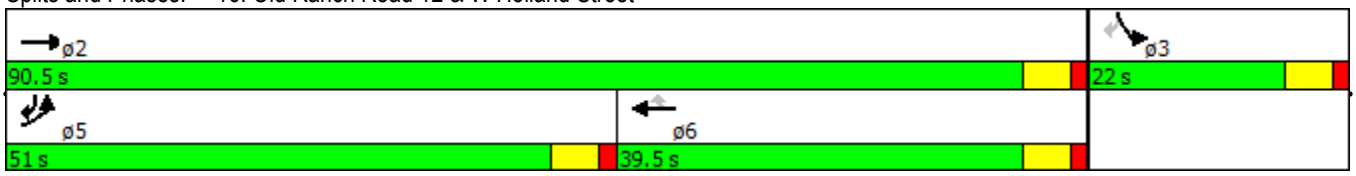
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	430	270	141	50	40	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3367	1827	1827	1553	1736	1553
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3367	1827	1827	1553	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				82		281
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	961	603	315	112	89	378
Shared Lane Traffic (%)						
Lane Group Flow (vph)	961	603	315	112	89	378
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template		Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		3	5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases				6		3
Detector Phase	5	2	6	6	3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0	10.0	10.0	5.0
Minimum Split (s)	10.5	25.5	21.5	21.5	21.5	10.5
Total Split (s)	51.0	90.5	39.5	39.5	22.0	51.0
Total Split (%)	45.3%	80.4%	35.1%	35.1%	19.6%	45.3%
Maximum Green (s)	45.5	85.0	34.0	34.0	16.5	45.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	26.0	53.3	18.6	18.6	12.1	38.0
Actuated g/C Ratio	0.38	0.77	0.27	0.27	0.17	0.55
v/c Ratio	0.76	0.43	0.64	0.23	0.29	0.39
Control Delay	24.5	5.4	32.4	10.9	36.0	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	5.4	32.4	10.9	36.0	3.6
LOS	C	A	C	B	D	A
Approach Delay		17.1	26.8		9.8	
Approach LOS		B	C		A	
Queue Length 50th (ft)	182	94	122	10	35	16
Queue Length 95th (ft)	282	143	231	45	90	49
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	2289	1770	1020	903	475	1365
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.34	0.31	0.12	0.19	0.28

Intersection Summary

Area Type: Other
Cycle Length: 112.5
Actuated Cycle Length: 69.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 17.4 — Intersection LOS: B
Intersection Capacity Utilization 57.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	246	69	135	412	87	6	1	34	203	41	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		100	65		100	0		0	100		100
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.967				0.850			0.850			0.850
Flt Protected	0.950			0.950				0.957		0.950	0.968	
Satd. Flow (prot)	1703	3293	0	1703	1792	1524	0	1715	1524	1618	1648	1524
Flt Permitted	0.154			0.314				0.679		0.950	0.419	
Satd. Flow (perm)	276	3293	0	563	1792	1524	0	1217	1524	1618	713	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31				124			124			124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	181%	181%	181%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	70	524	147	287	877	185	9	1	49	432	87	79
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	70	671	0	287	877	185	0	10	49	259	260	79
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6		6	8		8			4
Detector Phase	5	2		1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.0	27.0		14.0	21.0	21.0	12.0	26.0	26.0	12.0	21.0	21.0
Total Split (s)	15.0	71.0		21.0	77.0	77.0	15.0	26.0	26.0	32.0	43.0	43.0
Total Split (%)	10.0%	47.3%		14.0%	51.3%	51.3%	10.0%	17.3%	17.3%	21.3%	28.7%	28.7%
Maximum Green (s)	10.0	66.0		16.0	72.0	72.0	10.0	21.0	21.0	27.0	38.0	38.0
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	87.4	79.7		101.2	90.9	90.9		7.0	7.0	29.2	29.2	38.8
Actuated g/C Ratio	0.58	0.53		0.67	0.61	0.61		0.05	0.05	0.19	0.19	0.26
v/c Ratio	0.30	0.38		0.57	0.81	0.19		0.18	0.26	0.82	0.81	0.16
Control Delay	12.8	20.8		14.3	31.3	5.5		76.1	3.3	79.9	78.5	1.9
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	20.8		14.3	31.3	5.5		76.1	3.3	79.9	78.5	1.9
LOS	B	C		B	C	A		E	A	E	E	A
Approach Delay		20.1			24.2			15.6			69.0	
Approach LOS		C			C			B			E	
Queue Length 50th (ft)	22	188		103	656	24		10	0	264	264	0
Queue Length 95th (ft)	37	234		137	820	56		29	0	#395	#392	3
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65		100				100		100
Base Capacity (vph)	260	1763		513	1085	972		170	320	315	320	486
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	0
Reduced v/c Ratio	0.27	0.38		0.56	0.81	0.19		0.06	0.15	0.82	0.81	0.16

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 76.4% ICU Level of Service D
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: N LBJ Drive & Sessom Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	673	74	36	467	39	76	12	24	121	8	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.988			0.899			0.869	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3452	0	1752	3463	0	1752	1658	0	1752	1603	0
Flt Permitted	0.137			0.100			0.641			0.709		
Satd. Flow (perm)	253	3452	0	184	3463	0	1182	1658	0	1308	1603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			49			108	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	71	1369	150	73	950	79	155	24	49	246	16	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	1519	0	73	1029	0	155	73	0	246	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	41.0		21.0	46.0		20.5	25.5		15.5	20.5	
Total Split (%)	15.5%	39.8%		20.4%	44.7%		19.9%	24.8%		15.0%	19.9%	
Maximum Green (s)	10.0	35.0		15.0	40.1		15.0	20.0		10.0	15.0	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max		None	Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.2	40.2		46.0	40.2		32.8	22.1		31.3	21.3	
Actuated g/C Ratio	0.46	0.40		0.46	0.40		0.33	0.22		0.31	0.21	
v/c Ratio	0.31	1.09		0.36	0.73		0.34	0.18		0.54	0.29	
Control Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
LOS	B	F		B	C		C	B		C	B	
Approach Delay		78.8			28.8			22.1			24.4	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)	22	~600		23	296		69	13		116	8	
Queue Length 95th (ft)	44	#743		45	381		120	50		186	59	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	271	1397		329	1400		525	404		455	427	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	1.09		0.22	0.73		0.30	0.18		0.54	0.29	

Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 99.9	
Natural Cycle: 100	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 52.0	Intersection LOS: D
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

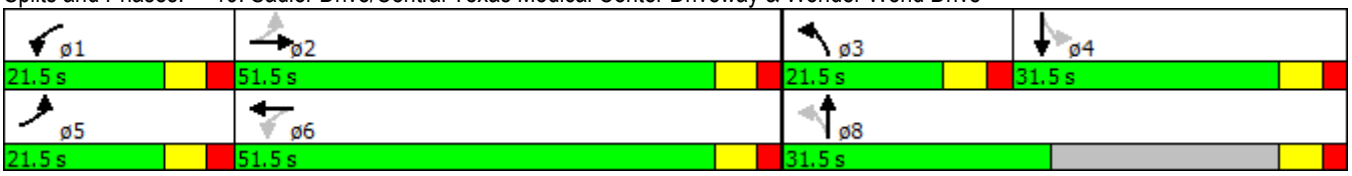
Splits and Phases: 18: Leah Avenue & Wonder World Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	436	118	19	458	14	74	3	21	1	1	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.996			0.869			0.874	
Flt Protected	0.950			0.950			0.950				0.998	
Satd. Flow (prot)	1829	3426	0	1829	3525	0	1770	1619	0	0	1625	0
Flt Permitted	0.170			0.145			0.568				0.990	
Satd. Flow (perm)	327	3426	0	279	3525	0	1058	1619	0	0	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			3			42			58	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			3027			240			186	
Travel Time (s)		23.2			45.9			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	90	867	235	38	911	28	147	6	42	2	2	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	1102	0	38	939	0	147	48	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	21.5	51.5		21.5	51.5		21.5	31.5		31.5	31.5	
Total Split (%)	17.1%	40.9%		17.1%	40.9%		17.1%	25.0%		25.0%	25.0%	
Maximum Green (s)	15.0	45.0		15.0	45.0		15.0	25.0		25.0	25.0	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	47.2	42.0		43.4	37.7		30.4	30.4			16.1	
Actuated g/C Ratio	0.50	0.45		0.46	0.40		0.32	0.32			0.17	
v/c Ratio	0.28	0.71		0.15	0.66		0.32	0.09			0.19	
Control Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
LOS	B	C		B	C		C	A			B	
Approach Delay		24.8			27.0			23.5			14.4	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	27	318		11	264		72	3			2	
Queue Length 95th (ft)	53	422		27	358		131	30			42	
Internal Link Dist (ft)		1451			2947			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	430	1794		410	1816		464	880			502	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.21	0.61		0.09	0.52		0.32	0.05			0.12	

Intersection Summary	
Area Type:	Other
Cycle Length: 126	
Actuated Cycle Length: 93.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



20: S IH 35 Frontage Road & McCarty Lane

2035 Recommendations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	307	64	71	236	0	0	0	0	335	66	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	110		0	0		0	100		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95
Frt			0.850								0.960	
Flt Protected				0.950						0.950	0.974	
Satd. Flow (prot)	0	1810	1538	1719	1810	0	0	0	0	1564	3079	0
Flt Permitted				0.950						0.950	0.974	
Satd. Flow (perm)	0	1810	1538	1719	1810	0	0	0	0	1564	3079	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191								37	
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	686	143	159	527	0	0	0	0	749	147	190
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	686	143	159	527	0	0	0	0	374	712	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

20: S IH 35 Frontage Road & McCarty Lane

2035 Recommendations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		22.0	22.0	13.0								
Total Split (s)		43.0	43.0	43.0								
Total Split (%)		35.8%	35.8%	35.8%								
Maximum Green (s)		37.0	37.0	37.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		C-Min	C-Min	Min								
Act Effct Green (s)		37.0	37.0	37.0	80.0					28.0	28.0	
Actuated g/C Ratio		0.31	0.31	0.31	0.67					0.23	0.23	
v/c Ratio		1.23	0.24	0.30	0.44					1.03	0.95	
Control Delay		147.0	8.3	4.3	5.9					99.9	66.9	
Queue Delay		0.8	0.0	2.0	38.2					0.0	0.0	
Total Delay		147.7	8.3	6.3	44.1					99.9	66.9	
LOS		F	A	A	D					F	E	
Approach Delay		123.7			35.4						78.2	
Approach LOS		F			D						E	
Queue Length 50th (ft)		~662	14	6	340					~339	287	
Queue Length 95th (ft)		m#630	m13	m9	m4					#463	#339	
Internal Link Dist (ft)		3294			206			422			301	
Turn Bay Length (ft)			100	110						100		
Base Capacity (vph)		558	606	530	1206					364	746	
Starvation Cap Reductn		0	0	246	707					0	0	
Spillback Cap Reductn		52	0	0	0					0	0	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		1.36	0.24	0.56	1.06					1.03	0.95	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.48
Intersection Signal Delay: 81.4 Intersection LOS: F
Intersection Capacity Utilization 102.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

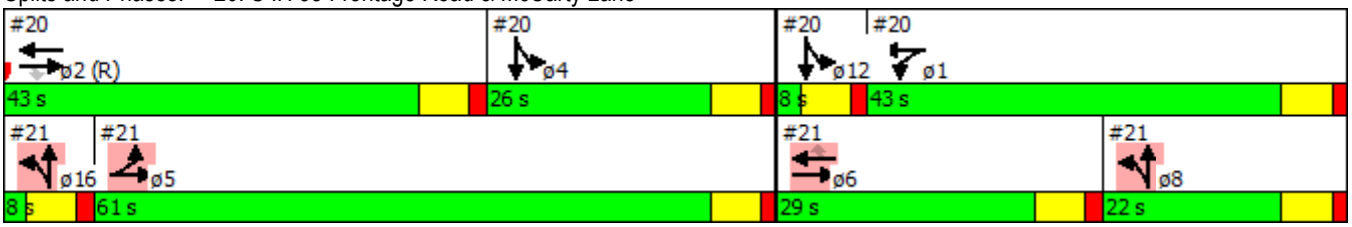
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	22.0
Total Split (s)	26.0	61.0	29.0	22.0	8.0	8.0
Total Split (%)	22%	51%	24%	18%	7%	7%
Maximum Green (s)	20.0	55.0	23.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: S IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	515	0	0	240	253	67	177	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		150	100		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.945				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1736	1827	0	0	1827	1553	1736	3280	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1736	1827	0	0	1827	1553	1736	3280	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						393		86				
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	274	1110	0	0	517	545	144	381	220	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	1110	0	0	517	545	144	601	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

21: N IH 35 Frontage Road & McCarty Lane

2035 Recommendations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						6						
Detector Phase	5	5 6			6	6	8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0	10.0						
Minimum Split (s)	13.0				22.0	22.0						
Total Split (s)	61.0				29.0	29.0						
Total Split (%)	50.8%				24.2%	24.2%						
Maximum Green (s)	55.0				23.0	23.0						
Yellow Time (s)	4.5				4.5	4.5						
All-Red Time (s)	1.5				1.5	1.5						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	6.0				6.0	6.0						
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	2.0				2.5	2.5						
Recall Mode	None				Min	Min						
Act Effct Green (s)	55.0	84.0			23.0	23.0	24.0	24.0				
Actuated g/C Ratio	0.46	0.70			0.19	0.19	0.20	0.20				
v/c Ratio	0.34	0.87			1.48	0.89	0.41	0.83				
Control Delay	13.9	6.1			264.9	30.8	46.1	50.3				
Queue Delay	3.6	48.3			4.6	0.0	0.0	0.0				
Total Delay	17.5	54.4			269.5	30.8	46.1	50.3				
LOS	B	D			F	C	D	D				
Approach Delay		47.1			147.0			49.5				
Approach LOS		D			F			D				
Queue Length 50th (ft)	60	142			~551	123	98	205				
Queue Length 95th (ft)	m55	m80			#695	#262	151	248				
Internal Link Dist (ft)		206			642			455			336	
Turn Bay Length (ft)	110					150	100					
Base Capacity (vph)	795	1278			350	615	347	724				
Starvation Cap Reductn	424	399			0	0	0	0				
Spillback Cap Reductn	0	0			110	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.74	1.26			2.15	0.89	0.41	0.83				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.48
Intersection Signal Delay: 80.9 Intersection LOS: F
Intersection Capacity Utilization 101.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

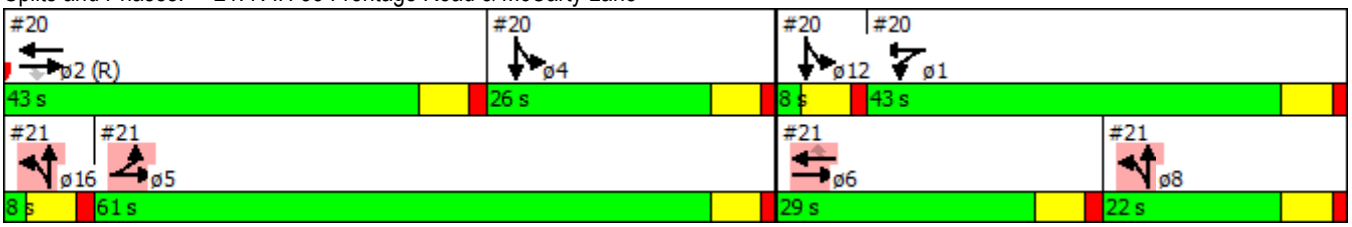
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	43.0	43.0	26.0	22.0	8.0	8.0
Total Split (%)	36%	36%	22%	18%	7%	7%
Maximum Green (s)	37.0	37.0	20.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	C-Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: N IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1027	284	127	678	0	0	0	0	361	148	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	2		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.973	
Satd. Flow (prot)	0	5085	1583	3433	3539	0	0	0	0	1522	4676	1583
Flt Permitted				0.950						0.950	0.973	
Satd. Flow (perm)	0	5085	1583	3433	3539	0	0	0	0	1522	4676	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212									166
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	0	2161	598	267	1427	0	0	0	0	760	311	1246
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	2161	598	267	1427	0	0	0	0	380	691	1246
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		2		1	1 2					4 12	4 12	
Permitted Phases			2									4 12

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16
Permitted Phases						

22: S IH 35 Frontage Road & Wonder World Drive

2035 Recommendations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		2	2	1	1 2					4 12	4 12	4 12
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		44.0	44.0	26.0								
Total Split (%)		31.9%	31.9%	18.8%								
Maximum Green (s)		38.0	38.0	20.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		38.0	38.0	49.0	93.0					33.0	33.0	33.0
Actuated g/C Ratio		0.28	0.28	0.36	0.67					0.24	0.24	0.24
v/c Ratio		1.54	1.02	0.22	0.60					1.05	0.95dl	2.47
Control Delay		282.9	72.8	10.3	6.0					110.1	49.7	688.6
Queue Delay		0.4	0.0	2.7	49.2					0.0	0.0	0.0
Total Delay		283.3	72.8	13.0	55.2					110.1	49.7	688.6
LOS		F	E	B	E					F	D	F
Approach Delay		237.7			48.6						403.2	
Approach LOS		F			D						F	
Queue Length 50th (ft)		~996	~404	17	420					~429	216	~1749
Queue Length 95th (ft)		#1019	#593	m19	m5					#619	251	#1902
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1400	589	1218	2384					363	1118	504
Starvation Cap Reductn		0	0	823	1201					0	0	0
Spillback Cap Reductn		152	0	0	0					0	0	0
Storage Cap Reductn		0	0	0	0					0	0	0
Reduced v/c Ratio		1.73	1.02	0.68	1.21					1.05	0.62	2.47

Intersection Summary

Area Type: Other
Cycle Length: 138
Actuated Cycle Length: 138
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.47
Intersection Signal Delay: 247.0 Intersection LOS: F
Intersection Capacity Utilization 156.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	31.0	26.0	33.0	30.0	8.0	8.0
Total Split (%)	22%	19%	24%	22%	6%	6%
Maximum Green (s)	25.0	20.0	27.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

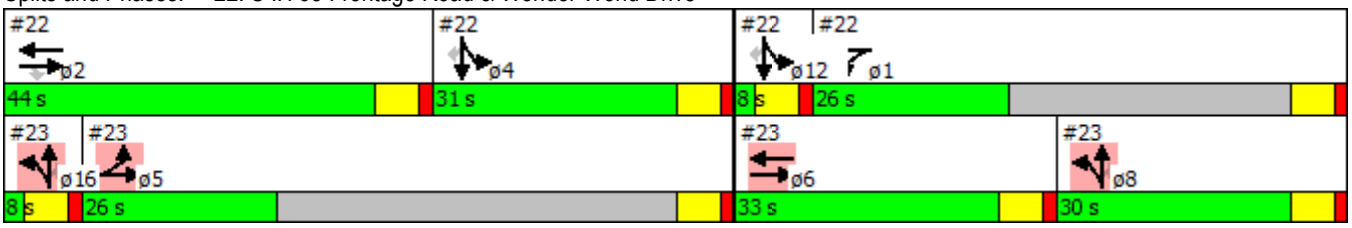
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



23: N IH 35 Frontage Road & Wonder World Drive

2035 Recommendations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	611	777	0	0	478	166	327	243	145	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.86	0.86	1.00	1.00	1.00	1.00
Frt					0.961				0.850			
Flt Protected	0.950						0.950	0.980				
Satd. Flow (prot)	3367	3471	0	0	4793	0	1493	4619	1553	0	0	0
Flt Permitted	0.950						0.950	0.980				
Satd. Flow (perm)	3367	3471	0	0	4793	0	1493	4619	1553	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					34				166			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	1271	1617	0	0	994	345	680	506	302	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1271	1617	0	0	1339	0	340	846	302	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA	Perm			
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									8 16			
Detector Phase	5	5 6			6		8 16	8 16	8 16			
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	26.0				33.0							
Total Split (%)	18.8%				23.9%							
Maximum Green (s)	20.0				27.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	61.0	94.0			27.0		32.0	32.0	32.0			
Actuated g/C Ratio	0.44	0.68			0.20		0.23	0.23	0.23			
v/c Ratio	0.85	0.68			1.39		0.98	0.89dl	0.62			
Control Delay	10.6	8.6			220.7		96.7	56.1	27.0			
Queue Delay	48.8	48.8			0.7		0.0	0.0	0.0			
Total Delay	59.4	57.4			221.4		96.7	56.1	27.0			
LOS	E	E			F		F	E	C			
Approach Delay		58.3			221.4			59.5				
Approach LOS		E			F			E				
Queue Length 50th (ft)	500	659			~578		355	278	109			
Queue Length 95th (ft)	m73	m0			#642		#558	321	199			
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	1488	2364			965		346	1071	487			
Starvation Cap Reductn	587	1104			0		0	0	0			
Spillback Cap Reductn	0	0			123		0	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	1.41	1.28			1.59		0.98	0.79	0.62			

Intersection Summary	
Area Type:	Other
Cycle Length: 138	
Actuated Cycle Length: 138	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.47	
Intersection Signal Delay: 96.8	Intersection LOS: F
Intersection Capacity Utilization 156.3%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	26.0	44.0	31.0	30.0	8.0	8.0
Total Split (%)	19%	32%	22%	22%	6%	6%
Maximum Green (s)	20.0	38.0	25.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

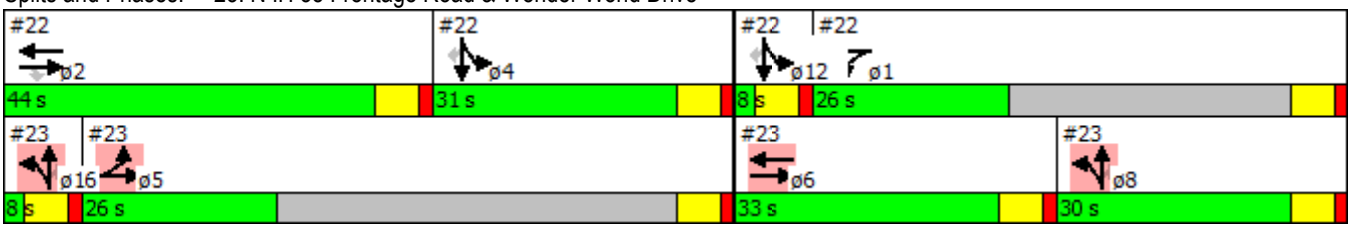
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	104	30	55	57	841	0	0	778	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		230	85		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.963		0.950					
Satd. Flow (prot)	0	0	0	0	3343	1553	1736	3471	0	0	3471	1553
Flt Permitted					0.963		0.950					
Satd. Flow (perm)	0	0	0	0	3343	1553	1736	3471	0	0	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						149						153
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	248	71	131	136	2003	0	0	1853	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	319	131	136	2003	0	0	1853	45
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				22.0	22.0
Total Split (s)							67.0				60.0	60.0
Total Split (%)							44.7%				40.0%	40.0%
Maximum Green (s)							61.0				54.0	54.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							Min				Min	Min
Act Effct Green (s)					17.0	17.0	61.0	121.0			54.0	54.0
Actuated g/C Ratio					0.11	0.11	0.41	0.81			0.36	0.36
v/c Ratio					1.27dl	0.43	0.19	0.72			1.48	0.07
Control Delay					85.1	10.3	5.3	17.9			256.9	0.2
Queue Delay					0.0	0.0	1.8	48.7			0.7	0.0
Total Delay					85.1	10.3	7.1	66.5			257.6	0.2
LOS					F	B	A	E			F	A
Approach Delay					63.3			62.7			251.5	
Approach LOS					E			E			F	
Queue Length 50th (ft)					163	0	15	1038			~1311	0
Queue Length 95th (ft)					182	18	m11	m712			#1117	0
Internal Link Dist (ft)		577			393			225			472	
Turn Bay Length (ft)						230	85					100
Base Capacity (vph)					378	308	705	2799			1249	657
Starvation Cap Reductn					0	0	434	1485			0	0
Spillback Cap Reductn					0	0	0	0			186	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.84	0.43	0.50	1.52			1.74	0.07

Intersection Summary

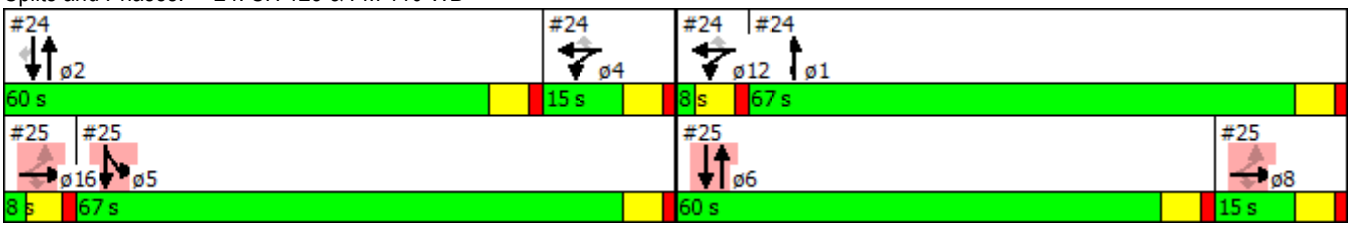
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 142.7 Intersection LOS: F
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	35.0
Total Split (s)	15.0	67.0	60.0	15.0	8.0	8.0
Total Split (%)	10%	45%	40%	10%	5%	5%
Maximum Green (s)	9.0	61.0	54.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 24: SH 123 & FM 110 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	6	62	0	0	0	0	893	69	8	874	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.989				
Flt Protected		0.978								0.950		
Satd. Flow (prot)	0	3461	1583	0	0	0	0	3500	0	1770	3539	0
Flt Permitted		0.978								0.950		
Satd. Flow (perm)	0	3461	1583	0	0	0	0	3500	0	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153					6				
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		618			489			309			305	
Travel Time (s)		14.0			11.1			3.5			3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	10	12	122	0	0	0	0	1757	136	16	1720	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	122	0	0	0	0	1893	0	16	1720	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Detector 1 Position(ft)	0	0	0					0		0	0	
Detector 1 Size(ft)	20	6	20					6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	
Permitted Phases	8 16		8 16									

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16
Permitted Phases						

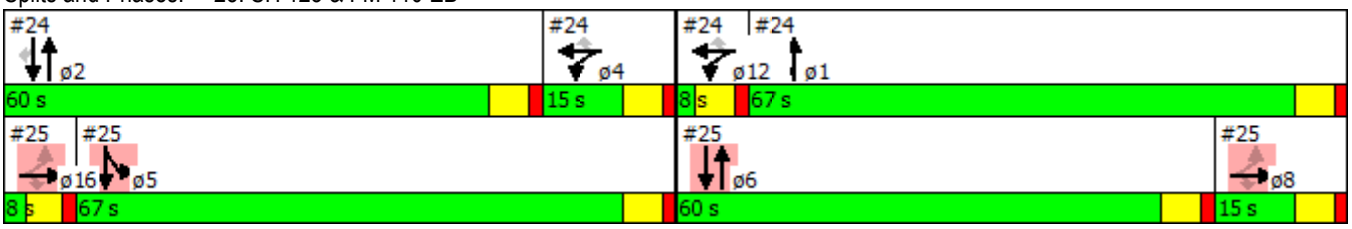
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	8 16	8 16	8 16					6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								22.0		13.0		
Total Split (s)								60.0		67.0		
Total Split (%)								40.0%		44.7%		
Maximum Green (s)								54.0		61.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0		0.0		
Total Lost Time (s)								6.0		6.0		
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								Min		None		
Act Effct Green (s)		17.0	17.0					54.0		61.0	121.0	
Actuated g/C Ratio		0.11	0.11					0.36		0.41	0.81	
v/c Ratio		0.06	0.39					1.50		0.02	0.60	
Control Delay		59.9	7.3					263.2		6.9	9.8	
Queue Delay		0.0	0.0					1.5		0.0	49.0	
Total Delay		59.9	7.3					264.8		6.9	58.8	
LOS		E	A					F		A	E	
Approach Delay		15.4						264.8			58.3	
Approach LOS		B						F			E	
Queue Length 50th (ft)		10	0					~1353		1	887	
Queue Length 95th (ft)		25	33					#1490		m1	m0	
Internal Link Dist (ft)		538			409			229			225	
Turn Bay Length (ft)			240							120		
Base Capacity (vph)		392	315					1263		719	2854	
Starvation Cap Reductn		0	0					359		0	1602	
Spillback Cap Reductn		0	0					288		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.06	0.39					2.09		0.02	1.37	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 160.3 Intersection LOS: F
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: SH 123 & FM 110 EB



Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	35.0
Total Split (s)	67.0	60.0	15.0	15.0	8.0	8.0
Total Split (%)	45%	40%	10%	10%	5%	5%
Maximum Green (s)	61.0	54.0	9.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	529	26	13	367	80	5	21	30	23	7	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.974			0.928			0.934	
Flt Protected		0.996			0.999			0.996			0.981	
Satd. Flow (prot)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Flt Permitted		0.996			0.999			0.996			0.981	
Satd. Flow (perm)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	113	1197	59	29	830	181	11	48	68	52	16	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1369	0	0	1040	0	0	127	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 104.8%	ICU Level of Service G
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1240	52	150	904	79	104	179	271	127	68	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	100		0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.994			0.988				0.850		0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	3433	3497	0	1770	1863	1583	3433	1792	0
Flt Permitted	0.061			0.950			0.476			0.950		
Satd. Flow (perm)	114	3518	0	3433	3497	0	887	1863	1583	3433	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10				140		11	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	64	2466	103	298	1798	157	207	356	539	253	135	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	2569	0	298	1955	0	207	356	539	253	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2						8		8			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	78.0		15.0	78.0		15.0	32.0	32.0	15.0	32.0	
Total Split (%)	10.7%	55.7%		10.7%	55.7%		10.7%	22.9%	22.9%	10.7%	22.9%	
Maximum Green (s)	10.5	72.0		10.5	72.0		10.5	26.0	26.0	10.5	26.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	73.5	72.0		10.5	77.4		38.0	26.0	26.0	10.5	26.0	
Actuated g/C Ratio	0.52	0.51		0.08	0.55		0.27	0.19	0.19	0.08	0.19	
v/c Ratio	0.45	1.42		1.16	1.01		0.68	1.03	1.32	0.98	0.53	
Control Delay	26.9	221.0		161.1	54.0		52.6	111.7	194.5	116.1	54.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	26.9	221.0		161.1	54.0		52.6	111.7	194.5	116.1	54.7	
LOS	C	F		F	D		D	F	F	F	D	
Approach Delay		216.3			68.2			141.1			90.5	
Approach LOS		F			E			F			F	
Queue Length 50th (ft)	28	~1664		~164	~1001		149	~346	~526	120	141	
Queue Length 95th (ft)	55	#1789		#262	#1167		224	#546	#758	#212	222	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100	100		
Base Capacity (vph)	184	1811		257	1938		306	345	407	257	341	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.35	1.42		1.16	1.01		0.68	1.03	1.32	0.98	0.53	

Intersection Summary

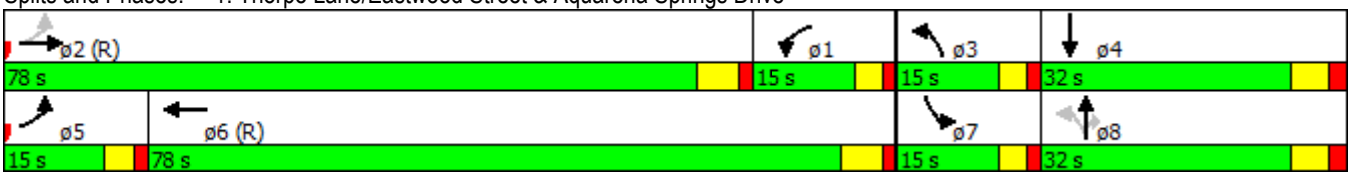
Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.42
Intersection Signal Delay: 142.9 Intersection LOS: F
Intersection Capacity Utilization 115.7% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



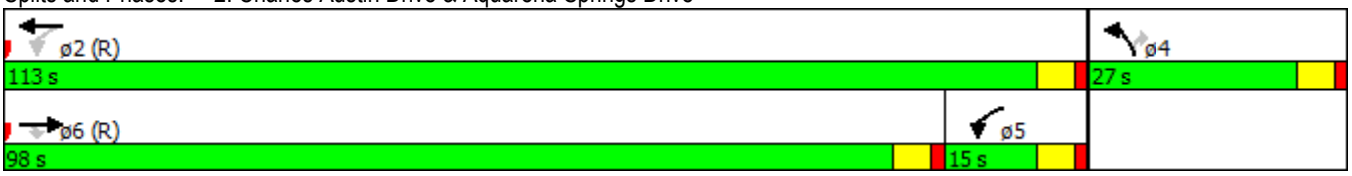
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1270	193	102	1121	241	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	100		100	130
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3505	1568	1752	3505	3400	1568
Flt Permitted			0.039		0.950	
Satd. Flow (perm)	3505	1568	72	3505	3400	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		110				106
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	122%	122%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	2583	393	207	2280	330	197
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2583	393	207	2280	330	197
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	7.0	12.0	7.0	7.0
Minimum Split (s)	24.5	24.5	12.5	21.5	27.5	27.5
Total Split (s)	98.0	98.0	15.0	113.0	27.0	27.0
Total Split (%)	70.0%	70.0%	10.7%	80.7%	19.3%	19.3%
Maximum Green (s)	92.5	92.5	9.5	107.5	21.5	21.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	12.0	12.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	97.1	97.1	112.1	112.1	16.9	16.9
Actuated g/C Ratio	0.69	0.69	0.80	0.80	0.12	0.12
v/c Ratio	1.06	0.35	1.21	0.81	0.80	0.70
Control Delay	43.4	1.7	177.1	11.7	74.8	40.0
Queue Delay	15.7	0.0	0.0	0.4	0.0	0.0
Total Delay	59.2	1.7	177.1	12.1	74.8	40.0
LOS	E	A	F	B	E	D
Approach Delay	51.6			25.8	61.8	
Approach LOS	D			C	E	
Queue Length 50th (ft)	~1357	10	~179	525	153	80
Queue Length 95th (ft)	m997	m23	#344	721	197	159
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)		100	100		100	130
Base Capacity (vph)	2430	1121	171	2806	522	330
Starvation Cap Reductn	84	0	0	0	0	0
Spillback Cap Reductn	0	0	0	160	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.35	1.21	0.86	0.63	0.60

Intersection Summary	
Area Type: Other	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 97 (69%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 41.8	Intersection LOS: D
Intersection Capacity Utilization 95.9%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	134	569	601	774	915	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3471	1553	3367	1553
Flt Permitted	0.090				0.950	
Satd. Flow (perm)	164	3471	3471	1553	3367	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				950		170
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	261	1107	1170	1506	1781	562
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	1107	1170	1506	1781	562
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	76.0	61.0	61.0	64.0	64.0
Total Split (%)	10.7%	54.3%	43.6%	43.6%	45.7%	45.7%
Maximum Green (s)	9.0	70.0	55.0	55.0	58.0	58.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	70.0	70.0	55.0	55.0	58.0	58.0
Actuated g/C Ratio	0.50	0.50	0.39	0.39	0.41	0.41
v/c Ratio	1.43	0.64	0.86	1.27	1.28	0.76
Control Delay	243.6	23.4	40.5	140.2	165.9	31.4
Queue Delay	0.0	0.5	0.0	0.3	0.4	0.0
Total Delay	243.6	23.9	40.5	140.4	166.3	31.4
LOS	F	C	D	F	F	C
Approach Delay		65.8	96.7		134.0	
Approach LOS		E	F		F	
Queue Length 50th (ft)	~270	428	525	~1530	~1055	314
Queue Length 95th (ft)	m#309	m460	587	#1890	#1190	473
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	183	1735	1363	1186	1394	742
Starvation Cap Reductn	0	0	0	71	0	0
Spillback Cap Reductn	0	235	0	0	143	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.74	0.86	1.35	1.42	0.76

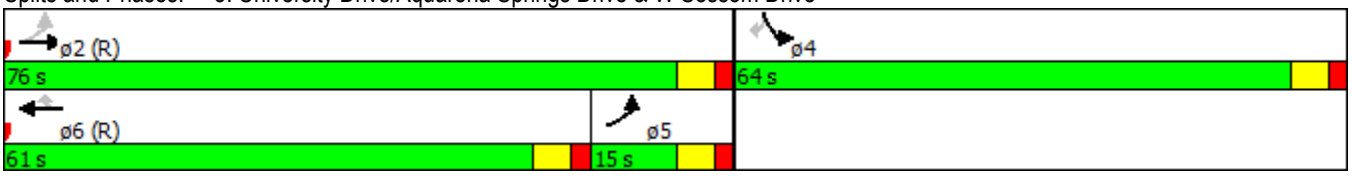
Intersection Summary	
Area Type: Other	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 136 (97%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 103.8	Intersection LOS: F
Intersection Capacity Utilization 110.2%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	478	2	77	9	2	1	31	255	1	0	398	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.990			0.999				0.850
Flt Protected	0.950	0.966			0.963		0.950					
Satd. Flow (prot)	1569	1528	0	0	1598	0	1711	1799	0	0	1863	1583
Flt Permitted	0.950	0.966			0.963		0.104					
Satd. Flow (perm)	1569	1528	0	0	1598	0	187	1799	0	0	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			1							1050
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	972	4	157	10	2	1	63	519	2	0	809	1088
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	573	560	0	0	13	0	63	521	0	0	809	1088
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA			NA	pm+ov
Protected Phases	4	4		3	3			2			6	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	55.0	55.0		15.0	15.0		70.0	70.0		70.0	70.0	55.0
Total Split (%)	39.3%	39.3%		10.7%	10.7%		50.0%	50.0%		50.0%	50.0%	39.3%
Maximum Green (s)	49.5	49.5		9.5	9.5		64.5	64.5		64.5	64.5	49.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	49.5	49.5			5.9		74.5	74.5			74.5	132.8
Actuated g/C Ratio	0.35	0.35			0.04		0.53	0.53			0.53	0.95
v/c Ratio	1.03	1.02			0.19		0.64	0.54			0.82	0.70
Control Delay	91.4	86.8			67.2		58.2	25.4			18.2	8.1
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	91.4	86.8			67.2		58.2	25.4			18.2	8.1
LOS	F	F			E		E	C			B	A
Approach Delay		89.1			67.2			29.0			12.4	
Approach LOS		F			E			C			B	
Queue Length 50th (ft)	~588	~556			11		36	278			229	252
Queue Length 95th (ft)	#816	#787			33		#133	458			#907	214
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	554	549			109		99	957			991	1555
Starvation Cap Reductn	0	0			0		0	0			0	19
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.03	1.02			0.12		0.64	0.54			0.82	0.71

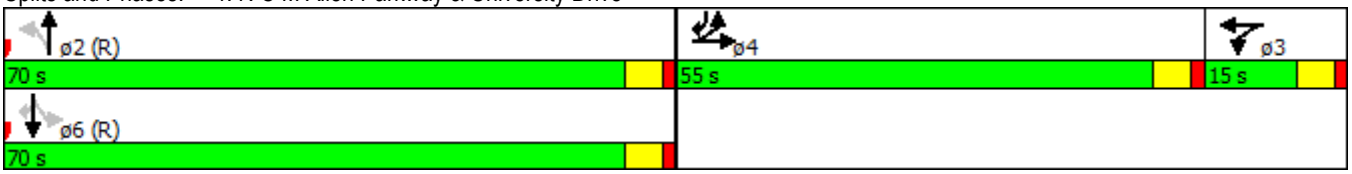
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 39.2 Intersection LOS: D
Intersection Capacity Utilization 102.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	11	9	25	15	248	6	950	4	280	890	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	70		0	145		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981				0.850		0.999			0.989	
Flt Protected		0.967			0.970		0.950			0.950		
Satd. Flow (prot)	0	1767	0	0	1807	1583	1770	3536	0	1770	3500	0
Flt Permitted		0.714			0.767		0.115			0.048		
Satd. Flow (perm)	0	1305	0	0	1429	1583	214	3536	0	89	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				18					14	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	89	22	18	49	30	488	12	1869	8	551	1751	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	79	488	12	1877	0	551	1895	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		8			4	5	1	6		5	2	
Permitted Phases	8			4		4	6			2		

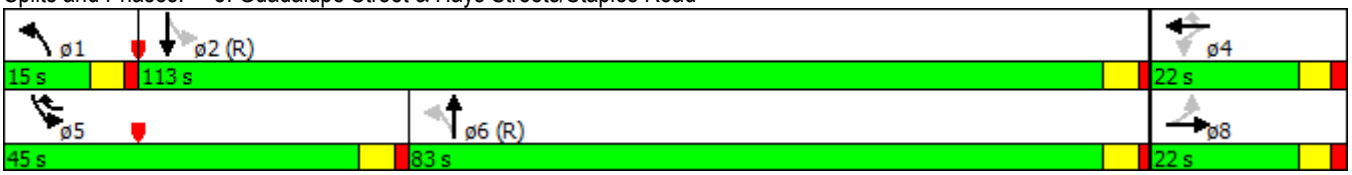
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	8	8		4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5	12.5	12.5	21.5		12.5	21.5	
Total Split (s)	22.0	22.0		22.0	22.0	45.0	15.0	83.0		45.0	113.0	
Total Split (%)	14.7%	14.7%		14.7%	14.7%	30.0%	10.0%	55.3%		30.0%	75.3%	
Maximum Green (s)	16.5	16.5		16.5	16.5	39.5	9.5	77.5		39.5	107.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	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	0.0	
Total Lost Time (s)		5.5			5.5	5.5	5.5	5.5		5.5	5.5	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		15.8			15.8	61.5	84.5	77.5		123.2	118.2	
Actuated g/C Ratio		0.11			0.11	0.41	0.56	0.52		0.82	0.79	
v/c Ratio		0.91			0.52	0.74	0.06	1.03		1.05	0.69	
Control Delay		118.8			76.4	44.2	3.6	49.0		98.7	9.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		118.8			76.4	44.2	3.6	49.0		98.7	9.9	
LOS		F			E	D	A	D		F	A	
Approach Delay		118.8			48.7			48.7			29.9	
Approach LOS		F			D			D			C	
Queue Length 50th (ft)		123			74	388	1	~1032		~545	322	
Queue Length 95th (ft)		#252			133	534	m3	#1152		#781	590	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)						100	70			145		
Base Capacity (vph)		147			157	659	222	1826		523	2759	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.88			0.50	0.74	0.05	1.03		1.05	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 41.3 Intersection LOS: D
Intersection Capacity Utilization 102.8% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road

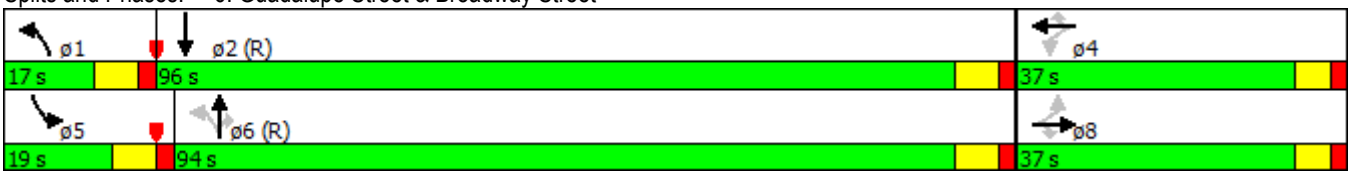


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	62	35	68	39	71	56	901	45	104	868	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		100	100		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	0.95
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	1752	3505	1568	3400	3473	0
Flt Permitted	0.722			0.514			0.063			0.950		
Satd. Flow (perm)	1332	1845	1568	948	1845	1568	116	3505	1568	3400	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			97			73		8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	122%	122%	122%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	102	126	71	93	53	97	114	1832	92	212	1765	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	126	71	93	53	97	114	1832	92	212	1883	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	
Protected Phases		8			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4		4	6		6			
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	12.0	26.0	26.0	12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	17.0	94.0	94.0	19.0	96.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	11.3%	62.7%	62.7%	12.7%	64.0%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0	31.0	10.0	87.0	87.0	12.0	89.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.5	2.5	1.0	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0	24.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	
Act Effct Green (s)	16.8	16.8	16.8	16.8	16.8	16.8	109.6	100.2	100.2	13.0	103.7	
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.73	0.67	0.67	0.09	0.69	
v/c Ratio	0.68	0.61	0.29	0.88	0.26	0.37	0.61	0.78	0.09	0.72	0.78	
Control Delay	85.5	74.9	11.7	123.8	61.6	13.9	33.0	22.1	3.8	72.9	15.4	
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	85.5	74.9	11.7	123.8	61.6	13.9	33.0	22.1	3.8	72.9	15.4	
LOS	F	E	B	F	E	B	C	C	A	E	B	
Approach Delay		63.5			66.4			21.8			21.2	
Approach LOS		E			E			C			C	
Queue Length 50th (ft)	98	119	0	91	48	0	26	616	6	106	381	
Queue Length 95th (ft)	154	177	37	150	88	52	99	879	31	150	439	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100			80			70		100	100		
Base Capacity (vph)	275	381	387	195	381	401	208	2340	1071	310	2403	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.33	0.18	0.48	0.14	0.24	0.55	0.78	0.09	0.68	0.78	

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.6	Intersection LOS: C
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Guadalupe Street & Broadway Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	34	95	34	25	11	44	661	81	28	967	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.890			0.978			0.984				0.850
Flt Protected	0.950				0.976		0.950			0.950		
Satd. Flow (prot)	1752	1642	0	0	1761	0	1752	3449	0	1752	3505	1568
Flt Permitted	0.682				0.312		0.050			0.078		
Satd. Flow (perm)	1258	1642	0	0	563	0	92	3449	0	144	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			5			15				125
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	362	71	198	39	29	13	92	1375	169	58	2012	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	362	269	0	0	81	0	92	1544	0	58	2012	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		16.5	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	25.0	25.0		16.0	16.0		15.0	84.0		15.0	84.0	84.0
Total Split (%)	17.9%	17.9%		11.4%	11.4%		10.7%	60.0%		10.7%	60.0%	60.0%
Maximum Green (s)	19.0	19.0		9.5	9.5		8.5	77.5		8.5	77.5	77.5
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	35.0	35.0			9.5		87.8	81.2		85.5	78.1	78.1
Actuated g/C Ratio	0.25	0.25			0.07		0.63	0.58		0.61	0.56	0.56
v/c Ratio	0.95	0.57			1.93		0.61	0.77		0.34	1.03	0.33
Control Delay	88.0	36.6			523.5		39.9	26.2		20.3	79.7	24.7
Queue Delay	62.1	0.0			0.0		0.0	14.9		0.0	28.7	1.9
Total Delay	150.2	36.6			523.5		39.9	41.1		20.3	108.4	26.5
LOS	F	D			F		D	D		C	F	C
Approach Delay		101.7			523.5			41.0			95.7	
Approach LOS		F			F			D			F	
Queue Length 50th (ft)	314	149			~109		32	557		32	~1053	187
Queue Length 95th (ft)	#496	232			#215		89	631		53	#1121	257
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	381	472			42		158	2007		186	1954	929
Starvation Cap Reductn	0	0			0		0	0		0	391	464
Spillback Cap Reductn	277	0			0		0	482		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	3.48	0.57			1.93		0.58	1.01		0.31	1.29	0.65

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.93
Intersection Signal Delay: 84.9 Intersection LOS: F
Intersection Capacity Utilization 101.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	72	14	52	109	445	28	254	58	291	350	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983				0.850		0.972			0.983	
Flt Protected		0.988			0.984		0.950			0.950		
Satd. Flow (prot)	0	1792	0	0	1815	1568	1752	3407	0	1752	3445	0
Flt Permitted		0.739			0.773		0.357			0.229		
Satd. Flow (perm)	0	1340	0	0	1426	1568	659	3407	0	422	3445	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				467		23			15	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	55	142	28	102	214	875	55	500	114	573	689	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	316	875	55	614	0	573	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	46.0	46.0		46.0	46.0	46.0	15.0	42.0		32.0	59.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%	38.3%	12.5%	35.0%		26.7%	49.2%	
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	9.0	36.0		26.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		41.0			41.0	41.0	42.2	35.0		67.0	56.4	
Actuated g/C Ratio		0.34			0.34	0.34	0.35	0.29		0.56	0.47	
v/c Ratio		0.49			0.65	1.04	0.19	0.61		1.10	0.48	
Control Delay		34.7			44.4	63.0	16.5	38.2		92.4	23.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		34.7			44.4	63.0	16.5	38.2		92.4	23.2	
LOS		C			D	E	B	D		F	C	
Approach Delay		34.7			58.0			36.4			52.5	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)		133			190	~384	19	207		~383	215	
Queue Length 95th (ft)		212			m251	m#711	38	270		#607	276	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		461			487	843	323	1038		523	1627	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.49			0.65	1.04	0.17	0.59		1.10	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 13 (11%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 50.1 Intersection LOS: D
Intersection Capacity Utilization 105.2% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Hunter Road & McCarty Lane

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	35	138	20	25	8	164	373	0	7	497	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980						0.985	
Flt Protected		0.966			0.981		0.950			0.950		
Satd. Flow (prot)	0	1799	1583	0	1791	0	1770	1863	0	1770	1835	0
Flt Permitted		0.712			0.409		0.068			0.288		
Satd. Flow (perm)	0	1326	1583	0	747	0	127	1863	0	536	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169		8						9	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	164	66	260	38	47	15	309	703	0	13	937	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	260	0	100	0	309	703	0	13	1044	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		10.0	15.0		10.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		15.0	21.0		15.0	21.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		18.0	62.0		15.0	59.0	
Total Split (%)	23.0%	23.0%	23.0%	23.0%	23.0%		18.0%	62.0%		15.0%	59.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		13.0	57.0		10.0	54.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		18.0	18.0		18.0		71.6	69.0		56.0	54.0	
Actuated g/C Ratio		0.18	0.18		0.18		0.72	0.69		0.56	0.54	
v/c Ratio		0.97	0.61		0.71		1.02	0.55		0.03	1.05	
Control Delay		92.9	20.8		63.7		91.5	10.9		9.4	54.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		92.9	20.8		63.7		91.5	10.9		9.4	54.8	
LOS		F	C		E		F	B		A	D	
Approach Delay		54.6			63.7			35.5			54.2	
Approach LOS		D			E			D			D	
Queue Length 50th (ft)		147	51		56		~151	173		4	~756	
Queue Length 95th (ft)		#297	135		#141		#331	419		m4	m565	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		238	423		141		304	1285		423	995	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.97	0.61		0.71		1.02	0.55		0.03	1.05	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 47.5 Intersection LOS: D
Intersection Capacity Utilization 101.3% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	111	91	16	23	3	61	450	11	8	577	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.990			0.996				0.850
Flt Protected	0.950				0.982		0.950				0.999	
Satd. Flow (prot)	1787	1753	0	0	1829	0	1787	1874	0	0	1879	1599
Flt Permitted	0.590				0.739		0.079				0.985	
Satd. Flow (perm)	1110	1753	0	0	1376	0	149	1874	0	0	1853	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			3			2				334
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	530	211	173	30	44	6	116	857	21	15	1099	526
Shared Lane Traffic (%)												
Lane Group Flow (vph)	530	384	0	0	80	0	116	878	0	0	1114	526
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			24			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	9.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	15.0	36.0		21.0	21.0		15.0	64.0		49.0	49.0	49.0
Total Split (%)	15.0%	36.0%		21.0%	21.0%		15.0%	64.0%		49.0%	49.0%	49.0%
Maximum Green (s)	10.0	31.0		16.0	16.0		10.0	59.0		44.0	44.0	44.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)		7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)		12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)		0						0		0	0	0
Act Effct Green (s)	31.0	31.0			13.8		59.0	59.0			46.6	46.6
Actuated g/C Ratio	0.31	0.31			0.14		0.59	0.59			0.47	0.47
v/c Ratio	1.21	0.67			0.42		0.56	0.79			1.29	0.57
Control Delay	144.9	33.3			43.6		26.2	16.3			166.2	9.5
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	144.9	33.3			43.6		26.2	16.3			166.2	9.5
LOS	F	C			D		C	B			F	A
Approach Delay		98.0			43.6			17.5			116.0	
Approach LOS		F			D			B			F	
Queue Length 50th (ft)	~432	189			44		22	271			~909	73
Queue Length 95th (ft)	#634	294			90		m68	m240			#1189	183
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	439	573			222		251	1106			863	923
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.21	0.67			0.36		0.46	0.79			1.29	0.57

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 82.9 Intersection LOS: F
Intersection Capacity Utilization 134.6% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	1243	77	129	1343	103	209	185	131	136	347	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.989			0.938			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1864	0	1787	3535	0	1421	1765	0	1787	1840	0
Flt Permitted	0.073			0.064			0.250			0.258		
Satd. Flow (perm)	137	1864	0	120	3535	0	374	1765	0	485	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			12			27			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)							21		20			
Adj. Flow (vph)	42	1351	84	140	1460	112	227	201	142	148	377	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	1435	0	140	1572	0	227	343	0	148	441	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0		4.0	4.0	
Minimum Split (s)	8.0	24.5		8.0	24.5		8.5	24.5		9.0	20.5	
Total Split (s)	8.0	65.0		8.0	65.0		15.0	20.0		15.0	20.0	
Total Split (%)	7.4%	60.2%		7.4%	60.2%		13.9%	18.5%		13.9%	18.5%	
Maximum Green (s)	4.0	60.5		4.0	60.5		10.5	15.5		10.5	15.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	1.0		0.5	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	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2		3.0	3.0	
Recall Mode	None	C-Max		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		15.0			15.0			15.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	65.0	60.5		66.6	63.7		26.5	16.0		25.5	15.5	
Actuated g/C Ratio	0.60	0.56		0.62	0.59		0.25	0.15		0.24	0.14	
v/c Ratio	0.29	1.37		1.04	0.75		1.18	1.21		0.63	1.63	
Control Delay	12.6	197.9		109.8	19.8		154.1	159.3		43.5	332.4	
Queue Delay	0.0	0.5		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.6	198.4		109.8	19.8		154.1	159.3		43.5	332.4	
LOS	B	F		F	B		F	F		D	F	
Approach Delay		193.1			27.1			157.3			259.8	
Approach LOS		F			C			F			F	
Queue Length 50th (ft)	10	~1327		~55	426		~149	~280		80	~442	
Queue Length 95th (ft)	23	#1593		#137	524		#301	#463		136	#641	
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	143	1046		135	2089		193	284		243	270	
Starvation Cap Reductn	0	110		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.29	1.53		1.04	0.75		1.18	1.21		0.61	1.63	

Intersection Summary

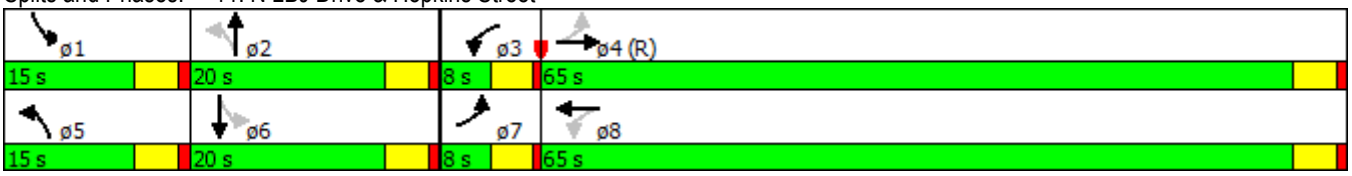
Area Type: Other
Cycle Length: 108
Actuated Cycle Length: 108
Offset: 91 (84%), Referenced to phase 4:EBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.63
Intersection Signal Delay: 132.1 Intersection LOS: F
Intersection Capacity Utilization 125.2% ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: N LBJ Drive & Hopkins Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	1108	115	86	1473	69	140	123	88	204	520	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.993			0.937			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1855	0	1787	3549	0	1787	1763	0	1555	1840	0
Flt Permitted	0.054			0.053			0.133			0.309		
Satd. Flow (perm)	102	1855	0	100	3549	0	250	1763	0	506	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			5			21			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)										6		6
Adj. Flow (vph)	67	1259	131	98	1674	78	159	140	100	232	591	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	1390	0	98	1752	0	159	240	0	232	692	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.19	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	8.0	23.5		8.0	23.5		9.5	23.5		9.5	23.5	
Total Split (s)	9.0	85.0		8.0	84.0		18.0	35.6		21.4	39.0	
Total Split (%)	6.0%	56.7%		5.3%	56.0%		12.0%	23.7%		14.3%	26.0%	
Maximum Green (s)	5.0	79.5		4.0	78.5		12.5	30.1		15.9	33.5	
Yellow Time (s)	3.5	4.0		3.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.5		0.5	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		0.0	0.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	81.0	79.5		80.0	78.5		42.3	30.1		49.7	33.8	
Actuated g/C Ratio	0.54	0.53		0.53	0.52		0.28	0.20		0.33	0.23	
v/c Ratio	0.60	1.41		1.00	0.94		0.82	0.65		0.83	1.66	
Control Delay	41.0	221.1		141.5	44.9		67.6	59.3		65.0	341.1	
Queue Delay	0.0	0.0		0.0	45.2		0.0	0.0		0.0	0.0	
Total Delay	41.0	221.1		141.5	90.1		67.6	59.3		65.0	341.1	
LOS	D	F		F	F		E	E		E	F	
Approach Delay		212.8			92.8			62.6			271.8	
Approach LOS		F			F			E			F	
Queue Length 50th (ft)	30	~1829		46	826		112	200		175	~987	
Queue Length 95th (ft)	#71	#2028		#168	910		#212	289		#293	#1200	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	111	985		98	1859		199	370		278	418	
Starvation Cap Reductn	0	0		0	594		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.60	1.41		1.00	1.38		0.80	0.65		0.83	1.66	

Intersection Summary

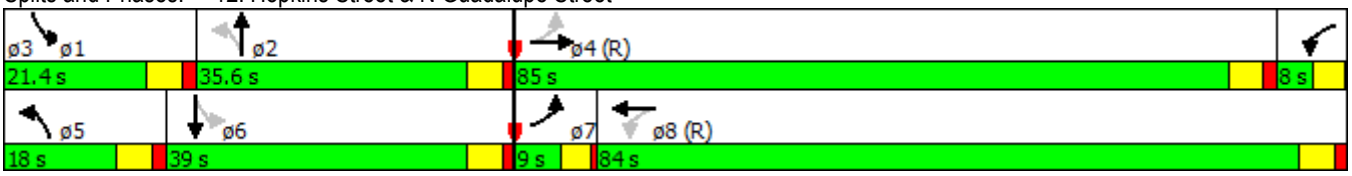
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 163.7 Intersection LOS: F
Intersection Capacity Utilization 125.7% ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



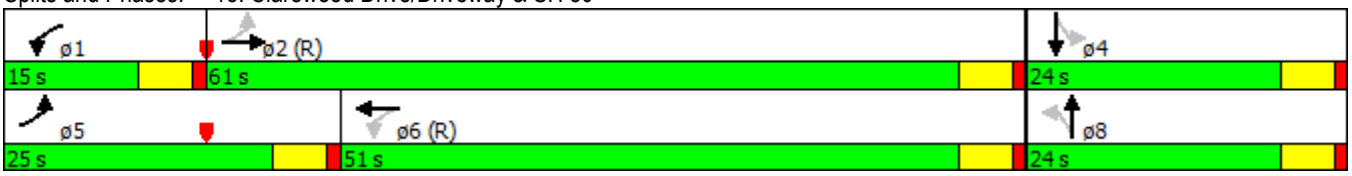
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	1250	33	36	1079	19	40	40	26	81	39	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.967			0.946	
Flt Protected	0.950			0.950				0.982			0.980	
Satd. Flow (prot)	1719	4920	0	1719	4925	0	0	1718	0	0	1678	0
Flt Permitted	0.073			0.080				0.729			0.769	
Satd. Flow (perm)	132	4920	0	145	4925	0	0	1276	0	0	1316	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			15			30	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	341	2433	64	70	2100	37	52	52	34	87	42	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	2497	0	70	2137	0	0	138	0	0	216	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	13.0	24.0		13.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	25.0	61.0		15.0	51.0		24.0	24.0		24.0	24.0	
Total Split (%)	25.0%	61.0%		15.0%	51.0%		24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	20.0	56.0		10.0	46.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	72.8	63.1		56.8	49.9			17.2			17.2	
Actuated g/C Ratio	0.73	0.63		0.57	0.50			0.17			0.17	
v/c Ratio	0.90	0.80		0.37	0.87			0.60			0.86	
Control Delay	53.1	18.0		16.5	28.3			44.8			65.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	53.1	18.0		16.5	28.3			44.8			65.5	
LOS	D	B		B	C			D			E	
Approach Delay		22.2			27.9			44.8			65.5	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	160	446		12	460			71			114	
Queue Length 95th (ft)	#309	554		35	#586			135			#235	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	413	3104		244	2458			254			274	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.83	0.80		0.29	0.87			0.54			0.79	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 83.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	10	40	200	1200	0	0	700	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.976		0.950					
Satd. Flow (prot)	0	0	0	0	1766	1538	1719	3438	0	0	3438	1538
Flt Permitted					0.976		0.950					
Satd. Flow (perm)	0	0	0	0	1766	1538	1719	3438	0	0	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						183						530
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	0	11	11	44	222	1333	0	0	778	1000
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	22	44	222	1333	0	0	778	1000
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				16.0	16.0
Total Split (s)							45.0				48.0	48.0
Total Split (%)							36.0%				38.4%	38.4%
Maximum Green (s)							39.0				42.0	42.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							None				None	None
Act Effct Green (s)					24.4	24.4	36.6	84.6			42.0	42.0
Actuated g/C Ratio					0.20	0.20	0.29	0.68			0.34	0.34
v/c Ratio					0.06	0.10	0.44	0.57			0.67	1.15
Control Delay					40.5	0.5	18.9	10.0			39.1	100.7
Queue Delay					0.0	0.0	70.0	50.6			0.8	0.0
Total Delay					40.5	0.5	88.9	60.6			39.9	100.7
LOS					D	A	F	E			D	F
Approach Delay					13.8			64.6			74.1	
Approach LOS					B			E			E	
Queue Length 50th (ft)					14	0	88	248			283	~649
Queue Length 95th (ft)					38	0	m84	m238			354	#907
Internal Link Dist (ft)		215			265			41			235	
Turn Bay Length (ft)												100
Base Capacity (vph)					344	447	536	2326			1155	868
Starvation Cap Reductn					0	0	389	1434			0	0
Spillback Cap Reductn					0	0	0	0			143	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.06	0.10	1.51	1.49			0.77	1.15

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 68.6 Intersection LOS: E
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

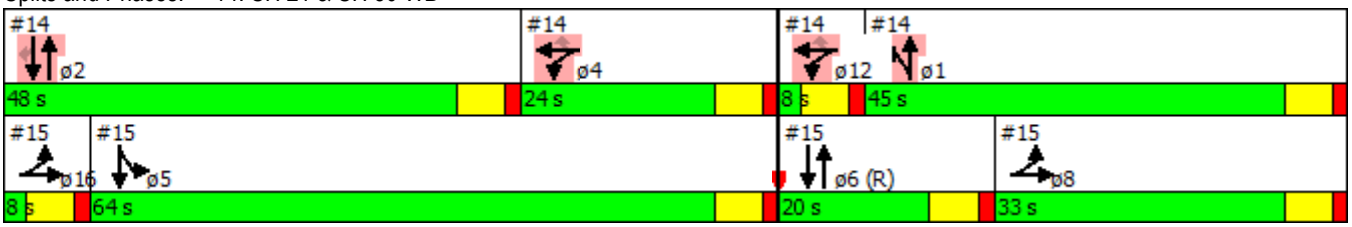
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	24.0	13.0	20.0	22.0	22.0	22.0
Total Split (s)	24.0	64.0	20.0	33.0	8.0	8.0
Total Split (%)	19%	51%	16%	26%	6%	6%
Maximum Green (s)	18.0	58.0	14.0	27.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	2.0	2.0
Recall Mode	None	None	C-Max	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: SH 21 & SH 80 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	800	5	100	0	0	0	0	600	100	100	610	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.858						0.979				
Flt Protected	0.950										0.993	
Satd. Flow (prot)	3273	1594	0	0	0	0	0	3465	0	0	3489	0
Flt Permitted	0.950										0.532	
Satd. Flow (perm)	3273	1594	0	0	0	0	0	3465	0	0	1869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		109						12				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			329			202			121	
Travel Time (s)		6.8			7.5			4.6			2.8	
Peak Hour Factor	0.86	0.86	0.92	0.92	0.86	0.86	0.92	0.92	0.92	0.86	0.92	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	2%	2%	7%	7%	2%	2%	2%	7%	2%	7%
Adj. Flow (vph)	930	6	109	0	0	0	0	652	109	116	663	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	930	115	0	0	0	0	0	761	0	0	779	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	8 16	8 16						6		5	5 6	

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases												
Detector Phase	8 16	8 16						6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								20.0		13.0		
Total Split (s)								20.0		64.0		
Total Split (%)								16.0%		51.2%		
Maximum Green (s)								14.0		58.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								6.0				
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Max		None		
Act Effct Green (s)	35.0	35.0						25.2			72.0	
Actuated g/C Ratio	0.28	0.28						0.20			0.58	
v/c Ratio	1.02	0.22						1.08			0.59	
Control Delay	78.2	8.1						102.6			5.8	
Queue Delay	13.0	0.0						12.4			0.4	
Total Delay	91.2	8.1						115.0			6.2	
LOS	F	A						F			A	
Approach Delay		82.1						115.0			6.2	
Approach LOS		F						F			A	
Queue Length 50th (ft)	~398	4						~396			0	
Queue Length 95th (ft)	#496	44						#526			0	
Internal Link Dist (ft)		217			249			122			41	
Turn Bay Length (ft)	100											
Base Capacity (vph)	916	524						707			1629	
Starvation Cap Reductn	0	0						0			365	
Spillback Cap Reductn	34	0						242			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.05	0.22						1.64			0.62	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 68.9 Intersection LOS: E
Intersection Capacity Utilization 77.4% ICU Level of Service D
Analysis Period (min) 15

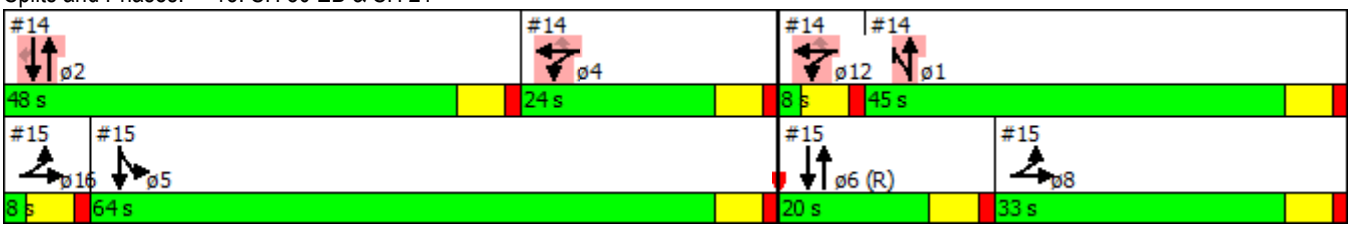
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	16.0	24.0	22.0	22.0	22.0
Total Split (s)	45.0	48.0	24.0	33.0	8.0	8.0
Total Split (%)	36%	38%	19%	26%	6%	6%
Maximum Green (s)	39.0	42.0	18.0	27.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 15: SH 80 EB & SH 21



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	351	338	432	72	114	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				38		86
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	154%	154%	154%	154%	154%	154%
Adj. Flow (vph)	614	592	756	126	200	791
Shared Lane Traffic (%)						
Lane Group Flow (vph)	614	592	756	126	200	791
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template		Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		3	5
Permitted Phases				6		3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0	10.0	10.0	5.0
Minimum Split (s)	10.5	25.5	21.5	21.5	21.5	10.5
Total Split (s)	29.0	86.0	57.0	57.0	44.0	29.0
Total Split (%)	22.3%	66.2%	43.8%	43.8%	33.8%	22.3%
Maximum Green (s)	23.5	80.5	51.5	51.5	38.5	23.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	23.5	80.6	51.6	51.6	16.5	45.5
Actuated g/C Ratio	0.22	0.75	0.48	0.48	0.15	0.42
v/c Ratio	0.82	0.43	0.85	0.16	0.74	1.10
Control Delay	51.3	6.8	36.7	12.6	60.6	94.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	6.8	36.7	12.6	60.6	94.1
LOS	D	A	D	B	E	F
Approach Delay		29.4	33.3		87.4	
Approach LOS		C	C		F	
Queue Length 50th (ft)	209	129	446	33	134	~590
Queue Length 95th (ft)	#309	230	#724	73	206	#798
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	747	1389	888	775	631	716
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.43	0.85	0.16	0.32	1.10

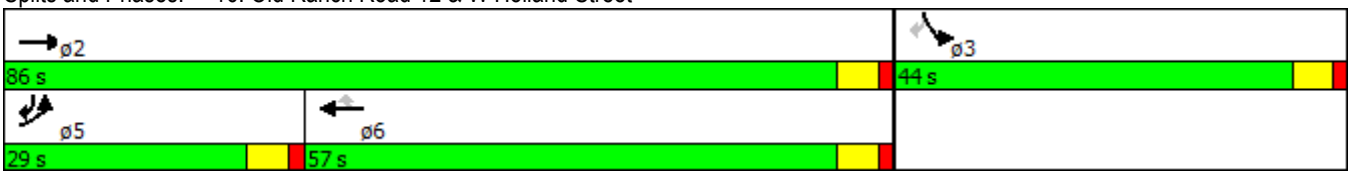
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 108.1
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 49.2 Intersection LOS: D
Intersection Capacity Utilization 87.3% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	583	32	152	456	280	79	16	45	252	26	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		100	65		100	0		0	100		100
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.992				0.850			0.850			0.850
Flt Protected	0.950			0.950				0.960		0.950	0.961	
Satd. Flow (prot)	1736	3443	0	1736	1827	1553	0	1754	1553	1649	1668	1553
Flt Permitted	0.088			0.079				0.576		0.950	0.432	
Satd. Flow (perm)	161	3443	0	144	1827	1553	0	1052	1553	1649	750	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				163			155			155
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	259	1199	66	313	938	576	110	22	62	518	53	144
Shared Lane Traffic (%)										45%		
Lane Group Flow (vph)	259	1265	0	313	938	576	0	132	62	285	286	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6		6	8		8			4
Detector Phase	5	2		1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.0	27.0		14.0	21.0	21.0	12.0	26.0	26.0	12.0	21.0	21.0
Total Split (s)	15.0	50.0		22.0	57.0	57.0	15.0	26.0	26.0	22.0	33.0	33.0
Total Split (%)	12.5%	41.7%		18.3%	47.5%	47.5%	12.5%	21.7%	21.7%	18.3%	27.5%	27.5%
Maximum Green (s)	10.0	45.0		17.0	52.0	52.0	10.0	21.0	21.0	17.0	28.0	28.0
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	59.1	45.5		70.4	52.0	52.0		17.4	17.4	17.0	17.0	39.4
Actuated g/C Ratio	0.49	0.38		0.59	0.43	0.43		0.14	0.14	0.14	0.14	0.33
v/c Ratio	1.01	0.97		0.89	1.19	0.75		0.87	0.17	1.22	1.21	0.23
Control Delay	93.3	54.8		61.6	128.4	27.3		93.9	1.1	176.0	171.7	4.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	93.3	54.8		61.6	128.4	27.3		93.9	1.1	176.0	171.7	4.4
LOS	F	D		E	F	C		F	A	F	F	A
Approach Delay		61.3			85.1			64.2			139.7	
Approach LOS		E			F			E			F	
Queue Length 50th (ft)	~183	502		192	~874	272		99	0	~285	~285	0
Queue Length 95th (ft)	#362	#634		#375	#1083	405		#187	0	#454	#452	35
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65		100				100		100
Base Capacity (vph)	257	1309		350	791	765		184	399	233	236	614
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	0
Reduced v/c Ratio	1.01	0.97		0.89	1.19	0.75		0.72	0.16	1.22	1.21	0.23

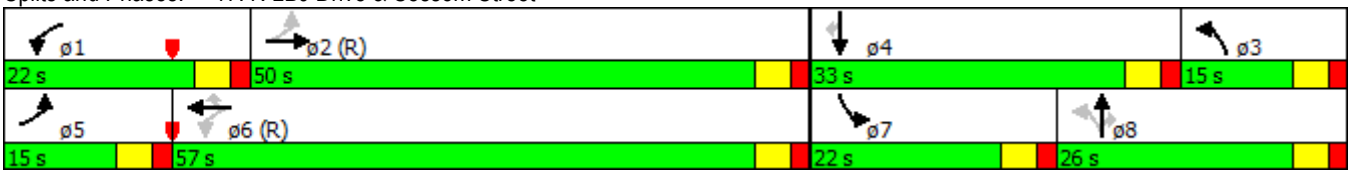
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 84.8 Intersection LOS: F
Intersection Capacity Utilization 89.1% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: N LBJ Drive & Sessom Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	570	188	65	625	73	162	71	101	29	32	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.984			0.912			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3408	0	1770	3483	0	1770	1699	0	1770	1654	0
Flt Permitted	0.058			0.059			0.188			0.514		
Satd. Flow (perm)	108	3408	0	110	3483	0	350	1699	0	957	1654	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			11			46			84	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	143	1134	374	129	1243	145	322	141	201	58	64	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	1508	0	129	1388	0	322	342	0	58	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	76.0		15.0	75.0		31.0	44.0		15.0	28.0	
Total Split (%)	10.7%	50.7%		10.0%	50.0%		20.7%	29.3%		10.0%	18.7%	
Maximum Green (s)	10.0	70.0		9.0	69.1		25.5	38.5		9.5	22.5	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	79.9	70.2		78.1	69.3		53.5	42.5		31.5	23.5	
Actuated g/C Ratio	0.53	0.47		0.52	0.46		0.36	0.28		0.21	0.16	
v/c Ratio	0.87	0.93		0.84	0.86		0.90	0.67		0.24	0.78	
Control Delay	87.0	40.3		78.1	37.8		67.7	49.3		36.5	57.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.0	40.3		78.1	37.8		67.7	49.3		36.5	57.2	
LOS	F	D		E	D		E	D		D	E	
Approach Delay		44.3			41.3			58.2			53.4	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	114	333		85	673		247	265		38	166	
Queue Length 95th (ft)	m#207	#694		m#178	769		#414	390		72	#304	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	168	1615		156	1616		366	513		261	329	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.85	0.93		0.83	0.86		0.88	0.67		0.22	0.78	

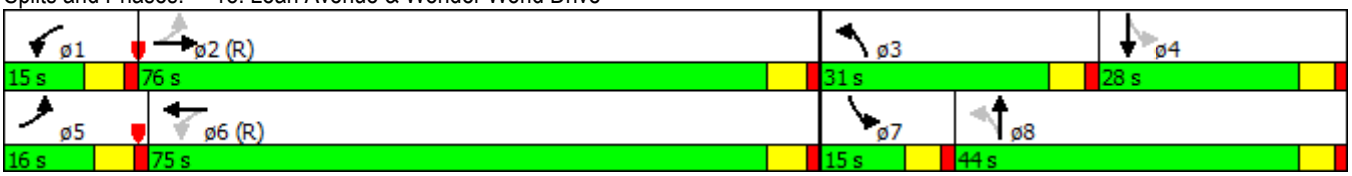
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 46.1 Intersection LOS: D
Intersection Capacity Utilization 95.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Leah Avenue & Wonder World Drive



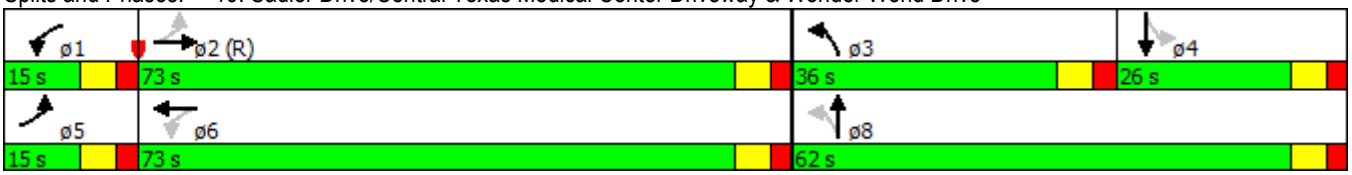
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	538	115	30	394	3	179	3	43	10	1	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.999			0.860			0.895	
Flt Protected	0.950			0.950			0.950				0.990	
Satd. Flow (prot)	1829	3447	0	1829	3536	0	1770	1602	0	0	1650	0
Flt Permitted	0.286			0.105			0.514				0.904	
Satd. Flow (perm)	551	3447	0	202	3536	0	957	1602	0	0	1507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			1			86			48	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			1704			240			186	
Travel Time (s)		23.2			25.8			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	122%	122%	122%
Adj. Flow (vph)	36	1070	229	60	784	6	356	6	86	13	1	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1299	0	60	790	0	356	92	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	15.0	73.0		15.0	73.0		36.0	62.0		26.0	26.0	
Total Split (%)	10.0%	48.7%		10.0%	48.7%		24.0%	41.3%		17.3%	17.3%	
Maximum Green (s)	8.5	66.5		8.5	66.5		29.5	55.5		19.5	19.5	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	C-Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.8	79.3		87.4	80.1		45.2	45.2			15.0	
Actuated g/C Ratio	0.57	0.53		0.58	0.53		0.30	0.30			0.10	
v/c Ratio	0.09	0.71		0.28	0.42		0.81	0.17			0.32	
Control Delay	18.5	31.0		17.4	24.3		60.0	8.2			26.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	18.5	31.0		17.4	24.3		60.0	8.2			26.8	
LOS	B	C		B	C		E	A			C	
Approach Delay		30.7			23.8			49.3			26.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	16	352		26	273		284	4			13	
Queue Length 95th (ft)	m17	m375		47	331		398	44			61	
Internal Link Dist (ft)		1451			1624			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	390	1833		216	1889		457	646			237	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.09	0.71		0.28	0.42		0.78	0.14			0.26	

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 31.5	Intersection LOS: C
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



20: S IH 35 Frontage Road & McCarty Lane

2035 Recommnedations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	218	116	108	320	0	0	0	0	145	160	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	110		0	0		0	100		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95
Frt			0.850								0.921	
Flt Protected				0.950						0.950	0.998	
Satd. Flow (prot)	0	1845	1568	1752	1845	0	0	0	0	1595	3086	0
Flt Permitted				0.950						0.950	0.998	
Satd. Flow (perm)	0	1845	1568	1752	1845	0	0	0	0	1595	3086	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191								208	
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	420	223	208	616	0	0	0	0	279	308	372
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	420	223	208	616	0	0	0	0	251	708	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

20: S IH 35 Frontage Road & McCarty Lane

2035 Recommnedations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		22.0	22.0	13.0								
Total Split (s)		32.0	32.0	58.0								
Total Split (%)		26.7%	26.7%	48.3%								
Maximum Green (s)		26.0	26.0	52.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		C-Min	C-Min	Min								
Act Effct Green (s)		26.3	26.3	51.7	84.0					24.0	24.0	
Actuated g/C Ratio		0.22	0.22	0.43	0.70					0.20	0.20	
v/c Ratio		1.04	0.45	0.28	0.48					0.79	0.90	
Control Delay		84.0	20.3	8.0	1.2					64.0	49.1	
Queue Delay		20.5	0.0	2.0	9.2					0.0	0.1	
Total Delay		104.5	20.3	10.1	10.4					64.0	49.2	
LOS		F	C	B	B					E	D	
Approach Delay		75.3			10.3						53.1	
Approach LOS		E			B						D	
Queue Length 50th (ft)		~361	70	19	0					204	216	
Queue Length 95th (ft)		m#381	m81	m27	m0					#346	#333	
Internal Link Dist (ft)		3294			206			422			301	
Turn Bay Length (ft)			100	110						100		
Base Capacity (vph)		404	493	759	1278					319	783	
Starvation Cap Reductn		0	0	412	623					0	0	
Spillback Cap Reductn		21	0	0	0					0	1	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		1.10	0.45	0.60	0.94					0.79	0.91	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 44.4 Intersection LOS: D
Intersection Capacity Utilization 92.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

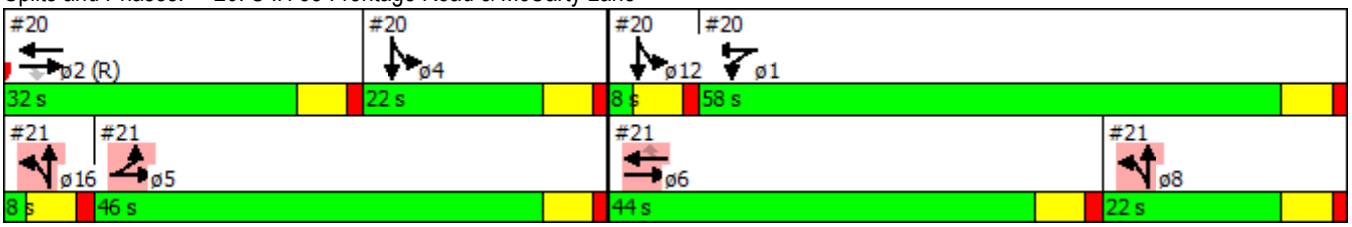
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	46.0	44.0	22.0	8.0	8.0
Total Split (%)	18%	38%	37%	18%	7%	7%
Maximum Green (s)	16.0	40.0	38.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: S IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	226	0	0	300	137	128	141	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		150	100		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.955				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1752	1845	0	0	1845	1568	1752	3347	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1752	1845	0	0	1845	1568	1752	3347	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						220		50				
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	288	476	0	0	631	288	269	297	128	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	476	0	0	631	288	269	425	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

21: N IH 35 Frontage Road & McCarty Lane

2035 Recommnedations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						6						
Detector Phase	5	5 6			6	6	8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0	10.0						
Minimum Split (s)	13.0				22.0	22.0						
Total Split (s)	46.0				44.0	44.0						
Total Split (%)	38.3%				36.7%	36.7%						
Maximum Green (s)	40.0				38.0	38.0						
Yellow Time (s)	4.5				4.5	4.5						
All-Red Time (s)	1.5				1.5	1.5						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	6.0				6.0	6.0						
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	2.0				2.5	2.5						
Recall Mode	None				Min	Min						
Act Effct Green (s)	40.0	84.0			38.0	38.0	24.0	24.0				
Actuated g/C Ratio	0.33	0.70			0.32	0.32	0.20	0.20				
v/c Ratio	0.49	0.37			1.08	0.45	0.77	0.60				
Control Delay	17.1	1.9			100.3	10.7	61.1	42.3				
Queue Delay	6.4	5.8			7.7	0.0	0.0	0.0				
Total Delay	23.6	7.7			108.0	10.7	61.1	42.3				
LOS	C	A			F	B	E	D				
Approach Delay		13.7			77.5			49.6				
Approach LOS		B			E			D				
Queue Length 50th (ft)	62	10			~546	38	199	140				
Queue Length 95th (ft)	m95	m10			#717	99	#296	184				
Internal Link Dist (ft)		206			642			455			336	
Turn Bay Length (ft)	110					150	100					
Base Capacity (vph)	584	1291			584	646	337	685				
Starvation Cap Reductn	240	745			0	0	0	0				
Spillback Cap Reductn	0	0			14	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.84	0.87			1.11	0.45	0.80	0.62				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 48.9 Intersection LOS: D
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

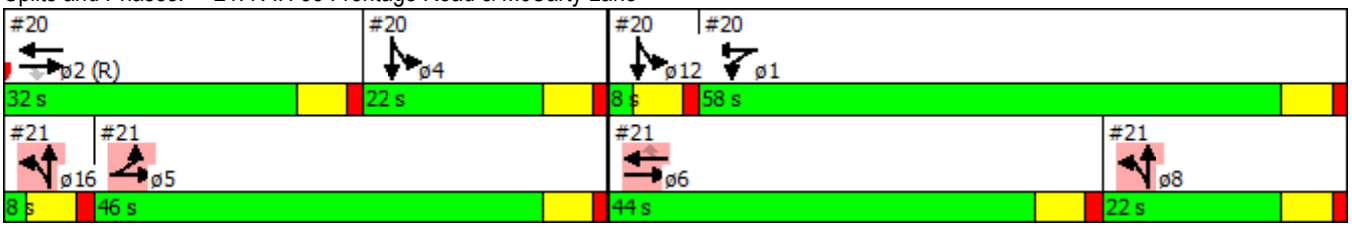
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	58.0	32.0	22.0	22.0	8.0	8.0
Total Split (%)	48%	27%	18%	18%	7%	7%
Maximum Green (s)	52.0	26.0	16.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	C-Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: N IH 35 Frontage Road & McCarty Lane



22: S IH 35 Frontage Road & Wonder World Drive

2035 Recommnedations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1191	335	224	723	0	0	0	0	588	115	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	2		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.965	
Satd. Flow (prot)	0	5036	1568	3400	3505	0	0	0	0	1507	4593	1568
Flt Permitted				0.950						0.950	0.965	
Satd. Flow (perm)	0	5036	1568	3400	3505	0	0	0	0	1507	4593	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189									153
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	2369	666	446	1438	0	0	0	0	1170	229	1305
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	2369	666	446	1438	0	0	0	0	585	814	1305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									4 12
Detector Phase		2	2	1	1 2					4 12	4 12	4 12
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		42.0	42.0	57.0								
Total Split (%)		28.0%	28.0%	38.0%								
Maximum Green (s)		36.0	36.0	51.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		36.0	36.0	51.0	93.0					45.0	45.0	45.0
Actuated g/C Ratio		0.24	0.24	0.34	0.62					0.30	0.30	0.30
v/c Ratio		1.96	1.28	0.39	0.66					1.29	1.17dl	2.26
Control Delay		465.3	173.9	15.8	7.9					189.9	46.8	595.6
Queue Delay		0.7	0.0	48.6	49.9					0.0	0.0	0.0
Total Delay		466.0	173.9	64.4	57.9					189.9	46.8	595.6
LOS		F	F	E	E					F	D	F
Approach Delay		401.9			59.4						342.6	
Approach LOS		F			E						F	
Queue Length 50th (ft)		~1311	~678	59	488					~846	263	~1970
Queue Length 95th (ft)		#1397	#927	m37	m15					#1122	315	#2239
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1208	519	1156	2173					452	1377	577
Starvation Cap Reductn		0	0	743	1197					0	0	0
Spillback Cap Reductn		168	0	0	0					0	0	0
Storage Cap Reductn		0	0	0	0					0	0	0
Reduced v/c Ratio		2.28	1.28	1.08	1.47					1.29	0.59	2.26

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.26
Intersection Signal Delay: 296.2 Intersection LOS: F
Intersection Capacity Utilization 185.5% ICU Level of Service H
Analysis Period (min) 15

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	43.0	77.0	37.0	28.0	8.0	8.0
Total Split (%)	29%	51%	25%	19%	5%	5%
Maximum Green (s)	37.0	71.0	31.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	C-Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

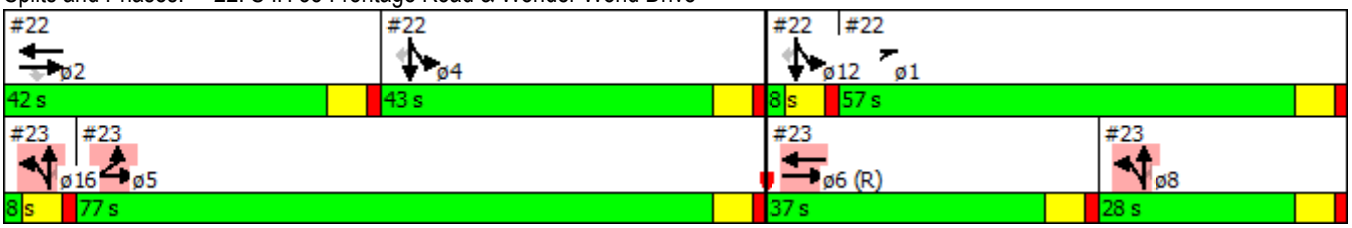
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	836	943	0	0	592	356	355	421	57	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.86	0.86	1.00	1.00	1.00	1.00
Frt					0.944				0.850			
Flt Protected	0.950						0.950	0.986				
Satd. Flow (prot)	3433	3539	0	0	4801	0	1522	4739	1583	0	0	0
Flt Permitted	0.950						0.950	0.986				
Satd. Flow (perm)	3433	3539	0	0	4801	0	1522	4739	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10				153			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	1544	1742	0	0	1093	658	656	778	105	0	0	0
Shared Lane Traffic (%)							47%					
Lane Group Flow (vph)	1544	1742	0	0	1751	0	348	1086	105	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA	Perm			
Protected Phases	5	5 6			6		8 16	8 16				
Permitted Phases									8 16			

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16
Permitted Phases						

23: N IH 35 Frontage Road & Wonder World Drive

2035 Recommnedations without Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	5 6			6		8 16	8 16	8 16			
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	77.0				37.0							
Total Split (%)	51.3%				24.7%							
Maximum Green (s)	71.0				31.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				C-Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	71.0	108.0			31.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.47	0.72			0.21		0.20	0.20	0.20			
v/c Ratio	0.95	0.68			1.94dr		1.14	1.15	0.24			
Control Delay	16.8	10.4			371.4		148.6	130.7	2.8			
Queue Delay	45.1	48.8			0.7		0.0	0.0	0.0			
Total Delay	61.8	59.1			372.1		148.6	130.7	2.8			
LOS	E	E			F		F	F	A			
Approach Delay		60.4			372.1			126.0				
Approach LOS		E			F			F				
Queue Length 50th (ft)	736	853			~936		~461	~481	0			
Queue Length 95th (ft)	m83	m0			#1032		#697	#584	13			
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	1624	2548			1000		304	947	439			
Starvation Cap Reductn	615	1260			0		0	0	0			
Spillback Cap Reductn	0	0			127		0	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	1.53	1.35			2.01		1.14	1.15	0.24			

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.26
Intersection Signal Delay: 158.7 Intersection LOS: F
Intersection Capacity Utilization 185.5% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	57.0	42.0	43.0	28.0	8.0	8.0
Total Split (%)	38%	28%	29%	19%	5%	5%
Maximum Green (s)	51.0	36.0	37.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

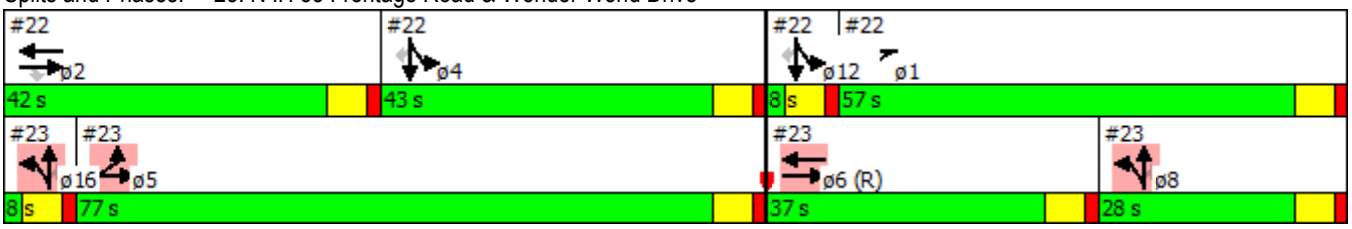
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	41	23	14	43	665	0	0	745	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		230	85		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.969		0.950					
Satd. Flow (prot)	0	0	0	0	3364	1553	1736	3471	0	0	3471	1553
Flt Permitted					0.969		0.950					
Satd. Flow (perm)	0	0	0	0	3364	1553	1736	3471	0	0	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						160						164
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	87	49	30	92	1416	0	0	1586	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	136	30	92	1416	0	0	1586	121
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				22.0	22.0
Total Split (s)							60.0				57.0	57.0
Total Split (%)							42.9%				40.7%	40.7%
Maximum Green (s)							54.0				51.0	51.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							Min				Min	Min
Act Effct Green (s)					17.0	17.0	54.0	111.0			51.0	51.0
Actuated g/C Ratio					0.12	0.12	0.39	0.79			0.36	0.36
v/c Ratio					0.33	0.09	0.14	0.51			1.25	0.18
Control Delay					58.8	0.5	3.2	8.4			159.2	2.0
Queue Delay					0.0	0.0	0.0	49.7			0.6	0.0
Total Delay					58.8	0.5	3.2	58.2			159.8	2.0
LOS					E	A	A	E			F	A
Approach Delay					48.3			54.8			148.6	
Approach LOS					D			D			F	
Queue Length 50th (ft)					60	0	5	682			~948	0
Queue Length 95th (ft)					90	0	m5	m8			#992	10
Internal Link Dist (ft)		577			393			225			472	
Turn Bay Length (ft)						230	85					100
Base Capacity (vph)					408	329	669	2752			1264	669
Starvation Cap Reductn					0	0	0	1662			0	0
Spillback Cap Reductn					0	0	0	0			170	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.33	0.09	0.14	1.30			1.45	0.18

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 101.9 Intersection LOS: F
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

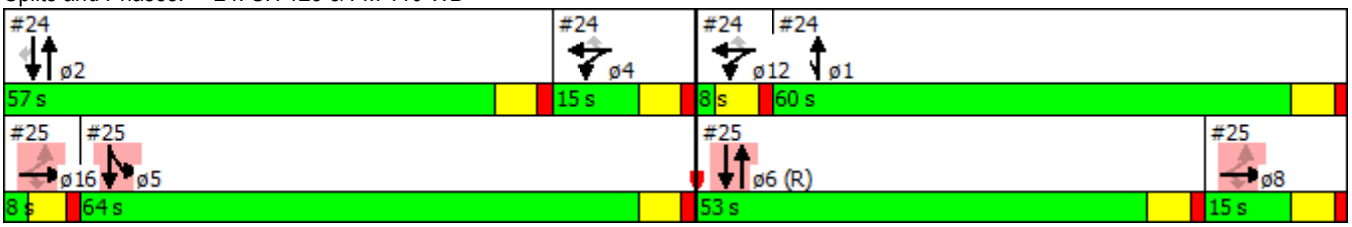
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	35.0
Total Split (s)	15.0	64.0	53.0	15.0	8.0	8.0
Total Split (%)	11%	46%	38%	11%	6%	6%
Maximum Green (s)	9.0	58.0	47.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	C-Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: SH 123 & FM 110 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	60	84	0	0	0	0	695	76	39	747	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.985				
Flt Protected		0.991								0.950		
Satd. Flow (prot)	0	3440	1553	0	0	0	0	3419	0	1736	3471	0
Flt Permitted		0.991								0.950		
Satd. Flow (perm)	0	3440	1553	0	0	0	0	3419	0	1736	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164					9				
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		409			489			309			305	
Travel Time (s)		9.3			11.1			3.5			3.5	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.92	0.93	0.92	0.93	0.93	0.93	0.93	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	26	118	165	0	0	0	0	1353	148	76	1454	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	165	0	0	0	0	1501	0	76	1454	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Detector 1 Position(ft)	0	0	0					0		0	0	
Detector 1 Size(ft)	20	6	20					6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8 16		8 16									
Detector Phase	8 16	8 16	8 16					6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								22.0		13.0		
Total Split (s)								53.0		64.0		
Total Split (%)								37.9%		45.7%		
Maximum Green (s)								47.0		58.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0		0.0		
Total Lost Time (s)								6.0		6.0		
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Min		None		
Act Effct Green (s)		17.0	17.0					47.0		58.0	111.0	
Actuated g/C Ratio		0.12	0.12					0.34		0.41	0.79	
v/c Ratio		0.35	0.50					1.30		0.11	0.53	
Control Delay		59.0	13.6					172.2		1.2	7.1	
Queue Delay		0.0	1.9					0.9		0.0	49.3	
Total Delay		59.0	15.5					173.1		1.2	56.4	
LOS		E	B					F		A	E	
Approach Delay		35.8						173.1			53.6	
Approach LOS		D						F			D	
Queue Length 50th (ft)		64	1					~904		0	705	
Queue Length 95th (ft)		100	70					m#1040		m1	m0	
Internal Link Dist (ft)		329			409			229			225	
Turn Bay Length (ft)			240							120		
Base Capacity (vph)		417	332					1153		719	2752	
Starvation Cap Reductn		0	0					154		0	1549	
Spillback Cap Reductn		0	72					197		0	1533	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.35	0.63					1.57		0.11	1.21	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 105.7 Intersection LOS: F
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

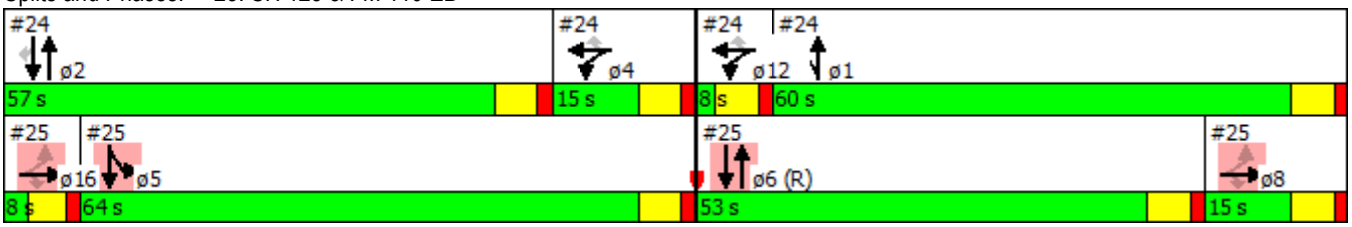
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	35.0
Total Split (s)	60.0	57.0	15.0	15.0	8.0	8.0
Total Split (%)	43%	41%	11%	11%	6%	6%
Maximum Green (s)	54.0	51.0	9.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: SH 123 & FM 110 EB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	701	10	11	730	73	4	8	13	39	28	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.987			0.930			0.934	
Flt Protected		0.999			0.999			0.992			0.985	
Satd. Flow (prot)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Flt Permitted		0.999			0.999			0.992			0.985	
Satd. Flow (perm)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	34	1394	20	22	1452	145	8	16	26	78	56	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1448	0	0	1619	0	0	50	0	0	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 119.8%		ICU Level of Service H	
Analysis Period (min) 15			

2035 Build Conditions

(15% Multimodal Reduction)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	512	10	97	1101	45	68	50	69	94	50	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	100		0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.997			0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3428	0	3335	3417	0	1719	1810	1538	3335	1728	0
Flt Permitted	0.043			0.950			0.471			0.950		
Satd. Flow (perm)	78	3428	0	3335	3417	0	852	1810	1538	3335	1728	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4				124		12	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	36	917	18	174	1972	81	122	90	124	168	90	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	935	0	174	2053	0	122	90	124	168	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	

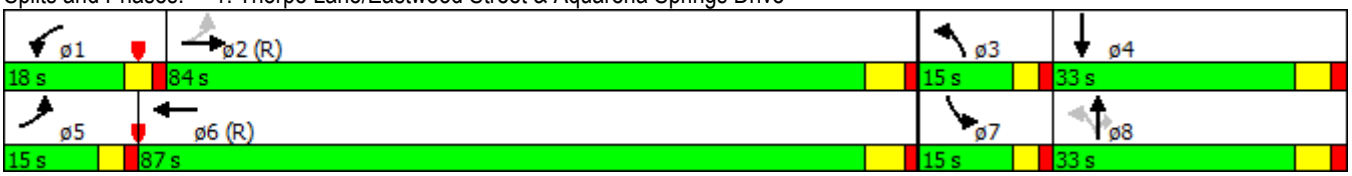
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2						8		8			
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	84.0		18.0	87.0		15.0	33.0	33.0	15.0	33.0	
Total Split (%)	10.0%	56.0%		12.0%	58.0%		10.0%	22.0%	22.0%	10.0%	22.0%	
Maximum Green (s)	10.5	78.0		13.5	81.0		10.5	27.0	27.0	10.5	27.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	99.7	92.7		11.7	100.8		26.1	14.5	14.5	10.1	14.5	
Actuated g/C Ratio	0.66	0.62		0.08	0.67		0.17	0.10	0.10	0.07	0.10	
v/c Ratio	0.32	0.44		0.67	0.89		0.59	0.52	0.48	0.75	0.72	
Control Delay	17.7	16.7		80.1	28.1		62.6	73.8	15.6	89.0	81.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	17.7	16.7		80.1	28.1		62.6	73.8	15.6	89.0	81.1	
LOS	B	B		F	C		E	E	B	F	F	
Approach Delay		16.7			32.1			48.2			85.6	
Approach LOS		B			C			D			F	
Queue Length 50th (ft)	9	244		86	850		103	85	0	84	112	
Queue Length 95th (ft)	23	314		121	1021		150	133	54	#120	169	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100	100		
Base Capacity (vph)	169	2119		300	2297		211	325	378	233	320	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.21	0.44		0.58	0.89		0.58	0.28	0.33	0.72	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 33.8 Intersection LOS: C
Intersection Capacity Utilization 79.5% ICU Level of Service D
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



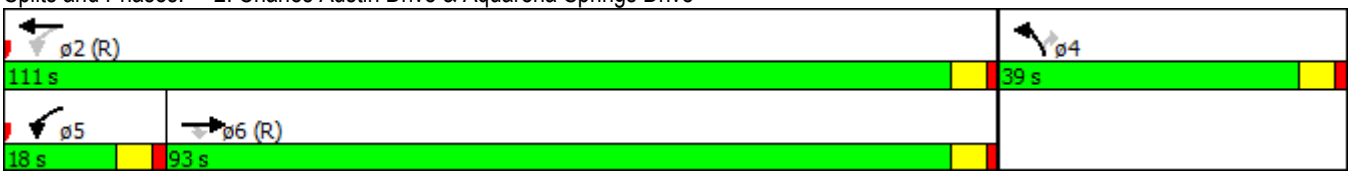
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	437	143	97	1050	437	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	100		100	130
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3406	1524	1703	3406	3303	1524
Flt Permitted			0.266		0.950	
Satd. Flow (perm)	3406	1524	477	3406	3303	1524
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		179				122
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	122%	122%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	869	284	193	2088	586	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	869	284	193	2088	586	192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	7.0	12.0	7.0	7.0
Minimum Split (s)	24.5	24.5	12.5	21.5	27.5	27.5
Total Split (s)	93.0	93.0	18.0	111.0	39.0	39.0
Total Split (%)	62.0%	62.0%	12.0%	74.0%	26.0%	26.0%
Maximum Green (s)	87.5	87.5	12.5	105.5	33.5	33.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	12.0	12.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	95.0	95.0	109.6	109.6	29.4	29.4
Actuated g/C Ratio	0.63	0.63	0.73	0.73	0.20	0.20
v/c Ratio	0.40	0.28	0.46	0.84	0.91	0.48
Control Delay	28.6	15.3	10.2	18.9	77.3	23.5
Queue Delay	0.0	0.0	0.0	1.4	0.0	0.0
Total Delay	28.6	15.3	10.2	20.3	77.3	23.5
LOS	C	B	B	C	E	C
Approach Delay	25.3			19.5	64.0	
Approach LOS	C			B	E	
Queue Length 50th (ft)	429	175	53	692	290	58
Queue Length 95th (ft)	m401	m181	88	886	353	136
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)		100	100		100	130
Base Capacity (vph)	2157	1030	450	2488	737	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	217	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.28	0.43	0.92	0.80	0.44

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 76.9%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	107	183	389	930	475	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1671	3343	3343	1495	3242	1495
Flt Permitted	0.381				0.950	
Satd. Flow (perm)	670	3343	3343	1495	3242	1495
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				971		76
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	154%	154%	154%	154%	154%	154%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	173	297	631	1508	770	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	173	297	631	1508	770	126
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

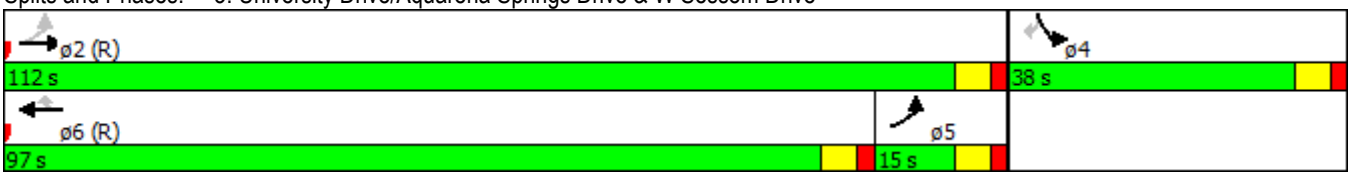
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	112.0	97.0	97.0	38.0	38.0
Total Split (%)	10.0%	74.7%	64.7%	64.7%	25.3%	25.3%
Maximum Green (s)	9.0	106.0	91.0	91.0	32.0	32.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	106.0	106.0	91.0	91.0	32.0	32.0
Actuated g/C Ratio	0.71	0.71	0.61	0.61	0.21	0.21
v/c Ratio	0.32	0.13	0.31	1.17	1.11	0.33
Control Delay	4.7	2.9	12.5	93.4	122.8	23.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	4.7	2.9	12.5	93.5	122.8	23.6
LOS	A	A	B	F	F	C
Approach Delay		3.6	69.6		108.9	
Approach LOS		A	E		F	
Queue Length 50th (ft)	20	18	132	~1548	~443	40
Queue Length 95th (ft)	30	24	176	#1822	#574	102
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	533	2362	2028	1288	691	378
Starvation Cap Reductn	0	0	0	35	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.13	0.31	1.20	1.11	0.33

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 70.8	Intersection LOS: E
Intersection Capacity Utilization 107.8%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	4	14	0	1	1	60	159	2	0	155	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.932			0.998				0.850
Flt Protected	0.950	0.965					0.950					
Satd. Flow (prot)	1496	1471	0	0	1489	0	1631	1713	0	0	1776	1509
Flt Permitted	0.950	0.965					0.466					
Satd. Flow (perm)	1496	1471	0	0	1489	0	800	1713	0	0	1776	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			1							761
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	253	9	31	0	1	1	131	347	4	0	338	761
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	149	144	0	0	2	0	131	351	0	0	338	761
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA			NA		Perm	NA			NA	pm+ov

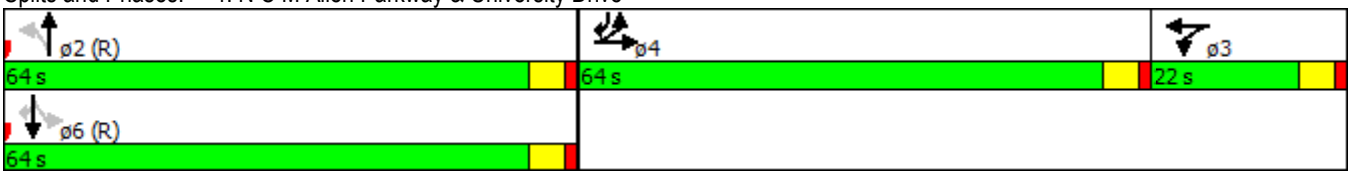
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	4	4		3	3			2			6	4
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	64.0	64.0		22.0	22.0		64.0	64.0		64.0	64.0	64.0
Total Split (%)	42.7%	42.7%		14.7%	14.7%		42.7%	42.7%		42.7%	42.7%	42.7%
Maximum Green (s)	58.5	58.5		16.5	16.5		58.5	58.5		58.5	58.5	58.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	58.5	58.5			5.1		78.3	78.3			78.3	146.7
Actuated g/C Ratio	0.39	0.39			0.03		0.52	0.52			0.52	0.98
v/c Ratio	0.26	0.25			0.04		0.31	0.39			0.36	0.51
Control Delay	32.5	29.8			60.5		24.1	23.9			22.4	2.9
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	32.5	29.8			60.5		24.1	23.9			22.4	2.9
LOS	C	C			E		C	C			C	A
Approach Delay		31.2			60.5			23.9			8.9	
Approach LOS		C			E			C			A	
Queue Length 50th (ft)	103	91			1		69	195			162	89
Queue Length 95th (ft)	148	135			10		124	285			222	98
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	583	580			164		417	894			927	1493
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.26	0.25			0.01		0.31	0.39			0.36	0.51

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 16.3 Intersection LOS: B
Intersection Capacity Utilization 72.4% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	2	5	23	17	321	7	880	6	126	552	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	70		0	145		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.977				0.850		0.999			0.983	
Flt Protected		0.963			0.972		0.950			0.950		
Satd. Flow (prot)	0	1702	0	0	1759	1538	1719	3435	0	1719	3380	0
Flt Permitted		0.695			0.819		0.193			0.053		
Satd. Flow (perm)	0	1229	0	0	1482	1538	349	3435	0	96	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				22		1			19	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	51	4	11	51	38	717	16	1966	13	282	1233	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	89	717	16	1979	0	282	1392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		8			4	5	1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5	12.5	12.5	21.5		12.5	21.5	
Total Split (s)	31.0	31.0		31.0	31.0	19.0	15.0	75.0		19.0	79.0	
Total Split (%)	24.8%	24.8%		24.8%	24.8%	15.2%	12.0%	60.0%		15.2%	63.2%	
Maximum Green (s)	25.5	25.5		25.5	25.5	13.5	9.5	69.5		13.5	73.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	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	0.0	
Total Lost Time (s)		5.5			5.5	5.5	5.5	5.5		5.5	5.5	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		12.2			12.2	44.5	76.5	69.5		101.8	96.8	
Actuated g/C Ratio		0.10			0.10	0.36	0.61	0.56		0.81	0.77	
v/c Ratio		0.53			0.62	1.28	0.06	1.04		0.66	0.53	
Control Delay		61.7			71.7	172.3	9.5	72.2		40.0	7.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		61.7			71.7	172.3	9.5	72.2		40.0	7.5	
LOS		E			E	F	A	E		D	A	
Approach Delay		61.7			161.2			71.7			13.0	
Approach LOS		E			F			E			B	
Queue Length 50th (ft)		46			70	~725	4	~883		156	145	
Queue Length 95th (ft)		81			108	#819	m6	#807		233	299	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)						100	70			145		
Base Capacity (vph)		256			302	561	324	1910		426	2622	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.26			0.29	1.28	0.05	1.04		0.66	0.53	

Intersection Summary

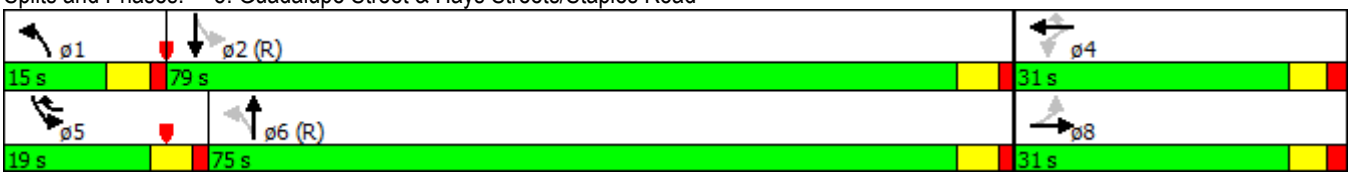
Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 95 (76%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 65.8 Intersection LOS: E
Intersection Capacity Utilization 99.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	75	34	156	59	179	48	735	113	189	597	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		100	100		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	0.95
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1827	1553	1736	1827	1553	1736	3471	1553	3367	3440	0
Flt Permitted	0.702			0.576			0.137			0.950		
Satd. Flow (perm)	1282	1827	1553	1052	1827	1553	250	3471	1553	3367	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			154			87		8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	122%	122%	122%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	66	160	72	224	85	257	102	1565	241	402	1271	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	160	72	224	85	257	102	1565	241	402	1356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	
Protected Phases		8			4		1	6		5	2	

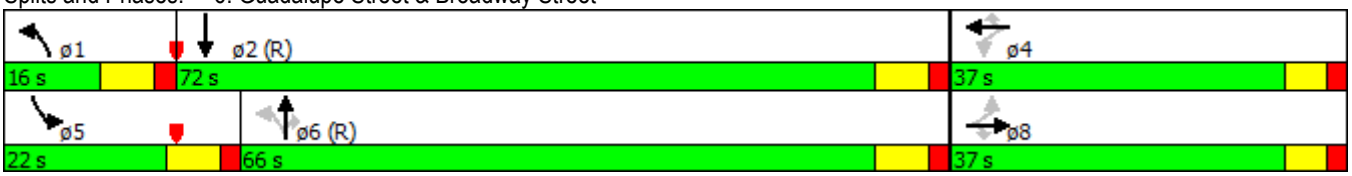
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4		4	6		6			
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	12.0	26.0	26.0	12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	16.0	66.0	66.0	22.0	72.0	
Total Split (%)	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	12.8%	52.8%	52.8%	17.6%	57.6%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0	31.0	9.0	59.0	59.0	15.0	65.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.5	2.5	1.0	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0	24.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	
Act Effct Green (s)	28.3	28.3	28.3	28.3	28.3	28.3	66.9	60.4	60.4	16.2	70.2	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.23	0.54	0.48	0.48	0.13	0.56	
v/c Ratio	0.23	0.39	0.17	0.94	0.21	0.55	0.49	0.93	0.30	0.92	0.70	
Control Delay	40.4	43.2	4.3	92.7	39.4	20.8	17.8	42.1	13.6	83.0	19.2	
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	40.4	43.2	4.3	92.7	39.4	20.8	17.8	42.1	13.6	83.0	19.2	
LOS	D	D	A	F	D	C	B	D	B	F	B	
Approach Delay		33.1			52.0			37.2			33.8	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	43	107	0	174	54	68	29	625	72	170	426	
Queue Length 95th (ft)	79	162	18	#290	93	137	47	672	119	#247	486	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100			80			70		100	100		
Base Capacity (vph)	317	453	457	260	453	500	245	1678	795	437	1936	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.35	0.16	0.86	0.19	0.51	0.42	0.93	0.30	0.92	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 37.5 Intersection LOS: D
Intersection Capacity Utilization 85.9% ICU Level of Service E
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Guadalupe Street & Broadway Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	178	11	32	66	17	32	58	925	59	15	679	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.888			0.963			0.991				0.850
Flt Protected	0.950				0.972		0.950			0.950		
Satd. Flow (prot)	1805	1687	0	0	1778	0	1805	3578	0	1805	3610	1615
Flt Permitted	0.622				0.772		0.068			0.076		
Satd. Flow (perm)	1182	1687	0	0	1413	0	129	3578	0	144	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			11			5				128
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	375	23	67	77	20	37	122	1947	124	32	1429	524
Shared Lane Traffic (%)												
Lane Group Flow (vph)	375	90	0	0	134	0	122	2071	0	32	1429	524
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		17.0	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	31.0	31.0		26.5	26.5		26.5	56.5		26.5	56.5	56.5
Total Split (%)	22.1%	22.1%		18.9%	18.9%		18.9%	40.2%		18.9%	40.2%	40.2%
Maximum Green (s)	25.0	25.0		20.0	20.0		20.0	50.0		20.0	50.0	50.0
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Act Effct Green (s)	51.5	51.5			20.0		66.6	59.3		57.3	50.0	50.0
Actuated g/C Ratio	0.39	0.39			0.15		0.51	0.45		0.44	0.38	0.38
v/c Ratio	0.65	0.13			0.60		0.60	1.28		0.21	1.04	0.76
Control Delay	37.3	9.7			60.4		35.4	163.9		19.8	75.8	34.9
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	25.2	53.1
Total Delay	37.3	9.7			60.4		35.4	163.9		19.8	101.0	88.0
LOS	D	A			E		D	F		B	F	F
Approach Delay		32.0			60.4			156.7			96.3	
Approach LOS		C			E			F			F	
Queue Length 50th (ft)	241	12			98		53	~1250		13	~685	297
Queue Length 95th (ft)	341	45			168		107	#1314		29	#811	431
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	581	701			224		321	1615		326	1372	693
Starvation Cap Reductn	0	0			0		0	0		0	507	235
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.65	0.13			0.60		0.38	1.28		0.10	1.65	1.14

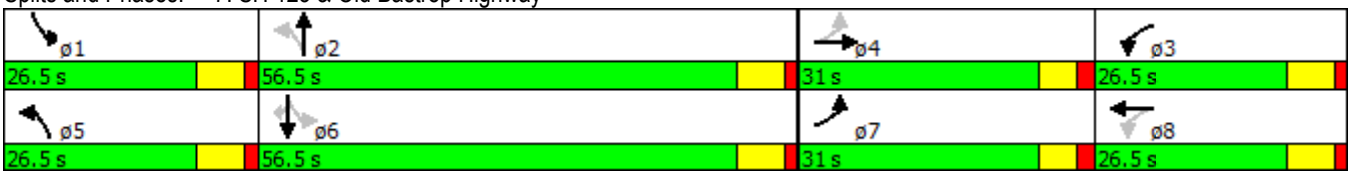
Intersection Summary

Area Type: Other
Cycle Length: 140.5
Actuated Cycle Length: 131.6
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 116.7 Intersection LOS: F
Intersection Capacity Utilization 95.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	97	30	21	20	211	8	277	58	291	200	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975				0.850		0.974			0.990	
Flt Protected		0.989			0.975		0.950			0.950		
Satd. Flow (prot)	0	1696	0	0	1715	1495	1671	3256	0	1671	3309	0
Flt Permitted		0.897			0.537		0.473			0.144		
Satd. Flow (perm)	0	1539	0	0	945	1495	832	3256	0	253	3309	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				483		21			10	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Adj. Flow (vph)	82	222	69	48	46	483	18	635	133	667	458	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	373	0	0	94	483	18	768	0	667	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	34.0	34.0		34.0	34.0	34.0	13.0	41.0		45.0	73.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%	28.3%	10.8%	34.2%		37.5%	60.8%	
Maximum Green (s)	28.0	28.0		28.0	28.0	28.0	7.0	35.0		39.0	67.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		28.0			28.0	28.0	42.0	35.0		80.0	74.8	
Actuated g/C Ratio		0.23			0.23	0.23	0.35	0.29		0.67	0.62	
v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	
Control Delay		96.8			61.1	22.5	13.4	45.3		82.7	10.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		96.8			61.1	22.5	13.4	45.3		82.7	10.9	
LOS		F			E	C	B	D		F	B	
Approach Delay		96.8			28.8			44.6			52.3	
Approach LOS		F			C			D			D	
Queue Length 50th (ft)		~301			77	179	4	282		~497	70	
Queue Length 95th (ft)		#397			m108	m174	11	300		#569	109	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		366			220	719	340	964		629	2066	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.02			0.43	0.67	0.05	0.80		1.06	0.24	

Intersection Summary

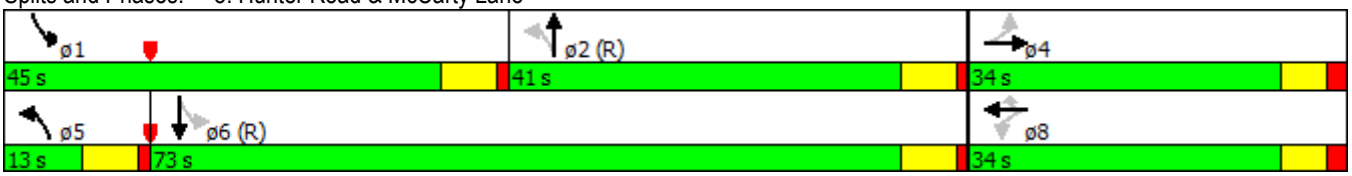
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 51.3 Intersection LOS: D
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Hunter Road & McCarty Lane



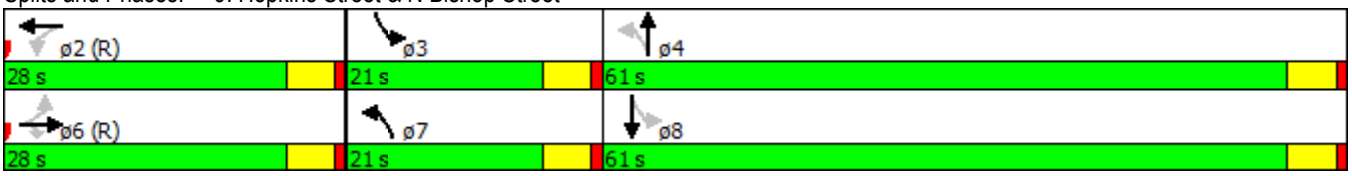
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	38	170	21	25	5	71	434	9	4	206	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987			0.997			0.971	
Flt Protected		0.968			0.980		0.950			0.950		
Satd. Flow (prot)	0	1803	1583	0	1802	0	1770	1857	0	1770	1809	0
Flt Permitted		0.745			0.815		0.231			0.087		
Satd. Flow (perm)	0	1388	1583	0	1498	0	430	1857	0	162	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			214		4			1			16	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	150	77	346	43	51	10	144	883	18	8	419	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	346	0	104	0	144	901	0	8	519	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0		21.0	61.0		21.0	61.0	
Total Split (%)	25.5%	25.5%	25.5%	25.5%	25.5%		19.1%	55.5%		19.1%	55.5%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		16.0	56.0		16.0	56.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		38.1	38.1		38.1		60.9	57.9		56.9	41.9	
Actuated g/C Ratio		0.35	0.35		0.35		0.55	0.53		0.52	0.38	
v/c Ratio		0.47	0.50		0.20		0.34	0.92		0.03	0.74	
Control Delay		34.9	15.0		28.6		12.8	40.0		7.9	40.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		34.9	15.0		28.6		12.8	40.0		7.9	40.9	
LOS		C	B		C		B	D		A	D	
Approach Delay		22.9			28.6			36.2			40.4	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)		115	61		46		51	570		4	353	
Queue Length 95th (ft)		#269	186		111		49	#844		m5	436	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		481	688		521		433	982		319	931	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.50		0.20		0.33	0.92		0.03	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 33.5 Intersection LOS: C
Intersection Capacity Utilization 85.0% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street



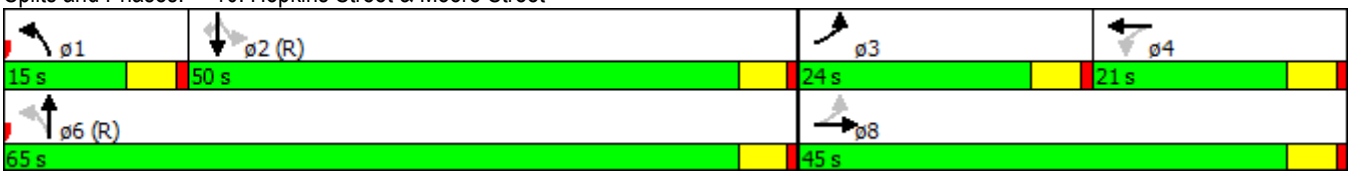
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	94	26	20	34	3	76	442	15	3	197	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.993			0.995				0.850
Flt Protected	0.950				0.983		0.950				0.999	
Satd. Flow (prot)	1770	1801	0	0	1818	0	1770	1853	0	0	1861	1583
Flt Permitted	0.537				0.804		0.349				0.969	
Satd. Flow (perm)	1000	1801	0	0	1487	0	650	1853	0	0	1805	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			2				347
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%
Adj. Flow (vph)	310	183	51	39	66	6	148	862	29	6	384	347
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	234	0	0	111	0	148	891	0	0	390	347
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			24			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	24.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	24.0	45.0		21.0	21.0		15.0	65.0		50.0	50.0	50.0
Total Split (%)	21.8%	40.9%		19.1%	19.1%		13.6%	59.1%		45.5%	45.5%	45.5%
Maximum Green (s)	19.0	40.0		16.0	16.0		10.0	60.0		45.0	45.0	45.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0						0		0	0	0
Act Effct Green (s)	40.0	40.0			16.0		60.0	60.0			46.4	46.4
Actuated g/C Ratio	0.36	0.36			0.15		0.55	0.55			0.42	0.42
v/c Ratio	0.62	0.35			0.51		0.33	0.88			0.51	0.40
Control Delay	33.5	25.8			51.6		7.4	19.5			14.9	1.4
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	33.5	25.8			51.6		7.4	19.5			14.9	1.4
LOS	C	C			D		A	B			B	A
Approach Delay		30.2			51.6			17.8			8.5	
Approach LOS		C			D			B			A	
Queue Length 50th (ft)	167	112			72		19	605			102	0
Queue Length 95th (ft)	212	151			113		m34	184			102	1
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	496	663			218		456	1011			761	868
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.63	0.35			0.51		0.32	0.88			0.51	0.40

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 20 (18%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 88.4% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	712	48	90	920	67	201	149	48	17	62	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.990			0.963			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	3574	0	1435	1830	0	1805	1862	0
Flt Permitted	0.206			0.095			0.545			0.630		
Satd. Flow (perm)	391	1881	0	180	3574	0	823	1830	0	1197	1862	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10			14			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)							21		20			
Adj. Flow (vph)	10	738	50	93	954	69	208	154	50	18	64	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	788	0	93	1023	0	208	204	0	18	74	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0		4.0	4.0	
Minimum Split (s)	8.0	24.5		8.0	24.5		8.5	24.5		8.5	20.5	
Total Split (s)	10.0	60.0		10.0	60.0		19.0	30.0		10.0	21.0	
Total Split (%)	9.1%	54.5%		9.1%	54.5%		17.3%	27.3%		9.1%	19.1%	
Maximum Green (s)	6.0	55.5		6.0	55.5		14.5	25.5		5.5	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	1.0		0.5	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	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		15.0			15.0			15.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	62.6	57.5		65.2	63.5		35.5	31.5		18.7	14.3	
Actuated g/C Ratio	0.57	0.52		0.59	0.58		0.32	0.29		0.17	0.13	
v/c Ratio	0.03	0.80		0.48	0.49		0.56	0.38		0.08	0.30	
Control Delay	7.1	14.1		17.9	15.2		36.5	33.2		27.2	41.7	
Queue Delay	0.0	1.6		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.1	15.6		17.9	15.2		36.5	33.2		27.2	41.7	
LOS	A	B		B	B		D	C		C	D	
Approach Delay		15.5			15.4			34.9			38.9	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	1	100		26	199		116	101		9	43	
Queue Length 95th (ft)	m2	190		44	273		167	168		23	79	
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	300	985		195	2067		369	534		233	284	
Starvation Cap Reductn	0	78		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	69		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.87		0.48	0.51		0.56	0.38		0.08	0.26	

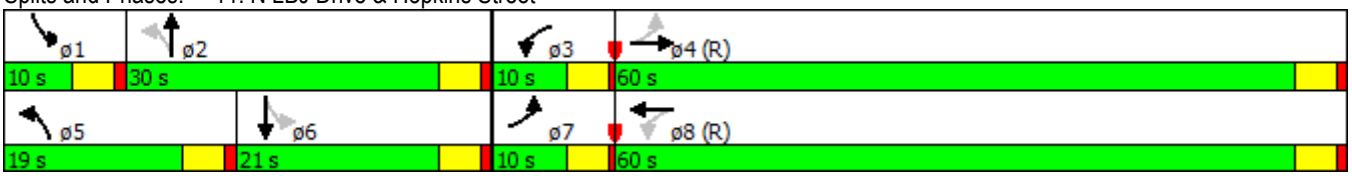
Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 65.5% ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: N LBJ Drive & Hopkins Street



12: Hopkins Street & N Guadalupe Street

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	763	73	60	1075	45	134	99	32	25	92	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.994			0.964			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	3518	0	1770	1796	0	1540	1824	0
Flt Permitted	0.146			0.120			0.594			0.673		
Satd. Flow (perm)	272	1839	0	224	3518	0	1106	1796	0	1091	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			6			13			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Parking (#/hr)										6		6
Adj. Flow (vph)	14	772	74	61	1088	46	136	100	32	25	93	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	846	0	61	1134	0	136	132	0	25	108	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.19	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

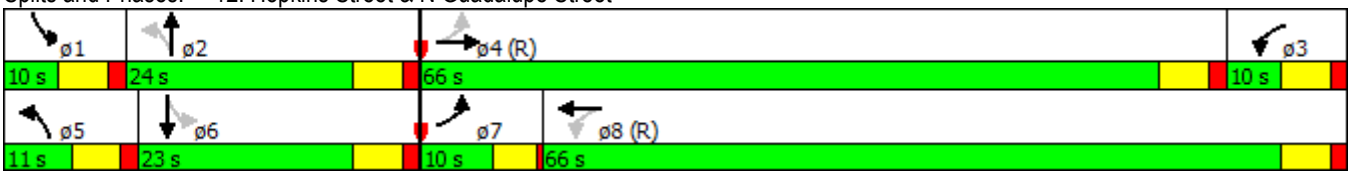
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	8.0	23.5		10.5	23.5		9.5	23.5		9.5	23.5	
Total Split (s)	10.0	66.0		10.0	66.0		11.0	24.0		10.0	23.0	
Total Split (%)	9.1%	60.0%		9.1%	60.0%		10.0%	21.8%		9.1%	20.9%	
Maximum Green (s)	6.0	60.5		4.5	60.5		5.5	18.5		4.5	17.5	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	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		0.0	0.0	
Total Lost Time (s)	4.0	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		4.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	C-Max		Max	C-Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	62.0	60.5		66.5	66.5		25.8	22.5		22.0	17.5	
Actuated g/C Ratio	0.56	0.55		0.60	0.60		0.23	0.20		0.20	0.16	
v/c Ratio	0.06	0.83		0.31	0.53		0.47	0.35		0.11	0.37	
Control Delay	14.7	36.1		17.7	11.5		40.2	38.5		32.2	43.0	
Queue Delay	0.0	0.8		0.0	0.2		0.0	0.0		0.0	0.0	
Total Delay	14.7	36.8		17.7	11.7		40.2	38.5		32.2	43.0	
LOS	B	D		B	B		D	D		C	D	
Approach Delay		36.5			12.0			39.4			41.0	
Approach LOS		D			B			D			D	
Queue Length 50th (ft)	6	553		8	192		77	76		13	65	
Queue Length 95th (ft)	m9	642		m22	165		123	126		33	111	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	235	1014		198	2128		292	377		236	295	
Starvation Cap Reductn	0	0		0	300		0	0		0	0	
Spillback Cap Reductn	0	36		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.06	0.87		0.31	0.62		0.47	0.35		0.11	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



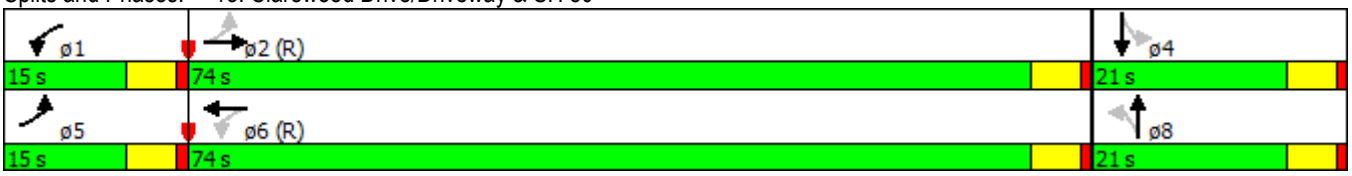
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	703	11	37	961	8	8	2	12	8	3	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.999			0.926			0.966	
Flt Protected	0.950			0.950				0.983			0.973	
Satd. Flow (prot)	1641	4706	0	1641	4711	0	0	1572	0	0	1623	0
Flt Permitted	0.095			0.172				0.879			0.809	
Satd. Flow (perm)	164	4706	0	297	4711	0	0	1406	0	0	1350	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			16			4	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	100%	100%	100%
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Adj. Flow (vph)	45	1368	21	72	1870	16	10	3	16	9	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1389	0	72	1886	0	0	29	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		21.0	21.0		20.0	20.0	
Total Split (s)	15.0	74.0		15.0	74.0		21.0	21.0		21.0	21.0	
Total Split (%)	13.6%	67.3%		13.6%	67.3%		19.1%	19.1%		19.1%	19.1%	
Maximum Green (s)	10.0	69.0		10.0	69.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							5.0	5.0				
Flash Dont Walk (s)							11.0	11.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	93.1	89.2		93.6	89.5			6.9			6.9	
Actuated g/C Ratio	0.85	0.81		0.85	0.81			0.06			0.06	
v/c Ratio	0.21	0.36		0.22	0.49			0.28			0.18	
Control Delay	3.8	4.4		3.0	5.2			36.1			44.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	3.8	4.4		3.0	5.2			36.1			44.4	
LOS	A	A		A	A			D			D	
Approach Delay		4.4			5.1			36.1			44.4	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)	3	108		5	171			9			8	
Queue Length 95th (ft)	10	151		14	233			38			31	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	277	3817		382	3833			218			199	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.16	0.36		0.19	0.49			0.13			0.08	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 5.3 Intersection LOS: A
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	10	30	200	1000	0	0	620	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.976		0.950					
Satd. Flow (prot)	0	0	0	0	1701	1482	1656	3312	0	0	3312	1482
Flt Permitted					0.976		0.950					
Satd. Flow (perm)	0	0	0	0	1701	1482	1656	3312	0	0	3312	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						158						577
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Adj. Flow (vph)	0	0	0	11	11	34	227	1133	0	0	703	1020
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	22	34	227	1133	0	0	703	1020
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				16.0	16.0
Total Split (s)							48.0				65.0	65.0
Total Split (%)							33.1%				44.8%	44.8%
Maximum Green (s)							42.0				59.0	59.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							None				None	None
Act Effct Green (s)					24.4	24.4	38.6	103.6			59.0	59.0
Actuated g/C Ratio					0.17	0.17	0.27	0.71			0.41	0.41
v/c Ratio					0.08	0.09	0.52	0.48			0.52	1.08
Control Delay					50.4	0.5	24.7	11.2			34.1	71.6
Queue Delay					0.0	0.0	68.0	50.7			0.0	0.0
Total Delay					50.4	0.5	92.7	61.9			34.1	71.6
LOS					D	A	F	E			C	E
Approach Delay					20.1			67.0			56.3	
Approach LOS					C			E			E	
Queue Length 50th (ft)					18	0	104	280			261	~730
Queue Length 95th (ft)					36	0	m150	260			254	#615
Internal Link Dist (ft)		215			265			41			235	
Turn Bay Length (ft)												100
Base Capacity (vph)					286	380	479	2366			1347	945
Starvation Cap Reductn					0	0	318	1478			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.08	0.09	1.41	1.28			0.52	1.08

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 60.3 Intersection LOS: E
Intersection Capacity Utilization 80.1% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

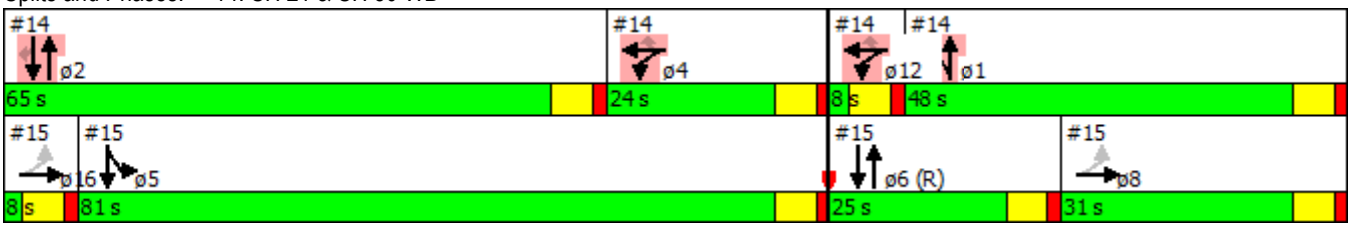
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	24.0	13.0	20.0	22.0	22.0	22.0
Total Split (s)	24.0	81.0	25.0	31.0	8.0	8.0
Total Split (%)	17%	56%	17%	21%	6%	6%
Maximum Green (s)	18.0	75.0	19.0	25.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	2.0	2.0
Recall Mode	None	None	C-Max	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: SH 21 & SH 80 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	600	5	100	0	0	0	0	600	100	80	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.858						0.979				
Flt Protected	0.950										0.950	
Satd. Flow (prot)	3072	1589	0	0	0	0	0	3465	0	0	3008	0
Flt Permitted	0.950										0.138	
Satd. Flow (perm)	3072	1589	0	0	0	0	0	3465	0	0	437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		92						11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			329			187			121	
Travel Time (s)		6.8			7.5			4.3			2.8	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	14%	14%	2%	2%	14%	14%	2%	2%	2%	14%	2%	14%
Adj. Flow (vph)	580	5	92	0	0	0	0	554	92	77	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	580	97	0	0	0	0	0	646	0	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	

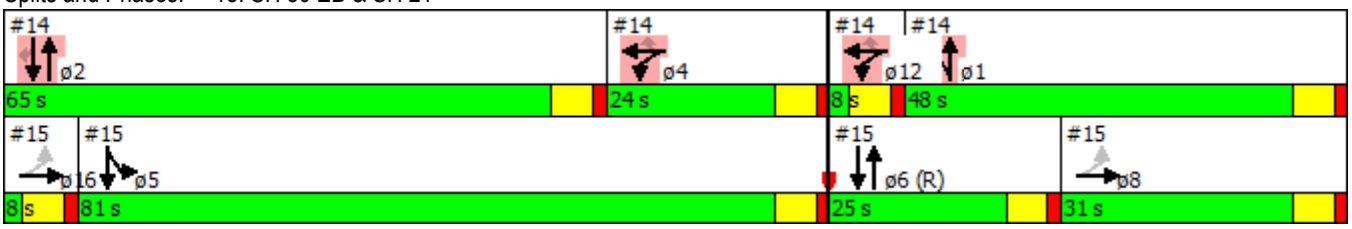
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8 16											
Detector Phase	8 16	8 16						6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								20.0		13.0		
Total Split (s)								25.0		81.0		
Total Split (%)								17.2%		55.9%		
Maximum Green (s)								19.0		75.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								6.0				
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Max		None		
Act Effct Green (s)	33.0	33.0						30.2			63.8	
Actuated g/C Ratio	0.23	0.23						0.21			0.44	
v/c Ratio	0.83	0.22						0.88			0.06	
Control Delay	64.6	10.8						69.9			0.8	
Queue Delay	0.4	0.0						49.6			0.4	
Total Delay	65.1	10.8						119.5			1.2	
LOS	E	B						F			A	
Approach Delay		57.3						119.5			1.2	
Approach LOS		E						F			A	
Queue Length 50th (ft)	271	4						318			0	
Queue Length 95th (ft)	334	50						#452			0	
Internal Link Dist (ft)		217			249			107			41	
Turn Bay Length (ft)	100											
Base Capacity (vph)	699	432						730			1555	
Starvation Cap Reductn	0	0						0			1196	
Spillback Cap Reductn	12	0						233			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.84	0.22						1.30			0.21	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 82.9 Intersection LOS: F
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: SH 80 EB & SH 21



Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	16.0	24.0	22.0	22.0	22.0
Total Split (s)	48.0	65.0	24.0	31.0	8.0	8.0
Total Split (%)	33%	45%	17%	21%	6%	6%
Maximum Green (s)	42.0	59.0	18.0	25.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

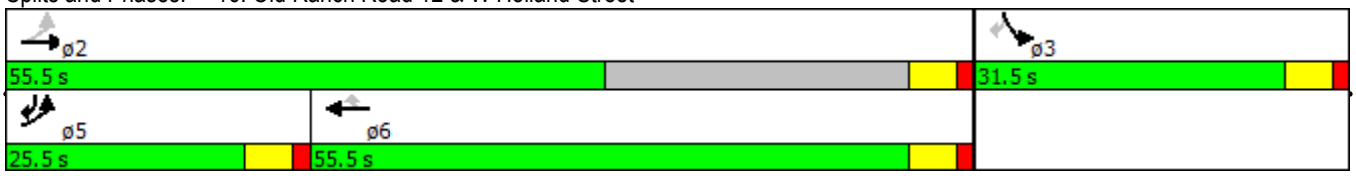
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	430	270	141	50	40	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3367	1827	1827	1553	1736	1553
Flt Permitted	0.396				0.950	
Satd. Flow (perm)	1404	1827	1827	1553	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				95		321
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	154%	154%	154%	154%	154%	154%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	818	513	268	95	76	321
Shared Lane Traffic (%)						
Lane Group Flow (vph)	818	513	268	95	76	321
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template		Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		3	5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		3
Detector Phase	5	2	6	6	3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0	10.0	10.0	5.0
Minimum Split (s)	10.5	25.5	21.5	21.5	21.5	10.5
Total Split (s)	25.5	55.5	55.5	55.5	31.5	25.5
Total Split (%)	22.7%	49.3%	49.3%	49.3%	28.0%	22.7%
Maximum Green (s)	20.0	50.0	50.0	50.0	26.0	20.0
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	35.9	39.3	13.6	13.6	11.1	23.8
Actuated g/C Ratio	0.72	0.79	0.27	0.27	0.22	0.48
v/c Ratio	0.49	0.35	0.53	0.19	0.20	0.35
Control Delay	4.8	4.8	23.0	6.0	23.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	4.8	23.0	6.0	23.4	2.2
LOS	A	A	C	A	C	A
Approach Delay		4.8	18.6		6.2	
Approach LOS		A	B		A	
Queue Length 50th (ft)	58	74	84	0	23	0
Queue Length 95th (ft)	71	103	135	23	55	20
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	1893	1827	1633	1398	1007	1059
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.28	0.16	0.07	0.08	0.30

Intersection Summary

Area Type: Other
Cycle Length: 112.5
Actuated Cycle Length: 49.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 7.5 — Intersection LOS: A
Intersection Capacity Utilization 52.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	246	69	135	412	87	6	1	34	203	41	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		100	65		100	0		0	100		100
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.967				0.850			0.850			0.850
Flt Protected	0.950			0.950				0.957		0.950	0.968	
Satd. Flow (prot)	1703	3293	0	1703	1792	1524	0	1715	1524	1618	1648	1524
Flt Permitted	0.247			0.367				0.595		0.950	0.452	
Satd. Flow (perm)	443	3293	0	658	1792	1524	0	1067	1524	1618	770	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				124			124			124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	154%	154%	154%	154%	154%	154%	122%	122%	122%	154%	154%	154%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	60	446	125	245	746	158	9	1	49	368	74	67
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	60	571	0	245	746	158	0	10	49	221	221	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6		6	8		8			4
Detector Phase	5	2		1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.0	27.0		14.0	21.0	21.0	12.0	26.0	26.0	12.0	21.0	21.0
Total Split (s)	15.0	71.0		21.0	77.0	77.0	15.0	26.0	26.0	32.0	43.0	43.0
Total Split (%)	10.0%	47.3%		14.0%	51.3%	51.3%	10.0%	17.3%	17.3%	21.3%	28.7%	28.7%
Maximum Green (s)	10.0	66.0		16.0	72.0	72.0	10.0	21.0	21.0	27.0	38.0	38.0
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	89.0	81.8		101.6	91.8	91.8		8.0	8.0	27.8	27.8	38.4
Actuated g/C Ratio	0.59	0.55		0.68	0.61	0.61		0.05	0.05	0.19	0.19	0.26
v/c Ratio	0.19	0.32		0.45	0.68	0.16		0.18	0.25	0.74	0.72	0.14
Control Delay	10.4	18.6		12.0	24.2	4.0		76.0	3.0	74.0	72.8	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	10.4	18.6		12.0	24.2	4.0		76.0	3.0	74.0	72.8	0.6
LOS	B	B		B	C	A		E	A	E	E	A
Approach Delay		17.8			18.8			15.3			63.8	
Approach LOS		B			B			B			E	
Queue Length 50th (ft)	18	146		83	479	13		10	0	222	222	0
Queue Length 95th (ft)	33	188		116	590	40		29	0	302	301	0
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65		100				100		100
Base Capacity (vph)	355	1809		561	1096	981		149	320	315	305	482
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	0
Reduced v/c Ratio	0.17	0.32		0.44	0.68	0.16		0.07	0.15	0.70	0.72	0.14

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: N LBJ Drive & Sessom Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	673	74	36	467	39	76	12	24	121	8	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.988			0.899			0.869	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3452	0	1752	3463	0	1752	1658	0	1752	1603	0
Flt Permitted	0.137			0.100			0.641			0.709		
Satd. Flow (perm)	253	3452	0	184	3463	0	1182	1658	0	1308	1603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			49			108	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	71	1369	150	73	950	79	155	24	49	246	16	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	1519	0	73	1029	0	155	73	0	246	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	41.0		21.0	46.0		20.5	25.5		15.5	20.5	
Total Split (%)	15.5%	39.8%		20.4%	44.7%		19.9%	24.8%		15.0%	19.9%	
Maximum Green (s)	10.0	35.0		15.0	40.1		15.0	20.0		10.0	15.0	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	Max		None	Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.2	40.2		46.0	40.2		32.8	22.1		31.3	21.3	
Actuated g/C Ratio	0.46	0.40		0.46	0.40		0.33	0.22		0.31	0.21	
v/c Ratio	0.31	1.09		0.36	0.73		0.34	0.18		0.54	0.29	
Control Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.1	81.7		17.9	29.6		25.0	16.1		30.8	11.8	
LOS	B	F		B	C		C	B		C	B	
Approach Delay		78.8			28.8			22.1			24.4	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)	22	~600		23	296		69	13		116	8	
Queue Length 95th (ft)	44	#743		45	381		120	50		186	59	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	271	1397		329	1400		525	404		455	427	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	1.09		0.22	0.73		0.30	0.18		0.54	0.29	

Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 99.9	
Natural Cycle: 100	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 52.0	Intersection LOS: D
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

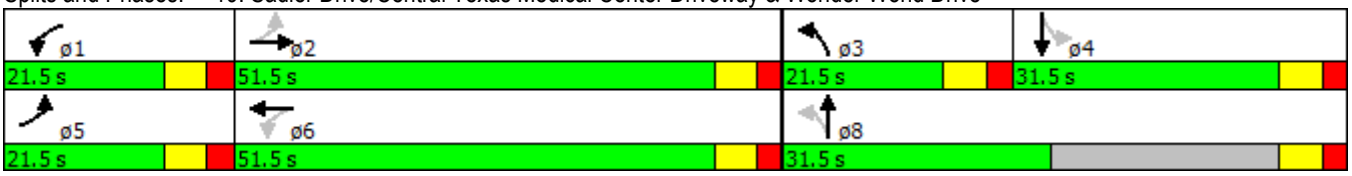
Splits and Phases: 18: Leah Avenue & Wonder World Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	436	118	19	458	14	74	3	21	1	1	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.996			0.869			0.874	
Flt Protected	0.950			0.950			0.950				0.998	
Satd. Flow (prot)	1829	3426	0	1829	3525	0	1770	1619	0	0	1625	0
Flt Permitted	0.170			0.145			0.568				0.990	
Satd. Flow (perm)	327	3426	0	279	3525	0	1058	1619	0	0	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			3			42			58	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			3027			240			186	
Travel Time (s)		23.2			45.9			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	90	867	235	38	911	28	147	6	42	2	2	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	1102	0	38	939	0	147	48	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	21.5	51.5		21.5	51.5		21.5	31.5		31.5	31.5	
Total Split (%)	17.1%	40.9%		17.1%	40.9%		17.1%	25.0%		25.0%	25.0%	
Maximum Green (s)	15.0	45.0		15.0	45.0		15.0	25.0		25.0	25.0	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	47.2	42.0		43.4	37.7		30.4	30.4			16.1	
Actuated g/C Ratio	0.50	0.45		0.46	0.40		0.32	0.32			0.17	
v/c Ratio	0.28	0.71		0.15	0.66		0.32	0.09			0.19	
Control Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	14.1	25.6		12.9	27.5		28.0	9.9			14.4	
LOS	B	C		B	C		C	A			B	
Approach Delay		24.8			27.0			23.5			14.4	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	27	318		11	264		72	3			2	
Queue Length 95th (ft)	53	422		27	358		131	30			42	
Internal Link Dist (ft)		1451			2947			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	430	1794		410	1816		464	880			502	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.21	0.61		0.09	0.52		0.32	0.05			0.12	

Intersection Summary	
Area Type:	Other
Cycle Length: 126	
Actuated Cycle Length: 93.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



20: S IH 35 Frontage Road & McCarty Lane

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	307	64	71	236	0	0	0	0	335	66	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	110		0	0		0	100		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95
Frt			0.850								0.960	
Flt Protected				0.950						0.950	0.974	
Satd. Flow (prot)	0	1810	1538	1719	1810	0	0	0	0	1564	3079	0
Flt Permitted				0.950						0.950	0.974	
Satd. Flow (perm)	0	1810	1538	1719	1810	0	0	0	0	1564	3079	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191								37	
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	686	143	159	527	0	0	0	0	749	147	190
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	686	143	159	527	0	0	0	0	374	712	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		22.0	22.0	13.0								
Total Split (s)		43.0	43.0	43.0								
Total Split (%)		35.8%	35.8%	35.8%								
Maximum Green (s)		37.0	37.0	37.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		C-Min	C-Min	Min								
Act Effct Green (s)		37.0	37.0	37.0	80.0					28.0	28.0	
Actuated g/C Ratio		0.31	0.31	0.31	0.67					0.23	0.23	
v/c Ratio		1.23	0.24	0.30	0.44					1.03	0.95	
Control Delay		147.0	8.3	4.3	5.9					99.9	66.9	
Queue Delay		0.8	0.0	2.0	38.2					0.0	0.0	
Total Delay		147.7	8.3	6.3	44.1					99.9	66.9	
LOS		F	A	A	D					F	E	
Approach Delay		123.7			35.4						78.2	
Approach LOS		F			D						E	
Queue Length 50th (ft)		~662	14	6	340					~339	287	
Queue Length 95th (ft)		m#630	m13	m9	m4					#463	#339	
Internal Link Dist (ft)		3294			206			422			301	
Turn Bay Length (ft)			100	110						100		
Base Capacity (vph)		558	606	530	1206					364	746	
Starvation Cap Reductn		0	0	246	707					0	0	
Spillback Cap Reductn		52	0	0	0					0	0	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		1.36	0.24	0.56	1.06					1.03	0.95	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.48
Intersection Signal Delay: 81.4 Intersection LOS: F
Intersection Capacity Utilization 102.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

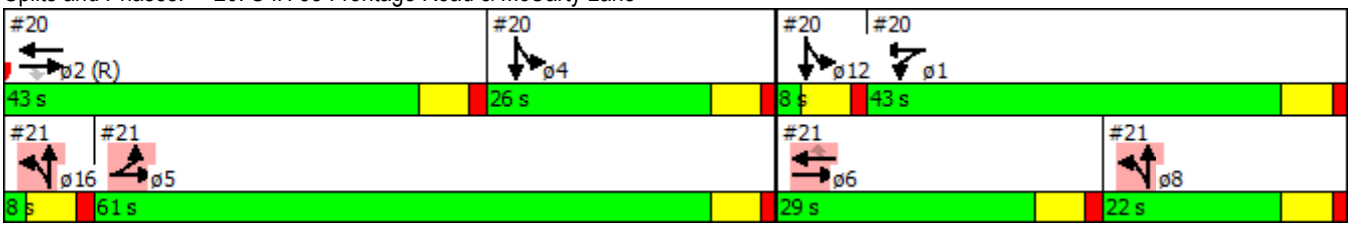
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	22.0
Total Split (s)	26.0	61.0	29.0	22.0	8.0	8.0
Total Split (%)	22%	51%	24%	18%	7%	7%
Maximum Green (s)	20.0	55.0	23.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: S IH 35 Frontage Road & McCarty Lane



21: N IH 35 Frontage Road & McCarty Lane

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	515	0	0	240	253	67	177	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		150	100		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.945				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1736	1827	0	0	1827	1553	1736	3280	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1736	1827	0	0	1827	1553	1736	3280	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						393		86				
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	274	1110	0	0	517	545	144	381	220	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	1110	0	0	517	545	144	601	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

21: N IH 35 Frontage Road & McCarty Lane

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						6						
Detector Phase	5	5 6			6	6	8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0	10.0						
Minimum Split (s)	13.0				22.0	22.0						
Total Split (s)	61.0				29.0	29.0						
Total Split (%)	50.8%				24.2%	24.2%						
Maximum Green (s)	55.0				23.0	23.0						
Yellow Time (s)	4.5				4.5	4.5						
All-Red Time (s)	1.5				1.5	1.5						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	6.0				6.0	6.0						
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	2.0				2.5	2.5						
Recall Mode	None				Min	Min						
Act Effct Green (s)	55.0	84.0			23.0	23.0	24.0	24.0				
Actuated g/C Ratio	0.46	0.70			0.19	0.19	0.20	0.20				
v/c Ratio	0.34	0.87			1.48	0.89	0.41	0.83				
Control Delay	13.9	6.1			264.9	30.8	46.1	50.3				
Queue Delay	3.6	48.3			4.6	0.0	0.0	0.0				
Total Delay	17.5	54.4			269.5	30.8	46.1	50.3				
LOS	B	D			F	C	D	D				
Approach Delay		47.1			147.0			49.5				
Approach LOS		D			F			D				
Queue Length 50th (ft)	60	142			~551	123	98	205				
Queue Length 95th (ft)	m55	m80			#695	#262	151	248				
Internal Link Dist (ft)		206			642			455			336	
Turn Bay Length (ft)	110					150	100					
Base Capacity (vph)	795	1278			350	615	347	724				
Starvation Cap Reductn	424	399			0	0	0	0				
Spillback Cap Reductn	0	0			110	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.74	1.26			2.15	0.89	0.41	0.83				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.48
Intersection Signal Delay: 80.9 Intersection LOS: F
Intersection Capacity Utilization 101.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

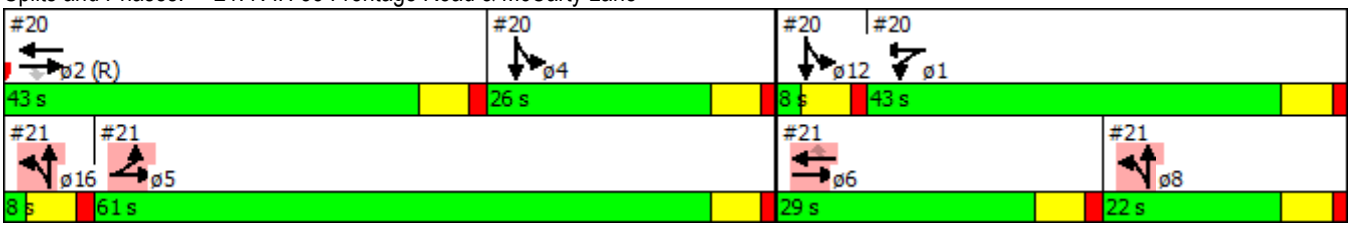
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	43.0	43.0	26.0	22.0	8.0	8.0
Total Split (%)	36%	36%	22%	18%	7%	7%
Maximum Green (s)	37.0	37.0	20.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	C-Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: N IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1027	284	127	678	0	0	0	0	361	148	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	2		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.973	
Satd. Flow (prot)	0	5085	1583	3433	3539	0	0	0	0	1522	4676	1583
Flt Permitted				0.950						0.950	0.973	
Satd. Flow (perm)	0	5085	1583	3433	3539	0	0	0	0	1522	4676	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212									166
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	0	2161	598	267	1427	0	0	0	0	760	311	1246
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	2161	598	267	1427	0	0	0	0	380	691	1246
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		2		1	1 2					4 12	4 12	
Permitted Phases			2									4 12

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16
Permitted Phases						

22: S IH 35 Frontage Road & Wonder World Drive

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		2	2	1	1 2					4 12	4 12	4 12
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		44.0	44.0	26.0								
Total Split (%)		31.9%	31.9%	18.8%								
Maximum Green (s)		38.0	38.0	20.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		38.0	38.0	49.0	93.0					33.0	33.0	33.0
Actuated g/C Ratio		0.28	0.28	0.36	0.67					0.24	0.24	0.24
v/c Ratio		1.54	1.02	0.22	0.60					1.05	0.95dl	2.47
Control Delay		282.9	72.8	10.3	6.0					110.1	49.7	688.6
Queue Delay		0.4	0.0	2.7	49.2					0.0	0.0	0.0
Total Delay		283.3	72.8	13.0	55.2					110.1	49.7	688.6
LOS		F	E	B	E					F	D	F
Approach Delay		237.7			48.6						403.2	
Approach LOS		F			D						F	
Queue Length 50th (ft)		~996	~404	17	420					~429	216	~1749
Queue Length 95th (ft)		#1019	#593	m19	m5					#619	251	#1902
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1400	589	1218	2384					363	1118	504
Starvation Cap Reductn		0	0	823	1201					0	0	0
Spillback Cap Reductn		152	0	0	0					0	0	0
Storage Cap Reductn		0	0	0	0					0	0	0
Reduced v/c Ratio		1.73	1.02	0.68	1.21					1.05	0.62	2.47

Intersection Summary

Area Type: Other
Cycle Length: 138
Actuated Cycle Length: 138
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.47
Intersection Signal Delay: 247.0 Intersection LOS: F
Intersection Capacity Utilization 156.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	31.0	26.0	33.0	30.0	8.0	8.0
Total Split (%)	22%	19%	24%	22%	6%	6%
Maximum Green (s)	25.0	20.0	27.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

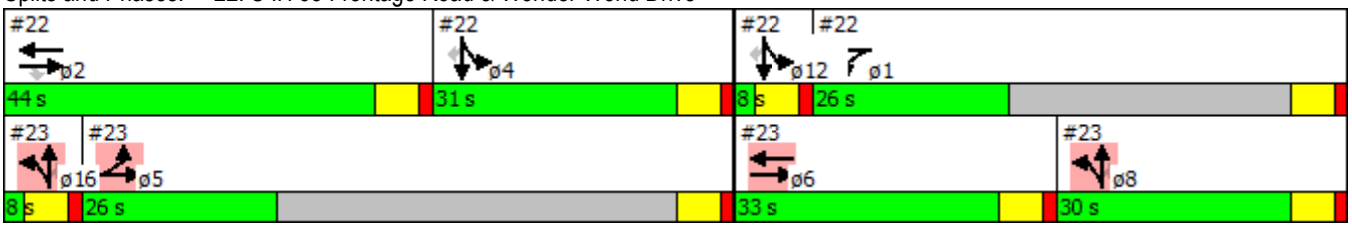
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



23: N IH 35 Frontage Road & Wonder World Drive

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	611	777	0	0	478	166	327	243	145	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.86	0.86	1.00	1.00	1.00	1.00
Frt					0.961				0.850			
Flt Protected	0.950						0.950	0.980				
Satd. Flow (prot)	3367	3471	0	0	4793	0	1493	4619	1553	0	0	0
Flt Permitted	0.950						0.950	0.980				
Satd. Flow (perm)	3367	3471	0	0	4793	0	1493	4619	1553	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					34				166			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	1271	1617	0	0	994	345	680	506	302	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1271	1617	0	0	1339	0	340	846	302	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA	Perm			
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

23: N IH 35 Frontage Road & Wonder World Drive

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									8 16			
Detector Phase	5	5 6			6		8 16	8 16	8 16			
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	26.0				33.0							
Total Split (%)	18.8%				23.9%							
Maximum Green (s)	20.0				27.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	61.0	94.0			27.0		32.0	32.0	32.0			
Actuated g/C Ratio	0.44	0.68			0.20		0.23	0.23	0.23			
v/c Ratio	0.85	0.68			1.39		0.98	0.89dl	0.62			
Control Delay	10.6	8.6			220.7		96.7	56.1	27.0			
Queue Delay	48.8	48.8			0.7		0.0	0.0	0.0			
Total Delay	59.4	57.4			221.4		96.7	56.1	27.0			
LOS	E	E			F		F	E	C			
Approach Delay		58.3			221.4			59.5				
Approach LOS		E			F			E				
Queue Length 50th (ft)	500	659			~578		355	278	109			
Queue Length 95th (ft)	m73	m0			#642		#558	321	199			
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	1488	2364			965		346	1071	487			
Starvation Cap Reductn	587	1104			0		0	0	0			
Spillback Cap Reductn	0	0			123		0	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	1.41	1.28			1.59		0.98	0.79	0.62			

Intersection Summary

Area Type: Other
Cycle Length: 138
Actuated Cycle Length: 138
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.47
Intersection Signal Delay: 96.8 Intersection LOS: F
Intersection Capacity Utilization 156.3% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	26.0	44.0	31.0	30.0	8.0	8.0
Total Split (%)	19%	32%	22%	22%	6%	6%
Maximum Green (s)	20.0	38.0	25.0	24.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

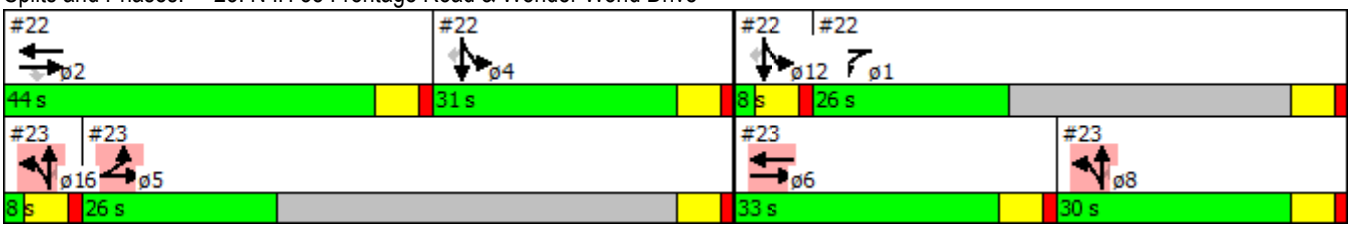
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	104	30	55	57	841	0	0	778	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		230	85		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.963		0.950					
Satd. Flow (prot)	0	0	0	0	3343	1553	1736	3471	0	0	3471	1553
Flt Permitted					0.963		0.950					
Satd. Flow (perm)	0	0	0	0	3343	1553	1736	3471	0	0	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						149						153
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	248	71	131	136	2003	0	0	1853	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	319	131	136	2003	0	0	1853	45
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				22.0	22.0
Total Split (s)							67.0				60.0	60.0
Total Split (%)							44.7%				40.0%	40.0%
Maximum Green (s)							61.0				54.0	54.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							Min				Min	Min
Act Effct Green (s)					17.0	17.0	61.0	121.0			54.0	54.0
Actuated g/C Ratio					0.11	0.11	0.41	0.81			0.36	0.36
v/c Ratio					1.27dl	0.43	0.19	0.72			1.48	0.07
Control Delay					85.1	10.3	5.3	17.9			256.9	0.2
Queue Delay					0.0	0.0	1.8	48.7			0.7	0.0
Total Delay					85.1	10.3	7.1	66.5			257.6	0.2
LOS					F	B	A	E			F	A
Approach Delay					63.3			62.7			251.5	
Approach LOS					E			E			F	
Queue Length 50th (ft)					163	0	15	1038			~1311	0
Queue Length 95th (ft)					182	18	m11	m712			#1117	0
Internal Link Dist (ft)		577			393			225			472	
Turn Bay Length (ft)						230	85					100
Base Capacity (vph)					378	308	705	2799			1249	657
Starvation Cap Reductn					0	0	434	1485			0	0
Spillback Cap Reductn					0	0	0	0			186	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.84	0.43	0.50	1.52			1.74	0.07

Intersection Summary

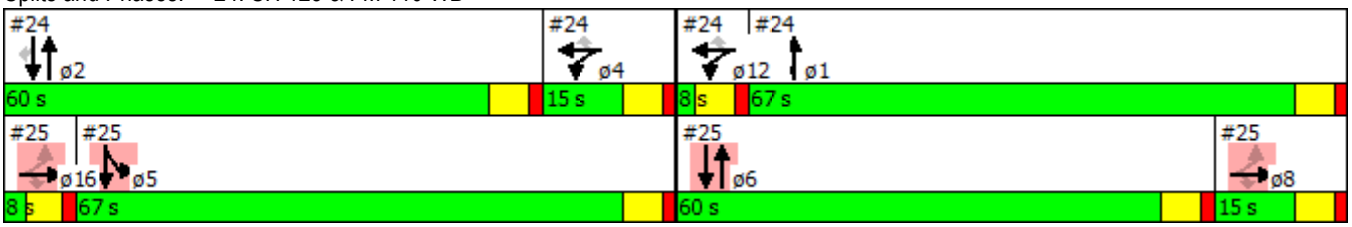
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 142.7 Intersection LOS: F
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	35.0
Total Split (s)	15.0	67.0	60.0	15.0	8.0	8.0
Total Split (%)	10%	45%	40%	10%	5%	5%
Maximum Green (s)	9.0	61.0	54.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 24: SH 123 & FM 110 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	6	62	0	0	0	0	893	69	8	874	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.989				
Flt Protected		0.978								0.950		
Satd. Flow (prot)	0	3461	1583	0	0	0	0	3500	0	1770	3539	0
Flt Permitted		0.978								0.950		
Satd. Flow (perm)	0	3461	1583	0	0	0	0	3500	0	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153					6				
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		618			489			309			305	
Travel Time (s)		14.0			11.1			3.5			3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	10	12	122	0	0	0	0	1757	136	16	1720	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	122	0	0	0	0	1893	0	16	1720	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Detector 1 Position(ft)	0	0	0					0		0	0	
Detector 1 Size(ft)	20	6	20					6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	
Permitted Phases	8 16		8 16									

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16
Permitted Phases						

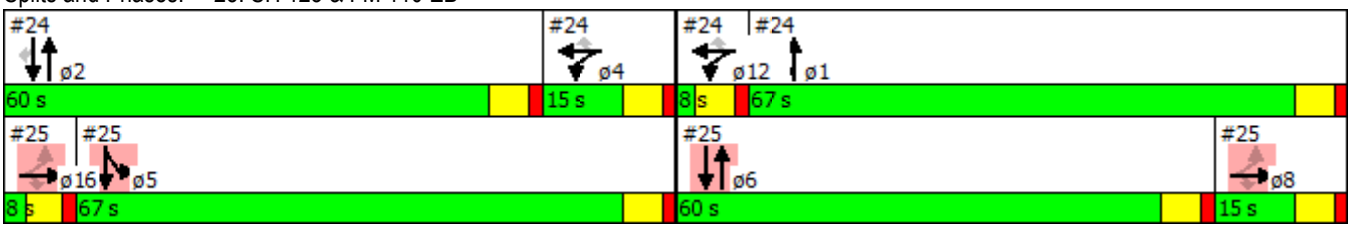
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	8 16	8 16	8 16					6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								22.0		13.0		
Total Split (s)								60.0		67.0		
Total Split (%)								40.0%		44.7%		
Maximum Green (s)								54.0		61.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0		0.0		
Total Lost Time (s)								6.0		6.0		
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								Min		None		
Act Effct Green (s)		17.0	17.0					54.0		61.0	121.0	
Actuated g/C Ratio		0.11	0.11					0.36		0.41	0.81	
v/c Ratio		0.06	0.39					1.50		0.02	0.60	
Control Delay		59.9	7.3					263.2		6.9	9.8	
Queue Delay		0.0	0.0					1.5		0.0	49.0	
Total Delay		59.9	7.3					264.8		6.9	58.8	
LOS		E	A					F		A	E	
Approach Delay		15.4						264.8			58.3	
Approach LOS		B						F			E	
Queue Length 50th (ft)		10	0					~1353		1	887	
Queue Length 95th (ft)		25	33					#1490		m1	m0	
Internal Link Dist (ft)		538			409			229			225	
Turn Bay Length (ft)			240							120		
Base Capacity (vph)		392	315					1263		719	2854	
Starvation Cap Reductn		0	0					359		0	1602	
Spillback Cap Reductn		0	0					288		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.06	0.39					2.09		0.02	1.37	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 160.3 Intersection LOS: F
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: SH 123 & FM 110 EB



Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	35.0
Total Split (s)	67.0	60.0	15.0	15.0	8.0	8.0
Total Split (%)	45%	40%	10%	10%	5%	5%
Maximum Green (s)	61.0	54.0	9.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	529	26	13	367	80	5	21	30	23	7	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.974			0.928			0.934	
Flt Protected		0.996			0.999			0.996			0.981	
Satd. Flow (prot)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Flt Permitted		0.996			0.999			0.996			0.981	
Satd. Flow (perm)	0	1844	0	0	3444	0	0	1722	0	0	1707	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	113	1197	59	29	830	181	11	48	68	52	16	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1369	0	0	1040	0	0	127	0	0	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 104.8%	ICU Level of Service G
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1240	52	150	904	79	104	179	271	127	68	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	100		0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.994			0.988				0.850		0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	3433	3497	0	1770	1863	1583	3433	1792	0
Flt Permitted	0.061			0.950			0.544			0.950		
Satd. Flow (perm)	114	3518	0	3433	3497	0	1013	1863	1583	3433	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10				140		11	
Link Speed (mph)		35			35			35			30	
Link Distance (ft)		444			334			297			295	
Travel Time (s)		8.6			6.5			5.8			6.7	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%
Adj. Flow (vph)	54	2098	88	254	1530	134	176	303	459	215	115	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	2186	0	254	1664	0	176	303	459	215	154	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2						8		8			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.5	33.0		9.5	33.0		9.5	35.0	35.0	9.5	35.0	
Total Split (s)	15.0	78.0		15.0	78.0		15.0	32.0	32.0	15.0	32.0	
Total Split (%)	10.7%	55.7%		10.7%	55.7%		10.7%	22.9%	22.9%	10.7%	22.9%	
Maximum Green (s)	10.5	72.0		10.5	72.0		10.5	26.0	26.0	10.5	26.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	2.0	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	6.0		4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	3.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	73.6	72.1		10.5	77.9		37.8	26.0	26.0	10.4	26.1	
Actuated g/C Ratio	0.53	0.52		0.08	0.56		0.27	0.19	0.19	0.07	0.19	
v/c Ratio	0.39	1.21		0.99	0.85		0.53	0.88	1.13	0.84	0.45	
Control Delay	24.6	129.7		117.0	32.3		45.4	81.2	119.4	91.3	51.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	24.6	129.7		117.0	32.3		45.4	81.2	119.4	91.3	51.8	
LOS	C	F		F	C		D	F	F	F	D	
Approach Delay		127.2			43.6			93.2			74.8	
Approach LOS		F			D			F			E	
Queue Length 50th (ft)	23	~1277		121	668		124	271	~372	101	117	
Queue Length 95th (ft)	46	#1411		#213	813		192	#435	#593	#169	190	
Internal Link Dist (ft)		364			254			217			215	
Turn Bay Length (ft)	100			100			100		100	100		
Base Capacity (vph)	184	1813		257	1949		331	345	407	257	342	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.29	1.21		0.99	0.85		0.53	0.88	1.13	0.84	0.45	

Intersection Summary

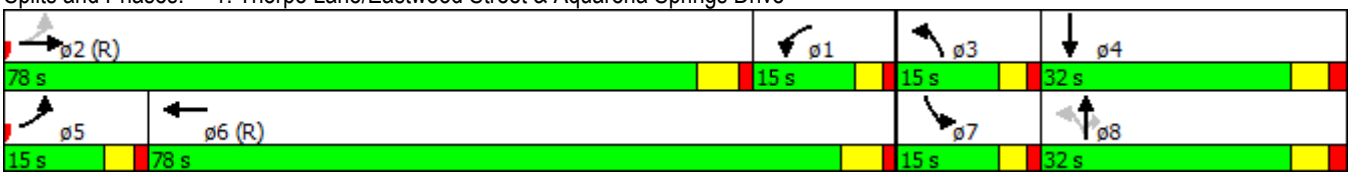
Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 88.5 Intersection LOS: F
Intersection Capacity Utilization 100.5% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Thorpe Lane/Eastwood Street & Aquarena Springs Drive



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1270	193	102	1121	241	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	100		100	130
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3505	1568	1752	3505	3400	1568
Flt Permitted			0.039		0.950	
Satd. Flow (perm)	3505	1568	72	3505	3400	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		110				106
Link Speed (mph)	35			35	30	
Link Distance (ft)	939			494	483	
Travel Time (s)	18.3			9.6	11.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	181%	122%	122%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	2583	393	207	2280	330	197
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2583	393	207	2280	330	197
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			11	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	7.0	12.0	7.0	7.0
Minimum Split (s)	24.5	24.5	12.5	21.5	27.5	27.5
Total Split (s)	98.0	98.0	15.0	113.0	27.0	27.0
Total Split (%)	70.0%	70.0%	10.7%	80.7%	19.3%	19.3%
Maximum Green (s)	92.5	92.5	9.5	107.5	21.5	21.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	12.0	12.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	97.1	97.1	112.1	112.1	16.9	16.9
Actuated g/C Ratio	0.69	0.69	0.80	0.80	0.12	0.12
v/c Ratio	1.06	0.35	1.21	0.81	0.80	0.70
Control Delay	49.9	2.1	177.1	11.7	74.8	40.0
Queue Delay	2.9	0.0	0.0	0.2	0.0	0.0
Total Delay	52.8	2.1	177.1	11.8	74.8	40.0
LOS	D	A	F	B	E	D
Approach Delay	46.1			25.6	61.8	
Approach LOS	D			C	E	
Queue Length 50th (ft)	~1380	12	~179	525	153	80
Queue Length 95th (ft)	m#1357	m20	#344	721	197	159
Internal Link Dist (ft)	859			414	403	
Turn Bay Length (ft)		100	100		100	130
Base Capacity (vph)	2430	1121	171	2806	522	330
Starvation Cap Reductn	16	0	0	0	0	0
Spillback Cap Reductn	0	0	0	77	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.35	1.21	0.84	0.63	0.60

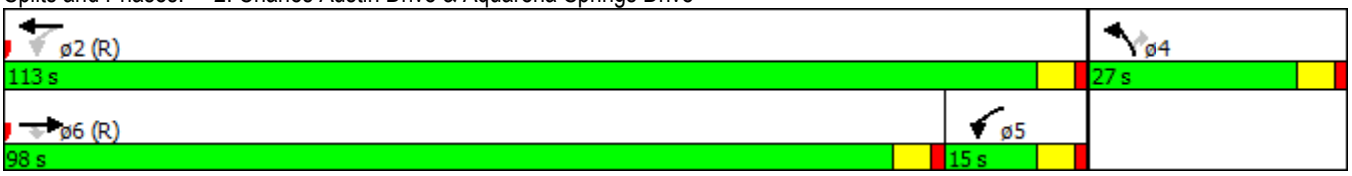
Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 97 (69%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 39.0	Intersection LOS: D
Intersection Capacity Utilization 95.9%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Charles Austin Drive & Aquarena Springs Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	134	569	601	774	915	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			520	0	170
Storage Lanes	1			1	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3471	1553	3367	1553
Flt Permitted	0.152				0.950	
Satd. Flow (perm)	278	3471	3471	1553	3367	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				961		184
Link Speed (mph)		35	35		30	
Link Distance (ft)		1321	939		312	
Travel Time (s)		25.7	18.3		7.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	154%	154%	154%	154%	154%	154%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	222	942	995	1282	1515	479
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	942	995	1282	1515	479
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	

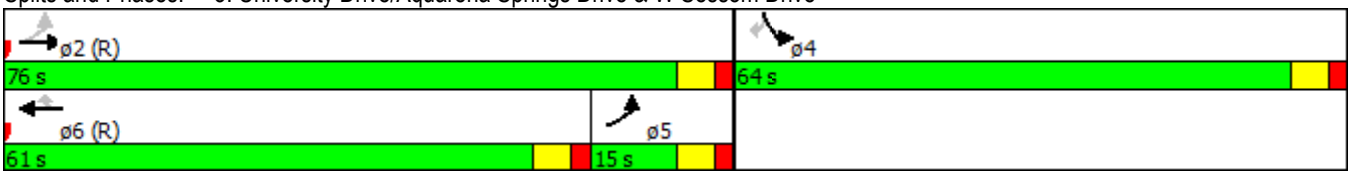
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	25.0	25.0	25.0	25.0
Total Split (s)	15.0	76.0	61.0	61.0	64.0	64.0
Total Split (%)	10.7%	54.3%	43.6%	43.6%	45.7%	45.7%
Maximum Green (s)	9.0	70.0	55.0	55.0	58.0	58.0
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	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Recall Mode	Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)			7.0	7.0	5.0	5.0
Flash Dont Walk (s)			12.0	12.0	14.0	14.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	70.0	70.0	55.0	55.0	58.0	58.0
Actuated g/C Ratio	0.50	0.50	0.39	0.39	0.41	0.41
v/c Ratio	0.96	0.54	0.73	1.07	1.09	0.64
Control Delay	75.3	21.1	35.0	54.1	90.4	23.7
Queue Delay	0.0	0.2	0.0	10.6	5.8	0.0
Total Delay	75.3	21.3	35.0	64.8	96.2	23.7
LOS	E	C	C	E	F	C
Approach Delay		31.6	51.7		78.7	
Approach LOS		C	D		E	
Queue Length 50th (ft)	120	355	421	~735	~796	214
Queue Length 95th (ft)	m#168	m393	457	#1453	#933	341
Internal Link Dist (ft)		1241	859		232	
Turn Bay Length (ft)	110			520		170
Base Capacity (vph)	232	1735	1363	1193	1394	751
Starvation Cap Reductn	0	0	0	76	0	0
Spillback Cap Reductn	0	235	0	0	105	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.63	0.73	1.15	1.18	0.64

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 136 (97%), Referenced to phase 2:EBTL and 6:WBT, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 57.3 Intersection LOS: E
Intersection Capacity Utilization 95.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: University Drive/Aquarena Springs Drive & W Sessom Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	478	2	77	9	2	1	31	255	1	0	398	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	9	9	9	11	11	11	12	12	12
Storage Length (ft)	0		0	0		0	80		0	0		90
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.990			0.999				0.850
Flt Protected	0.950	0.966			0.963		0.950					
Satd. Flow (prot)	1569	1528	0	0	1598	0	1711	1799	0	0	1863	1583
Flt Permitted	0.950	0.966			0.963		0.104					
Satd. Flow (perm)	1569	1528	0	0	1598	0	187	1799	0	0	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			1							1050
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		319			291			311			1321	
Travel Time (s)		7.3			6.6			6.1			25.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	972	4	157	10	2	1	63	519	2	0	809	1088
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	573	560	0	0	13	0	63	521	0	0	809	1088
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.14	1.14	1.14	1.04	1.04	1.04	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA			NA	pm+ov
Protected Phases	4	4		3	3			2			6	4

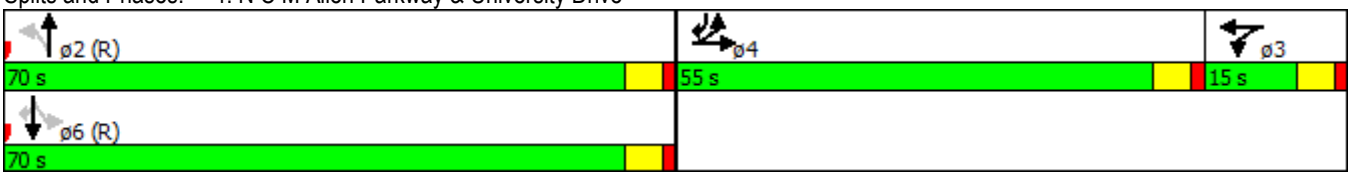
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases							2			6		6
Detector Phase	4	4		3	3		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		15.0	15.0		15.0	15.0	15.0
Minimum Split (s)	27.5	27.5		21.5	21.5		23.5	23.5		32.5	32.5	27.5
Total Split (s)	55.0	55.0		15.0	15.0		70.0	70.0		70.0	70.0	55.0
Total Split (%)	39.3%	39.3%		10.7%	10.7%		50.0%	50.0%		50.0%	50.0%	39.3%
Maximum Green (s)	49.5	49.5		9.5	9.5		64.5	64.5		64.5	64.5	49.5
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)	1.5	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	0.0
Total Lost Time (s)	5.5	5.5			5.5		5.5	5.5			5.5	5.5
Lead/Lag	Lead	Lead		Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		None	None		C-Max	C-Max		C-Max	C-Max	Max
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0					8.0	8.0		20.0	20.0	15.0
Pedestrian Calls (#/hr)	0	0					0	0		0	0	0
Act Effct Green (s)	49.5	49.5			5.9		74.5	74.5			74.5	132.8
Actuated g/C Ratio	0.35	0.35			0.04		0.53	0.53			0.53	0.95
v/c Ratio	1.03	1.02			0.19		0.64	0.54			0.82	0.70
Control Delay	91.4	86.8			67.2		58.2	25.4			22.5	8.5
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	91.4	86.8			67.2		58.2	25.4			22.5	8.5
LOS	F	F			E		E	C			C	A
Approach Delay		89.1			67.2			29.0			14.4	
Approach LOS		F			E			C			B	
Queue Length 50th (ft)	~588	~556			11		36	278			254	307
Queue Length 95th (ft)	#816	#787			33		#133	458			#929	300
Internal Link Dist (ft)		239			211			231			1241	
Turn Bay Length (ft)							80					90
Base Capacity (vph)	554	549			109		99	957			991	1555
Starvation Cap Reductn	0	0			0		0	0			0	11
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.03	1.02			0.12		0.64	0.54			0.82	0.70

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 11 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 40.3	Intersection LOS: D
Intersection Capacity Utilization 102.3%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: N C M Allen Parkway & University Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	11	9	25	15	248	6	950	4	280	890	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	70		0	145		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981				0.850		0.999			0.989	
Flt Protected		0.967			0.970		0.950			0.950		
Satd. Flow (prot)	0	1767	0	0	1807	1583	1770	3536	0	1770	3500	0
Flt Permitted		0.714			0.767		0.115			0.048		
Satd. Flow (perm)	0	1305	0	0	1429	1583	214	3536	0	89	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				18					14	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		496			660			2096			1789	
Travel Time (s)		11.3			22.5			31.8			27.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	89	22	18	49	30	488	12	1869	8	551	1751	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	79	488	12	1877	0	551	1895	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		8			4	5	1	6		5	2	
Permitted Phases	8			4		4	6			2		

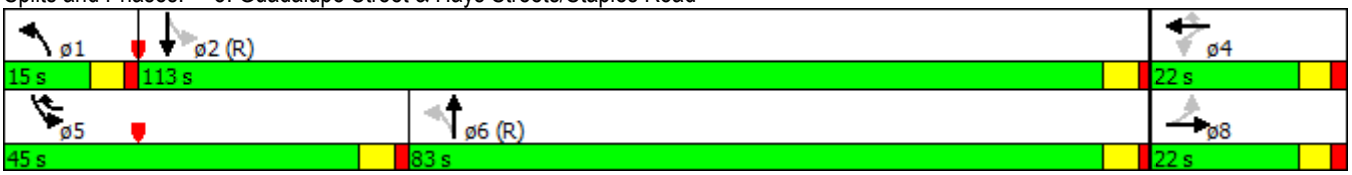
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	8	8		4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	15.0		7.0	15.0	
Minimum Split (s)	21.5	21.5		21.5	21.5	12.5	12.5	21.5		12.5	21.5	
Total Split (s)	22.0	22.0		22.0	22.0	45.0	15.0	83.0		45.0	113.0	
Total Split (%)	14.7%	14.7%		14.7%	14.7%	30.0%	10.0%	55.3%		30.0%	75.3%	
Maximum Green (s)	16.5	16.5		16.5	16.5	39.5	9.5	77.5		39.5	107.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	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	0.0	
Total Lost Time (s)		5.5			5.5	5.5	5.5	5.5		5.5	5.5	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		15.8			15.8	61.5	84.5	77.5		123.2	118.2	
Actuated g/C Ratio		0.11			0.11	0.41	0.56	0.52		0.82	0.79	
v/c Ratio		0.91			0.52	0.74	0.06	1.03		1.05	0.69	
Control Delay		118.8			76.4	44.2	3.6	49.0		98.7	9.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		118.8			76.4	44.2	3.6	49.0		98.7	9.9	
LOS		F			E	D	A	D		F	A	
Approach Delay		118.8			48.7			48.7			29.9	
Approach LOS		F			D			D			C	
Queue Length 50th (ft)		123			74	388	1	~1032		~545	322	
Queue Length 95th (ft)		#252			133	534	m3	#1152		#781	590	
Internal Link Dist (ft)		416			580			2016			1709	
Turn Bay Length (ft)						100	70			145		
Base Capacity (vph)		147			157	659	222	1826		523	2759	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.88			0.50	0.74	0.05	1.03		1.05	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 41.3 Intersection LOS: D
Intersection Capacity Utilization 102.8% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Guadalupe Street & Hays Streets/Staples Road



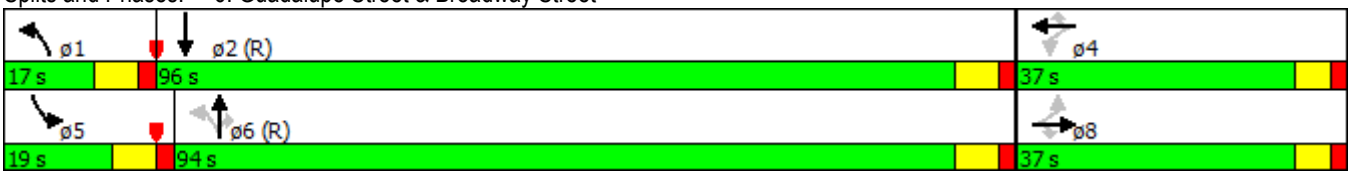
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	62	35	68	39	71	56	901	45	104	868	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	80		0	70		100	100		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	0.95
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	1752	3505	1568	3400	3473	0
Flt Permitted	0.722			0.514			0.063			0.950		
Satd. Flow (perm)	1332	1845	1568	948	1845	1568	116	3505	1568	3400	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			97			73		8	
Link Speed (mph)		30			20			45			45	
Link Distance (ft)		659			398			613			2096	
Travel Time (s)		15.0			13.6			9.3			31.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	181%	181%	181%	122%	122%	122%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	102	126	71	93	53	97	114	1832	92	212	1765	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	126	71	93	53	97	114	1832	92	212	1883	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	
Protected Phases		8			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4		4	6		6			
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	12.0	26.0	26.0	12.0	26.0	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	17.0	94.0	94.0	19.0	96.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	11.3%	62.7%	62.7%	12.7%	64.0%	
Maximum Green (s)	31.0	31.0	31.0	31.0	31.0	31.0	10.0	87.0	87.0	12.0	89.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.5	2.5	1.0	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0	24.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	
Act Effct Green (s)	16.8	16.8	16.8	16.8	16.8	16.8	109.6	100.2	100.2	13.0	103.7	
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.73	0.67	0.67	0.09	0.69	
v/c Ratio	0.68	0.61	0.29	0.88	0.26	0.37	0.61	0.78	0.09	0.72	0.78	
Control Delay	85.5	74.9	11.7	123.8	61.6	13.9	33.0	22.1	3.8	72.9	15.4	
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	85.5	74.9	11.7	123.8	61.6	13.9	33.0	22.1	3.8	72.9	15.4	
LOS	F	E	B	F	E	B	C	C	A	E	B	
Approach Delay		63.5			66.4			21.8			21.2	
Approach LOS		E			E			C			C	
Queue Length 50th (ft)	98	119	0	91	48	0	26	616	6	106	381	
Queue Length 95th (ft)	154	177	37	150	88	52	99	879	31	150	439	
Internal Link Dist (ft)		579			318			533			2016	
Turn Bay Length (ft)	100			80			70		100	100		
Base Capacity (vph)	275	381	387	195	381	401	208	2340	1071	310	2403	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.33	0.18	0.48	0.14	0.24	0.55	0.78	0.09	0.68	0.78	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Guadalupe Street & Broadway Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	34	95	34	25	11	44	661	81	28	967	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	280		0	0		0	580		0	120		90
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.890			0.978			0.984				0.850
Flt Protected	0.950				0.976		0.950			0.950		
Satd. Flow (prot)	1752	1642	0	0	1761	0	1752	3449	0	1752	3505	1568
Flt Permitted	0.682				0.312		0.050			0.078		
Satd. Flow (perm)	1258	1642	0	0	563	0	92	3449	0	144	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			5			15				125
Link Speed (mph)		40			40			60			60	
Link Distance (ft)		552			283			1101			309	
Travel Time (s)		9.4			4.8			12.5			3.5	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	181%	181%	181%	100%	100%	100%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	362	71	198	39	29	13	92	1375	169	58	2012	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	362	269	0	0	81	0	92	1544	0	58	2012	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	15.0		7.0	15.0	15.0
Minimum Split (s)	16.0	21.0		16.5	21.0		13.5	21.5		13.5	21.5	21.5
Total Split (s)	25.0	25.0		16.0	16.0		15.0	84.0		15.0	84.0	84.0
Total Split (%)	17.9%	17.9%		11.4%	11.4%		10.7%	60.0%		10.7%	60.0%	60.0%
Maximum Green (s)	19.0	19.0		9.5	9.5		8.5	77.5		8.5	77.5	77.5
Yellow Time (s)	4.0	4.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		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	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.5		6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	35.0	35.0			9.5		87.8	81.2		85.5	78.1	78.1
Actuated g/C Ratio	0.25	0.25			0.07		0.63	0.58		0.61	0.56	0.56
v/c Ratio	0.95	0.57			1.93		0.61	0.77		0.34	1.03	0.33
Control Delay	88.0	36.6			523.5		39.9	26.2		20.3	79.7	24.7
Queue Delay	62.1	0.0			0.0		0.0	14.9		0.0	28.7	1.9
Total Delay	150.2	36.6			523.5		39.9	41.1		20.3	108.4	26.5
LOS	F	D			F		D	D		C	F	C
Approach Delay		101.7			523.5			41.0			95.7	
Approach LOS		F			F			D			F	
Queue Length 50th (ft)	314	149			~109		32	557		32	~1053	187
Queue Length 95th (ft)	#496	232			#215		89	631		53	#1121	257
Internal Link Dist (ft)		472			203			1021			229	
Turn Bay Length (ft)	280						580			120		90
Base Capacity (vph)	381	472			42		158	2007		186	1954	929
Starvation Cap Reductn	0	0			0		0	0		0	391	464
Spillback Cap Reductn	277	0			0		0	482		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	3.48	0.57			1.93		0.58	1.01		0.31	1.29	0.65

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.93
Intersection Signal Delay: 84.9 Intersection LOS: F
Intersection Capacity Utilization 101.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: SH 123 & Old Bastrop Highway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	72	14	52	109	445	28	254	58	291	350	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		150	95		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983				0.850		0.972			0.983	
Flt Protected		0.988			0.984		0.950			0.950		
Satd. Flow (prot)	0	1792	0	0	1815	1568	1752	3407	0	1752	3445	0
Flt Permitted		0.739			0.773		0.357			0.229		
Satd. Flow (perm)	0	1340	0	0	1426	1568	659	3407	0	422	3445	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				467		23			15	
Link Speed (mph)		45			40			55			55	
Link Distance (ft)		620			3374			444			592	
Travel Time (s)		9.4			57.5			5.5			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	55	142	28	102	214	875	55	500	114	573	689	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	316	875	55	614	0	573	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	35.0		7.0	35.0	
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	13.0	41.0		13.0	41.0	
Total Split (s)	46.0	46.0		46.0	46.0	46.0	15.0	42.0		32.0	59.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%	38.3%	12.5%	35.0%		26.7%	49.2%	
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	9.0	36.0		26.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	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	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		41.0			41.0	41.0	42.2	35.0		67.0	56.4	
Actuated g/C Ratio		0.34			0.34	0.34	0.35	0.29		0.56	0.47	
v/c Ratio		0.49			0.65	1.04	0.19	0.61		1.10	0.48	
Control Delay		34.7			44.4	63.0	16.5	38.2		92.4	23.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		34.7			44.4	63.0	16.5	38.2		92.4	23.2	
LOS		C			D	E	B	D		F	C	
Approach Delay		34.7			58.0			36.4			52.5	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)		133			190	~384	19	207		~383	215	
Queue Length 95th (ft)		212			m251	m#711	38	270		#607	276	
Internal Link Dist (ft)		540			3294			364			512	
Turn Bay Length (ft)						150	95			120		
Base Capacity (vph)		461			487	843	323	1038		523	1627	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.49			0.65	1.04	0.17	0.59		1.10	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 13 (11%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 50.1 Intersection LOS: D
Intersection Capacity Utilization 105.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Hunter Road & McCarty Lane

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	35	138	20	25	8	164	373	0	7	497	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980						0.985	
Flt Protected		0.966			0.981		0.950			0.950		
Satd. Flow (prot)	0	1799	1583	0	1791	0	1770	1863	0	1770	1835	0
Flt Permitted		0.712			0.409		0.068			0.288		
Satd. Flow (perm)	0	1326	1583	0	747	0	127	1863	0	536	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169		8						9	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		850			516			854			4071	
Travel Time (s)		19.3			11.7			16.6			79.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	164	66	260	38	47	15	309	703	0	13	937	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	260	0	100	0	309	703	0	13	1044	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6		6	2			4			8		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	6	6	6	2	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		10.0	15.0		10.0	15.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		15.0	21.0		15.0	21.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		18.0	62.0		15.0	59.0	
Total Split (%)	23.0%	23.0%	23.0%	23.0%	23.0%		18.0%	62.0%		15.0%	59.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		13.0	57.0		10.0	54.0	
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)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		18.0	18.0		18.0		71.6	69.0		56.0	54.0	
Actuated g/C Ratio		0.18	0.18		0.18		0.72	0.69		0.56	0.54	
v/c Ratio		0.97	0.61		0.71		1.02	0.55		0.03	1.05	
Control Delay		92.9	20.8		63.7		91.5	10.9		9.5	61.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		92.9	20.8		63.7		91.5	10.9		9.5	61.9	
LOS		F	C		E		F	B		A	E	
Approach Delay		54.6			63.7			35.5			61.2	
Approach LOS		D			E			D			E	
Queue Length 50th (ft)		147	51		56		~151	173		4	~755	
Queue Length 95th (ft)		#297	135		#141		#331	419		m5	m#747	
Internal Link Dist (ft)		770			436			774			3991	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		238	423		141		304	1285		423	995	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.97	0.61		0.71		1.02	0.55		0.03	1.05	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 50.3 Intersection LOS: D
Intersection Capacity Utilization 101.3% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Hopkins Street & N Bishop Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	111	91	16	23	3	61	450	11	8	577	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	1		0	0		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.990			0.996				0.850
Flt Protected	0.950				0.981		0.950				0.999	
Satd. Flow (prot)	1787	1753	0	0	1827	0	1787	1874	0	0	1879	1599
Flt Permitted	0.618				0.764		0.077				0.988	
Satd. Flow (perm)	1163	1753	0	0	1423	0	145	1874	0	0	1859	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			3			2				333
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			343			4071			190	
Travel Time (s)		7.4			7.8			92.5			4.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%	154%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	451	180	148	26	37	5	99	729	18	13	935	447
Shared Lane Traffic (%)												
Lane Group Flow (vph)	451	328	0	0	68	0	99	747	0	0	948	447
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			24			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	5.0		5.0	15.0		15.0	15.0	15.0
Minimum Split (s)	9.0	24.0		21.0	21.0		10.0	23.0		24.0	24.0	24.0
Total Split (s)	15.0	36.0		21.0	21.0		15.0	64.0		49.0	49.0	49.0
Total Split (%)	15.0%	36.0%		21.0%	21.0%		15.0%	64.0%		49.0%	49.0%	49.0%
Maximum Green (s)	10.0	31.0		16.0	16.0		10.0	59.0		44.0	44.0	44.0
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)	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
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Max		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)		7.0						7.0		7.0	7.0	7.0
Flash Dont Walk (s)		12.0						9.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)		0						0		0	0	0
Act Effct Green (s)	31.0	31.0			13.8		59.0	59.0			48.9	48.9
Actuated g/C Ratio	0.31	0.31			0.14		0.59	0.59			0.49	0.49
v/c Ratio	1.01	0.57			0.34		0.49	0.68			1.04	0.47
Control Delay	79.7	29.6			40.8		23.1	11.4			69.3	6.6
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Delay	79.7	29.6			40.8		23.1	11.4			69.3	6.6
LOS	E	C			D		C	B			E	A
Approach Delay		58.6			40.8			12.8			49.2	
Approach LOS		E			D			B			D	
Queue Length 50th (ft)	~288	151			37		18	118			~681	40
Queue Length 95th (ft)	#512	242			78		m53	m165			#953	118
Internal Link Dist (ft)		245			263			3991			110	
Turn Bay Length (ft)												
Base Capacity (vph)	448	573			230		249	1106			909	952
Starvation Cap Reductn	0	0			0		0	0			0	0
Spillback Cap Reductn	0	0			0		0	0			0	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	1.01	0.57			0.30		0.40	0.68			1.04	0.47

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of 1st Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 41.4 Intersection LOS: D
Intersection Capacity Utilization 116.8% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Hopkins Street & Moore Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	1243	77	129	1343	103	209	185	131	136	347	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.989			0.938			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1864	0	1787	3535	0	1421	1765	0	1787	1840	0
Flt Permitted	0.134			0.066			0.242			0.258		
Satd. Flow (perm)	252	1864	0	124	3535	0	362	1765	0	485	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			14			30			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			255			291			340	
Travel Time (s)		9.3			5.8			6.6			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)							21		20			
Adj. Flow (vph)	36	1148	71	119	1241	95	193	171	121	126	321	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1219	0	119	1336	0	193	292	0	126	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		4.0	10.0		4.0	4.0	
Minimum Split (s)	24.5	24.5		24.5	24.5		8.5	24.5		9.0	20.5	
Total Split (s)	65.0	65.0		65.0	65.0		15.0	20.0		15.0	20.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		15.0%	20.0%		15.0%	20.0%	
Maximum Green (s)	60.5	60.5		60.5	60.5		10.5	15.5		10.5	15.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0	0.2		3.0	3.0	
Recall Mode	C-Max	C-Max		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	60.5	60.5		60.5	60.5		27.0	16.5		25.0	15.5	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.27	0.16		0.25	0.16	
v/c Ratio	0.24	1.08		1.59	0.62		0.93	0.93		0.51	1.29	
Control Delay	14.0	72.2		341.1	14.0		78.2	74.1		34.1	190.2	
Queue Delay	0.0	9.6		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.0	81.8		341.1	14.0		78.2	74.1		34.1	190.2	
LOS	B	F		F	B		E	E		C	F	
Approach Delay		79.8			40.7			75.8			151.0	
Approach LOS		E			D			E			F	
Queue Length 50th (ft)	10	~873		~109	260		99	170		60	~306	
Queue Length 95th (ft)	30	#1131		#177	325		#220	#340		107	#488	
Internal Link Dist (ft)		331			175			211			260	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	152	1130		75	2144		208	315		262	291	
Starvation Cap Reductn	0	197		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	1.31		1.59	0.62		0.93	0.93		0.48	1.29	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 4:EBTL, Start of 1st Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.59
Intersection Signal Delay: 73.6 Intersection LOS: E
Intersection Capacity Utilization 111.3% ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: N LBJ Drive & Hopkins Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	1108	115	86	1473	69	140	123	88	204	520	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.993			0.937			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1855	0	1787	3549	0	1787	1763	0	1555	1840	0
Flt Permitted	0.054			0.052			0.130			0.365		
Satd. Flow (perm)	102	1855	0	98	3549	0	245	1763	0	597	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			5			21			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1298			411			284			391	
Travel Time (s)		29.5			9.3			6.5			8.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)										6		6
Adj. Flow (vph)	57	1070	111	83	1423	67	135	119	85	197	502	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	1181	0	83	1490	0	135	204	0	197	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.19	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0		4.0	10.0	
Minimum Split (s)	8.0	23.5		8.0	23.5		9.5	23.5		9.5	23.5	
Total Split (s)	8.0	85.0		8.0	85.0		12.0	35.6		21.4	45.0	
Total Split (%)	5.3%	56.7%		5.3%	56.7%		8.0%	23.7%		14.3%	30.0%	
Maximum Green (s)	4.0	79.5		4.0	79.5		6.5	30.1		15.9	39.5	
Yellow Time (s)	3.5	4.0		3.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.5		0.5	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		0.0	0.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	81.0	79.5		82.6	81.1		37.2	30.7		51.5	39.5	
Actuated g/C Ratio	0.54	0.53		0.55	0.54		0.25	0.20		0.34	0.26	
v/c Ratio	0.57	1.20		0.85	0.78		1.06	0.54		0.65	1.20	
Control Delay	38.8	132.1		103.8	31.1		137.5	54.0		48.6	156.2	
Queue Delay	0.0	0.0		0.0	48.5		0.0	0.0		0.0	0.0	
Total Delay	38.8	132.1		103.8	79.5		137.5	54.0		48.6	156.2	
LOS	D	F		F	E		F	D		D	F	
Approach Delay		127.8			80.8			87.3			129.2	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	26	~1399		38	603		~103	163		145	~695	
Queue Length 95th (ft)	#52	#1609		#127	673		#229	244		213	#903	
Internal Link Dist (ft)		1218			331			204			311	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	100	985		98	1921		127	377		306	488	
Starvation Cap Reductn	0	0		0	700		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.57	1.20		0.85	1.22		1.06	0.54		0.64	1.20	

Intersection Summary

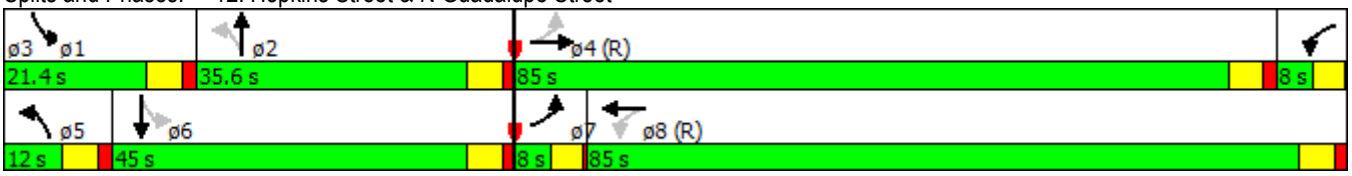
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 105.8 Intersection LOS: F
Intersection Capacity Utilization 108.9% ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Hopkins Street & N Guadalupe Street



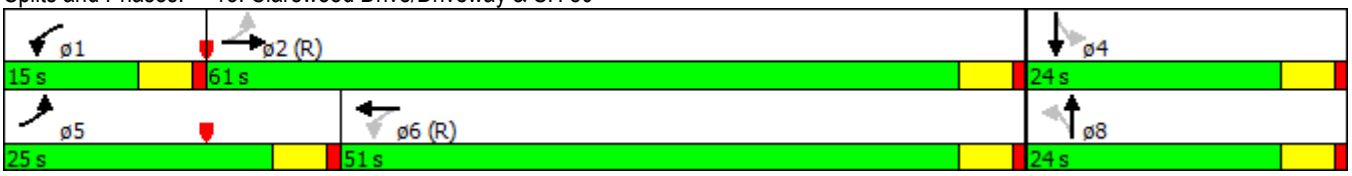
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	1250	33	36	1079	19	40	40	26	81	39	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.967			0.946	
Flt Protected	0.950			0.950				0.982			0.980	
Satd. Flow (prot)	1719	4920	0	1719	4925	0	0	1718	0	0	1678	0
Flt Permitted	0.073			0.080				0.729			0.769	
Satd. Flow (perm)	132	4920	0	145	4925	0	0	1276	0	0	1316	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			15			30	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		488			377			172			154	
Travel Time (s)		9.5			7.3			3.9			3.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	181%	181%	181%	181%	181%	181%	122%	122%	122%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	341	2433	64	70	2100	37	52	52	34	87	42	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	2497	0	70	2137	0	0	138	0	0	216	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	13.0	24.0		13.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	25.0	61.0		15.0	51.0		24.0	24.0		24.0	24.0	
Total Split (%)	25.0%	61.0%		15.0%	51.0%		24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	20.0	56.0		10.0	46.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	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	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	72.8	63.1		56.8	49.9			17.2			17.2	
Actuated g/C Ratio	0.73	0.63		0.57	0.50			0.17			0.17	
v/c Ratio	0.90	0.80		0.37	0.87			0.60			0.86	
Control Delay	53.1	18.0		16.5	28.3			44.8			65.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	53.1	18.0		16.5	28.3			44.8			65.5	
LOS	D	B		B	C			D			E	
Approach Delay		22.2			27.9			44.8			65.5	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	160	446		12	460			71			114	
Queue Length 95th (ft)	#309	554		35	#586			135			#235	
Internal Link Dist (ft)		408			297			92			74	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	413	3104		244	2458			254			274	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.83	0.80		0.29	0.87			0.54			0.79	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 83.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Clarewood Drive/Driveway & SH 80



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	10	40	200	1200	0	0	700	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.976		0.950					
Satd. Flow (prot)	0	0	0	0	1766	1538	1719	3438	0	0	3438	1538
Flt Permitted					0.976		0.950					
Satd. Flow (perm)	0	0	0	0	1766	1538	1719	3438	0	0	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						183						530
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			345			121			315	
Travel Time (s)		6.7			7.8			2.8			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	0	9	9	38	189	1133	0	0	661	850
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	18	38	189	1133	0	0	661	850
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

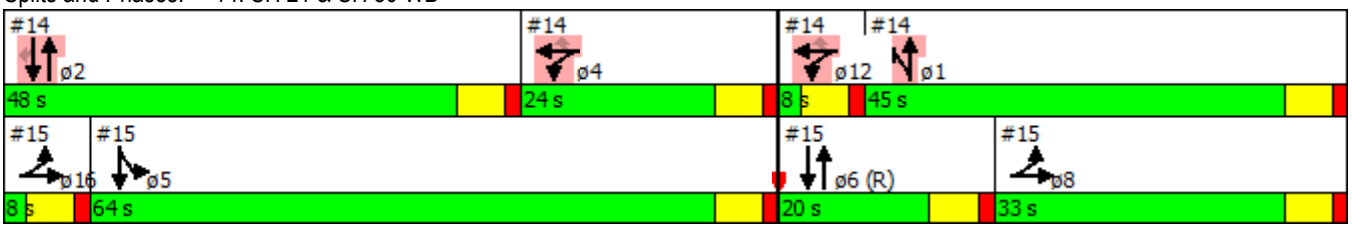
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				16.0	16.0
Total Split (s)							45.0				48.0	48.0
Total Split (%)							36.0%				38.4%	38.4%
Maximum Green (s)							39.0				42.0	42.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							None				None	None
Act Effct Green (s)					24.4	24.4	36.5	84.6			42.1	42.1
Actuated g/C Ratio					0.20	0.20	0.29	0.68			0.34	0.34
v/c Ratio					0.05	0.09	0.38	0.49			0.57	0.98
Control Delay					40.2	0.4	16.4	7.9			36.4	41.7
Queue Delay					0.0	0.0	70.0	50.7			0.4	0.0
Total Delay					40.2	0.4	86.4	58.6			36.8	41.7
LOS					D	A	F	E			D	D
Approach Delay					13.2			62.6			39.5	
Approach LOS					B			E			D	
Queue Length 50th (ft)					12	0	56	211			230	334
Queue Length 95th (ft)					33	0	m81	m234			293	#642
Internal Link Dist (ft)		215			265			41			235	
Turn Bay Length (ft)												100
Base Capacity (vph)					344	447	536	2326			1158	869
Starvation Cap Reductn					0	0	388	1434			0	0
Spillback Cap Reductn					0	0	0	0			143	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.05	0.09	1.28	1.27			0.65	0.98

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 49.6 Intersection LOS: D
Intersection Capacity Utilization 80.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: SH 21 & SH 80 WB



Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	24.0	13.0	20.0	22.0	22.0	22.0
Total Split (s)	24.0	64.0	20.0	33.0	8.0	8.0
Total Split (%)	19%	51%	16%	26%	6%	6%
Maximum Green (s)	18.0	58.0	14.0	27.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	2.0	2.0
Recall Mode	None	None	C-Max	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	800	5	100	0	0	0	0	600	100	100	610	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.858						0.979				
Flt Protected	0.950										0.993	
Satd. Flow (prot)	3273	1594	0	0	0	0	0	3465	0	0	3489	0
Flt Permitted	0.950										0.576	
Satd. Flow (perm)	3273	1594	0	0	0	0	0	3465	0	0	2024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		92						12				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			329			202			121	
Travel Time (s)		6.8			7.5			4.6			2.8	
Peak Hour Factor	0.86	0.86	0.92	0.92	0.86	0.86	0.92	0.92	0.92	0.86	0.92	0.86
Growth Factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Heavy Vehicles (%)	7%	7%	2%	2%	7%	7%	2%	2%	2%	7%	2%	7%
Adj. Flow (vph)	791	5	92	0	0	0	0	554	92	99	564	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	791	97	0	0	0	0	0	646	0	0	663	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	8 16	8 16						6		5	5 6	

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases												
Detector Phase	8 16	8 16						6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								20.0		13.0		
Total Split (s)								20.0		64.0		
Total Split (%)								16.0%		51.2%		
Maximum Green (s)								14.0		58.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								6.0				
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Max		None		
Act Effct Green (s)	35.0	35.0						25.2			72.0	
Actuated g/C Ratio	0.28	0.28						0.20			0.58	
v/c Ratio	0.86	0.19						0.91			0.49	
Control Delay	53.7	8.5						67.1			5.4	
Queue Delay	0.6	0.0						48.4			0.2	
Total Delay	54.4	8.5						115.5			5.6	
LOS	D	A						F			A	
Approach Delay		49.4						115.5			5.6	
Approach LOS		D						F			A	
Queue Length 50th (ft)	313	3						~293			0	
Queue Length 95th (ft)	370	40						#416			0	
Internal Link Dist (ft)		217			249			122			41	
Turn Bay Length (ft)	100											
Base Capacity (vph)	888	499						707			1654	
Starvation Cap Reductn	0	0						0			388	
Spillback Cap Reductn	13	0						235			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.90	0.19						1.37			0.52	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 55.6 Intersection LOS: E
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15

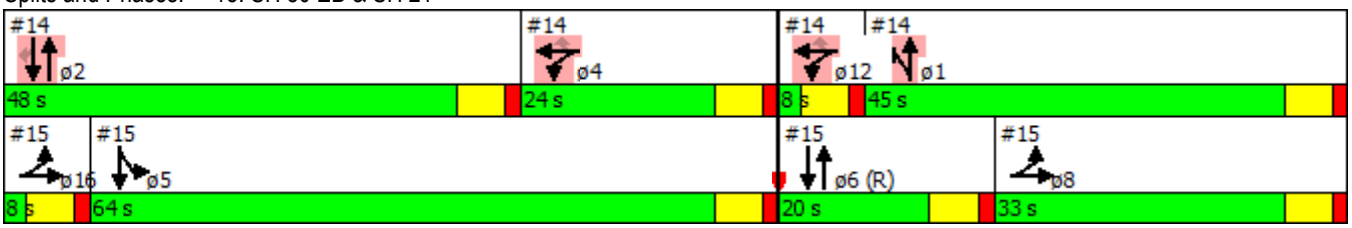
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	16.0	24.0	22.0	22.0	22.0
Total Split (s)	45.0	48.0	24.0	33.0	8.0	8.0
Total Split (%)	36%	38%	19%	26%	6%	6%
Maximum Green (s)	39.0	42.0	18.0	27.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 15: SH 80 EB & SH 21



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	351	338	432	72	114	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				38		86
Link Speed (mph)		40	45		30	
Link Distance (ft)		308	289		277	
Travel Time (s)		5.3	4.4		6.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	154%	154%	154%	154%	154%	154%
Adj. Flow (vph)	614	592	756	126	200	791
Shared Lane Traffic (%)						
Lane Group Flow (vph)	614	592	756	126	200	791
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template		Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	8.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		3	5
Permitted Phases				6		3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	3	5
Switch Phase						
Minimum Initial (s)	5.0	20.0	10.0	10.0	10.0	5.0
Minimum Split (s)	10.5	25.5	21.5	21.5	21.5	10.5
Total Split (s)	29.0	86.0	57.0	57.0	44.0	29.0
Total Split (%)	22.3%	66.2%	43.8%	43.8%	33.8%	22.3%
Maximum Green (s)	23.5	80.5	51.5	51.5	38.5	23.5
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	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	23.5	80.6	51.6	51.6	16.5	45.5
Actuated g/C Ratio	0.22	0.75	0.48	0.48	0.15	0.42
v/c Ratio	0.82	0.43	0.85	0.16	0.74	1.10
Control Delay	51.3	6.8	36.7	12.6	60.6	94.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	6.8	36.7	12.6	60.6	94.1
LOS	D	A	D	B	E	F
Approach Delay		29.4	33.3		87.4	
Approach LOS		C	C		F	
Queue Length 50th (ft)	209	129	446	33	134	~590
Queue Length 95th (ft)	#309	230	#724	73	206	#798
Internal Link Dist (ft)		228	209		197	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	747	1389	888	775	631	716
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.43	0.85	0.16	0.32	1.10

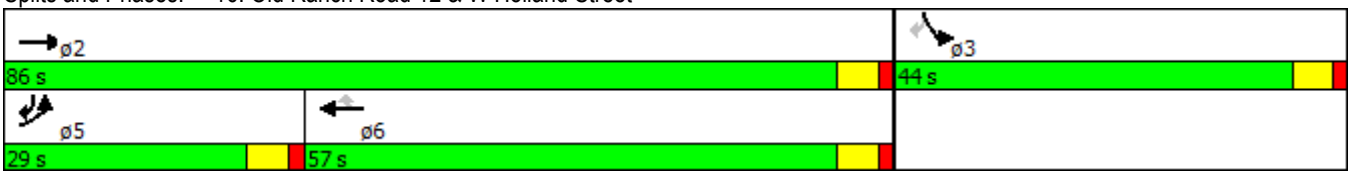
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 108.1
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 49.2 Intersection LOS: D
Intersection Capacity Utilization 87.3% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Old Ranch Road 12 & W Holland Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	583	32	152	456	280	79	16	45	252	26	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		100	65		100	0		0	100		100
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.992				0.850			0.850			0.850
Flt Protected	0.950			0.950				0.960		0.950	0.961	
Satd. Flow (prot)	1736	3443	0	1736	1827	1553	0	1754	1553	1649	1668	1553
Flt Permitted	0.082			0.107				0.600		0.950	0.430	
Satd. Flow (perm)	150	3443	0	195	1827	1553	0	1096	1553	1649	746	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				163			155			155
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		430			251			362			519	
Travel Time (s)		9.8			5.7			8.2			11.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	154%	154%	154%	154%	154%	154%	122%	122%	122%	154%	154%	154%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	220	1020	56	266	798	490	110	22	62	441	46	122
Shared Lane Traffic (%)										45%		
Lane Group Flow (vph)	220	1076	0	266	798	490	0	132	62	243	244	122
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

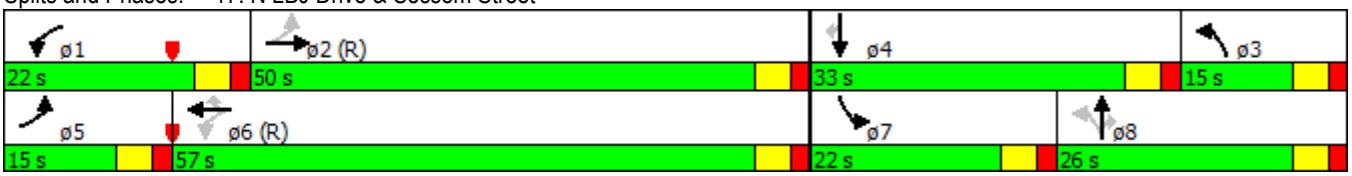
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6		6	8		8			4
Detector Phase	5	2		1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		9.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.0	27.0		14.0	21.0	21.0	12.0	26.0	26.0	12.0	21.0	21.0
Total Split (s)	15.0	50.0		22.0	57.0	57.0	15.0	26.0	26.0	22.0	33.0	33.0
Total Split (%)	12.5%	41.7%		18.3%	47.5%	47.5%	12.5%	21.7%	21.7%	18.3%	27.5%	27.5%
Maximum Green (s)	10.0	45.0		17.0	52.0	52.0	10.0	21.0	21.0	17.0	28.0	28.0
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0						7.0	7.0			
Flash Dont Walk (s)		15.0						14.0	14.0			
Pedestrian Calls (#/hr)		0						0	0			
Act Effct Green (s)	62.1	48.7		68.1	52.3	52.3		17.2	17.2	17.0	17.0	39.2
Actuated g/C Ratio	0.52	0.41		0.57	0.44	0.44		0.14	0.14	0.14	0.14	0.33
v/c Ratio	0.86	0.77		0.81	1.00	0.64		0.85	0.17	1.04	1.03	0.20
Control Delay	62.5	36.1		43.7	67.1	21.5		89.4	1.1	120.7	118.1	2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	36.1		43.7	67.1	21.5		89.4	1.1	120.7	118.1	2.6
LOS	E	D		D	E	C		F	A	F	F	A
Approach Delay		40.6			48.7			61.2			96.0	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	124	393		127	~619	196		99	0	~213	~213	0
Queue Length 95th (ft)	#297	466		#255	#856	302		#181	0	#373	#374	20
Internal Link Dist (ft)		350			171			282			439	
Turn Bay Length (ft)	70			65		100				100		100
Base Capacity (vph)	256	1401		339	795	768		191	399	233	236	611
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	0
Reduced v/c Ratio	0.86	0.77		0.78	1.00	0.64		0.69	0.16	1.04	1.03	0.20

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 54.4	Intersection LOS: D
Intersection Capacity Utilization 78.7%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: N LBJ Drive & Sessom Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	570	188	65	625	73	162	71	101	29	32	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		0	160		0	1		0	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.984			0.912			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3408	0	1770	3483	0	1770	1699	0	1770	1654	0
Flt Permitted	0.058			0.059			0.188			0.514		
Satd. Flow (perm)	108	3408	0	110	3483	0	350	1699	0	957	1654	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			11			46			84	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1177			1531			298			455	
Travel Time (s)		17.8			23.2			5.8			8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	143	1134	374	129	1243	145	322	141	201	58	64	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	1508	0	129	1388	0	322	342	0	58	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8			13			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	25.0		13.0	24.9		12.5	27.5		12.5	27.5	
Total Split (s)	16.0	76.0		15.0	75.0		31.0	44.0		15.0	28.0	
Total Split (%)	10.7%	50.7%		10.0%	50.0%		20.7%	29.3%		10.0%	18.7%	
Maximum Green (s)	10.0	70.0		9.0	69.1		25.5	38.5		9.5	22.5	
Yellow Time (s)	4.5	4.5		4.5	4.4		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		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	5.9		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	79.9	70.2		78.1	69.3		53.5	42.5		31.5	23.5	
Actuated g/C Ratio	0.53	0.47		0.52	0.46		0.36	0.28		0.21	0.16	
v/c Ratio	0.87	0.93		0.84	0.86		0.90	0.67		0.24	0.78	
Control Delay	87.0	40.3		78.1	37.8		67.7	49.3		36.5	57.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.0	40.3		78.1	37.8		67.7	49.3		36.5	57.2	
LOS	F	D		E	D		E	D		D	E	
Approach Delay		44.3			41.3			58.2			53.4	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	114	333		85	673		247	265		38	166	
Queue Length 95th (ft)	m#207	#694		m#178	769		#414	390		72	#304	
Internal Link Dist (ft)		1097			1451			218			375	
Turn Bay Length (ft)	160			160			1			80		
Base Capacity (vph)	168	1615		156	1616		366	513		261	329	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.85	0.93		0.83	0.86		0.88	0.67		0.22	0.78	

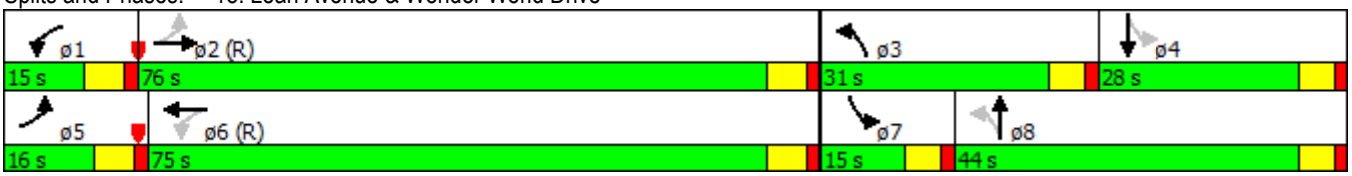
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 46.1 Intersection LOS: D
Intersection Capacity Utilization 95.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Leah Avenue & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	538	115	30	394	3	179	3	43	10	1	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	12	12	12	12	12	12	12	12
Storage Length (ft)	100		0	100		0	1		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.999			0.860			0.895	
Flt Protected	0.950			0.950			0.950				0.990	
Satd. Flow (prot)	1829	3447	0	1829	3536	0	1770	1602	0	0	1650	0
Flt Permitted	0.286			0.105			0.514				0.904	
Satd. Flow (perm)	551	3447	0	202	3536	0	957	1602	0	0	1507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			1			86			48	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1531			1704			240			186	
Travel Time (s)		23.2			25.8			5.5			4.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	122%	122%	122%
Adj. Flow (vph)	36	1070	229	60	784	6	356	6	86	13	1	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1299	0	60	790	0	356	92	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes				
Headway Factor	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	

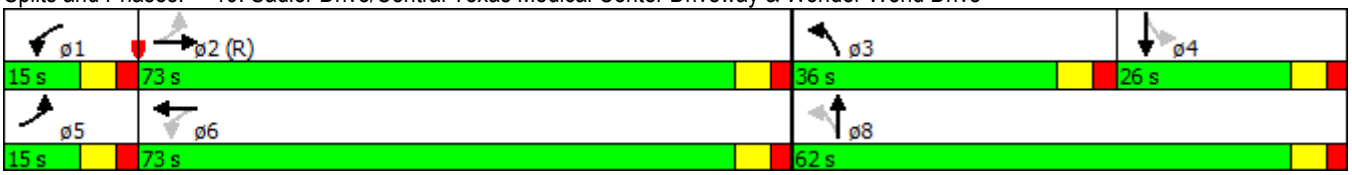
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		15.0	15.0	
Minimum Split (s)	13.5	24.5		13.5	24.5		13.5	25.5		25.5	25.5	
Total Split (s)	15.0	73.0		15.0	73.0		36.0	62.0		26.0	26.0	
Total Split (%)	10.0%	48.7%		10.0%	48.7%		24.0%	41.3%		17.3%	17.3%	
Maximum Green (s)	8.5	66.5		8.5	66.5		29.5	55.5		19.5	19.5	
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		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	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5			6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Recall Mode	None	C-Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		10.0			10.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.8	79.3		87.4	80.1		45.2	45.2			15.0	
Actuated g/C Ratio	0.57	0.53		0.58	0.53		0.30	0.30			0.10	
v/c Ratio	0.09	0.71		0.28	0.42		0.81	0.17			0.32	
Control Delay	18.5	31.0		17.4	24.3		60.0	8.2			26.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	18.5	31.0		17.4	24.3		60.0	8.2			26.8	
LOS	B	C		B	C		E	A			C	
Approach Delay		30.7			23.8			49.3			26.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	16	352		26	273		284	4			13	
Queue Length 95th (ft)	m17	m375		47	331		398	44			61	
Internal Link Dist (ft)		1451			1624			160			106	
Turn Bay Length (ft)	100			100			1					
Base Capacity (vph)	390	1833		216	1889		457	646			237	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.09	0.71		0.28	0.42		0.78	0.14			0.26	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 31.5 Intersection LOS: C
Intersection Capacity Utilization 80.3% ICU Level of Service D
Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: Sadler Drive/Central Texas Medical Center Driveway & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	218	116	108	320	0	0	0	0	145	160	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	110		0	0		0	100		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.95
Frt			0.850								0.921	
Flt Protected				0.950						0.950	0.998	
Satd. Flow (prot)	0	1845	1568	1752	1845	0	0	0	0	1595	3086	0
Flt Permitted				0.950						0.950	0.998	
Satd. Flow (perm)	0	1845	1568	1752	1845	0	0	0	0	1595	3086	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191								208	
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		3374			286			502			381	
Travel Time (s)		57.5			4.3			6.2			4.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	420	223	208	616	0	0	0	0	279	308	372
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	420	223	208	616	0	0	0	0	251	708	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									
Detector Phase		2	2	1	1 2					4 12	4 12	
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		22.0	22.0	13.0								
Total Split (s)		32.0	32.0	58.0								
Total Split (%)		26.7%	26.7%	48.3%								
Maximum Green (s)		26.0	26.0	52.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		C-Min	C-Min	Min								
Act Effct Green (s)		26.3	26.3	51.7	84.0					24.0	24.0	
Actuated g/C Ratio		0.22	0.22	0.43	0.70					0.20	0.20	
v/c Ratio		1.04	0.45	0.28	0.48					0.79	0.90	
Control Delay		84.0	20.3	8.0	1.2					64.0	49.1	
Queue Delay		20.5	0.0	2.0	9.2					0.0	0.1	
Total Delay		104.5	20.3	10.1	10.4					64.0	49.2	
LOS		F	C	B	B					E	D	
Approach Delay		75.3			10.3						53.1	
Approach LOS		E			B						D	
Queue Length 50th (ft)		~361	70	19	0					204	216	
Queue Length 95th (ft)		m#381	m81	m27	m0					#346	#333	
Internal Link Dist (ft)		3294			206			422			301	
Turn Bay Length (ft)			100	110						100		
Base Capacity (vph)		404	493	759	1278					319	783	
Starvation Cap Reductn		0	0	412	623					0	0	
Spillback Cap Reductn		21	0	0	0					0	1	
Storage Cap Reductn		0	0	0	0					0	0	
Reduced v/c Ratio		1.10	0.45	0.60	0.94					0.79	0.91	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 44.4 Intersection LOS: D
Intersection Capacity Utilization 92.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

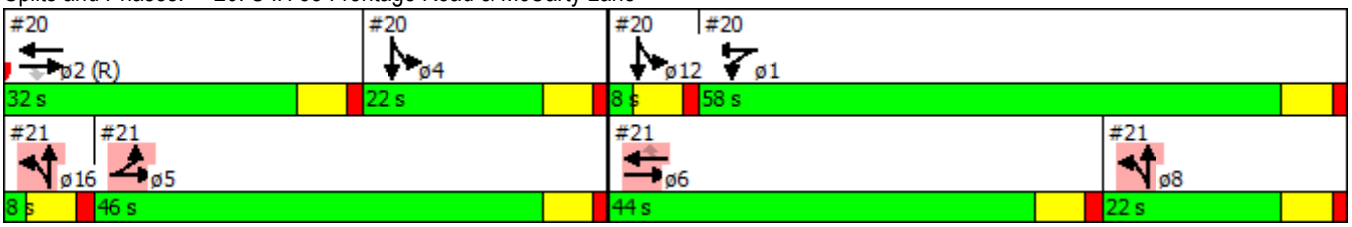
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	46.0	44.0	22.0	8.0	8.0
Total Split (%)	18%	38%	37%	18%	7%	7%
Maximum Green (s)	16.0	40.0	38.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: S IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	226	0	0	300	137	128	141	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	0		150	100		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.955				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1752	1845	0	0	1845	1568	1752	3347	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1752	1845	0	0	1845	1568	1752	3347	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						220		50				
Link Speed (mph)		40			45			55			55	
Link Distance (ft)		286			722			535			416	
Travel Time (s)		4.9			10.9			6.6			5.2	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	288	476	0	0	631	288	269	297	128	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	476	0	0	631	288	269	425	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Split	NA				
Protected Phases	5	5 6			6		8 16	8 16				

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

21: N IH 35 Frontage Road & McCarty Lane

2035 Recommended with Reductions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						6						
Detector Phase	5	5 6			6	6	8 16	8 16				
Switch Phase												
Minimum Initial (s)	7.0				10.0	10.0						
Minimum Split (s)	13.0				22.0	22.0						
Total Split (s)	46.0				44.0	44.0						
Total Split (%)	38.3%				36.7%	36.7%						
Maximum Green (s)	40.0				38.0	38.0						
Yellow Time (s)	4.5				4.5	4.5						
All-Red Time (s)	1.5				1.5	1.5						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	6.0				6.0	6.0						
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	2.0				2.5	2.5						
Recall Mode	None				Min	Min						
Act Effct Green (s)	40.0	84.0			38.0	38.0	24.0	24.0				
Actuated g/C Ratio	0.33	0.70			0.32	0.32	0.20	0.20				
v/c Ratio	0.49	0.37			1.08	0.45	0.77	0.60				
Control Delay	17.1	1.9			100.3	10.7	61.1	42.3				
Queue Delay	6.4	5.8			7.7	0.0	0.0	0.0				
Total Delay	23.6	7.7			108.0	10.7	61.1	42.3				
LOS	C	A			F	B	E	D				
Approach Delay		13.7			77.5			49.6				
Approach LOS		B			E			D				
Queue Length 50th (ft)	62	10			~546	38	199	140				
Queue Length 95th (ft)	m95	m10			#717	99	#296	184				
Internal Link Dist (ft)		206			642			455			336	
Turn Bay Length (ft)	110					150	100					
Base Capacity (vph)	584	1291			584	646	337	685				
Starvation Cap Reductn	240	745			0	0	0	0				
Spillback Cap Reductn	0	0			14	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.84	0.87			1.11	0.45	0.80	0.62				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 48.9 Intersection LOS: D
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

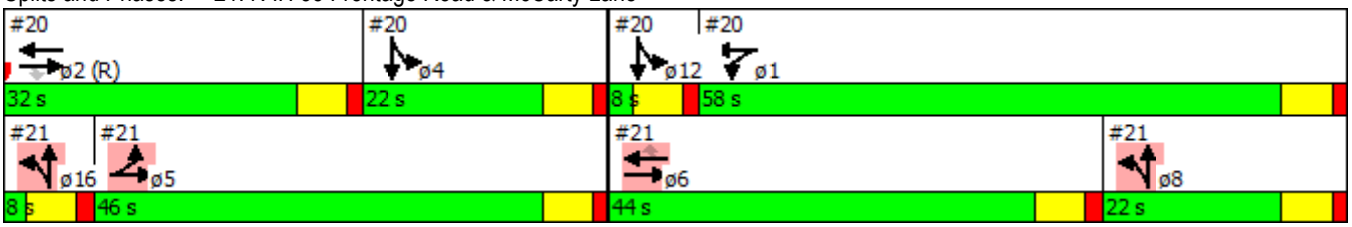
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	58.0	32.0	22.0	22.0	8.0	8.0
Total Split (%)	48%	27%	18%	18%	7%	7%
Maximum Green (s)	52.0	26.0	16.0	16.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	C-Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: N IH 35 Frontage Road & McCarty Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1191	335	224	723	0	0	0	0	588	115	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		170	0		0	0		0	0		0
Storage Lanes	1		1	2		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.965	
Satd. Flow (prot)	0	5036	1568	3400	3505	0	0	0	0	1507	4593	1568
Flt Permitted				0.950						0.950	0.965	
Satd. Flow (perm)	0	5036	1568	3400	3505	0	0	0	0	1507	4593	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189									153
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		488			225			812			1252	
Travel Time (s)		7.4			3.4			12.3			19.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	2369	666	446	1438	0	0	0	0	1170	229	1305
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	2369	666	446	1438	0	0	0	0	585	814	1305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		2		1	1 2					4 12	4 12	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2									4 12
Detector Phase		2	2	1	1 2					4 12	4 12	4 12
Switch Phase												
Minimum Initial (s)		10.0	10.0	7.0								
Minimum Split (s)		21.0	21.0	13.0								
Total Split (s)		42.0	42.0	57.0								
Total Split (%)		28.0%	28.0%	38.0%								
Maximum Green (s)		36.0	36.0	51.0								
Yellow Time (s)		4.5	4.5	4.5								
All-Red Time (s)		1.5	1.5	1.5								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		6.0	6.0	6.0								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		2.5	2.5	2.0								
Recall Mode		Min	Min	Min								
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		10.0	10.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)		36.0	36.0	51.0	93.0					45.0	45.0	45.0
Actuated g/C Ratio		0.24	0.24	0.34	0.62					0.30	0.30	0.30
v/c Ratio		1.96	1.28	0.39	0.66					1.29	1.17dl	2.26
Control Delay		465.3	173.9	15.8	7.9					189.9	46.8	595.6
Queue Delay		0.7	0.0	48.6	49.9					0.0	0.0	0.0
Total Delay		466.0	173.9	64.4	57.9					189.9	46.8	595.6
LOS		F	F	E	E					F	D	F
Approach Delay		401.9			59.4						342.6	
Approach LOS		F			E						F	
Queue Length 50th (ft)		~1311	~678	59	488					~846	263	~1970
Queue Length 95th (ft)		#1397	#927	m37	m15					#1122	315	#2239
Internal Link Dist (ft)		408			145			732			1172	
Turn Bay Length (ft)			170									
Base Capacity (vph)		1208	519	1156	2173					452	1377	577
Starvation Cap Reductn		0	0	743	1197					0	0	0
Spillback Cap Reductn		168	0	0	0					0	0	0
Storage Cap Reductn		0	0	0	0					0	0	0
Reduced v/c Ratio		2.28	1.28	1.08	1.47					1.29	0.59	2.26

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.26
Intersection Signal Delay: 296.2 Intersection LOS: F
Intersection Capacity Utilization 185.5% ICU Level of Service H
Analysis Period (min) 15

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	16.0	13.0	21.0	28.0	10.0	10.0
Total Split (s)	43.0	77.0	37.0	28.0	8.0	8.0
Total Split (%)	29%	51%	25%	19%	5%	5%
Maximum Green (s)	37.0	71.0	31.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	C-Min	Min	None	None
Walk Time (s)			5.0	7.0		
Flash Dont Walk (s)			10.0	15.0		
Pedestrian Calls (#/hr)			0	0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

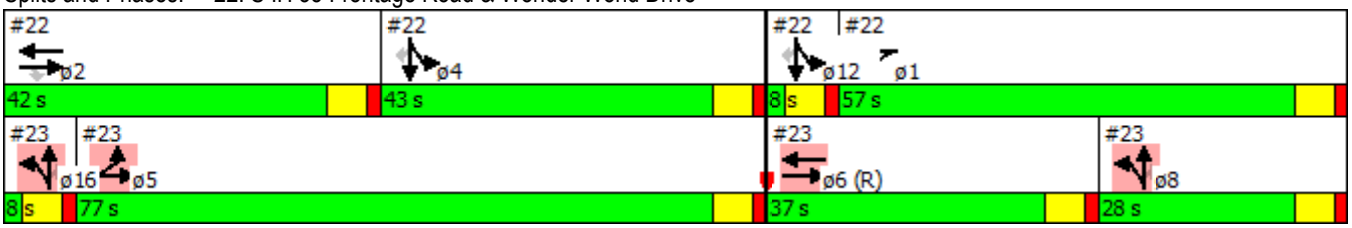
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 22: S IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	836	943	0	0	592	356	355	421	57	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	0		0
Storage Lanes	2		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.86	0.86	1.00	1.00	1.00	1.00
Frt					0.944				0.850			
Flt Protected	0.950						0.950	0.986				
Satd. Flow (prot)	3433	3539	0	0	4801	0	1522	4739	1583	0	0	0
Flt Permitted	0.950						0.950	0.986				
Satd. Flow (perm)	3433	3539	0	0	4801	0	1522	4739	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10				153			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		225			1177			870			999	
Travel Time (s)		3.4			17.8			13.2			15.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Adj. Flow (vph)	1544	1742	0	0	1093	658	656	778	105	0	0	0
Shared Lane Traffic (%)							47%					
Lane Group Flow (vph)	1544	1742	0	0	1751	0	348	1086	105	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Split	NA	Perm			
Protected Phases	5	5 6			6		8 16	8 16				
Permitted Phases									8 16			

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16
Permitted Phases						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	5 6			6		8 16	8 16	8 16			
Switch Phase												
Minimum Initial (s)	7.0				10.0							
Minimum Split (s)	13.0				21.0							
Total Split (s)	77.0				37.0							
Total Split (%)	51.3%				24.7%							
Maximum Green (s)	71.0				31.0							
Yellow Time (s)	4.5				4.5							
All-Red Time (s)	1.5				1.5							
Lost Time Adjust (s)	0.0				0.0							
Total Lost Time (s)	6.0				6.0							
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0				2.5							
Recall Mode	None				C-Min							
Walk Time (s)					5.0							
Flash Dont Walk (s)					10.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	71.0	108.0			31.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.47	0.72			0.21		0.20	0.20	0.20			
v/c Ratio	0.95	0.68			1.94dr		1.14	1.15	0.24			
Control Delay	16.8	10.4			371.4		148.6	130.7	2.8			
Queue Delay	45.1	48.8			0.7		0.0	0.0	0.0			
Total Delay	61.8	59.1			372.1		148.6	130.7	2.8			
LOS	E	E			F		F	F	A			
Approach Delay		60.4			372.1			126.0				
Approach LOS		E			F			F				
Queue Length 50th (ft)	736	853			~936		~461	~481	0			
Queue Length 95th (ft)	m83	m0			#1032		#697	#584	13			
Internal Link Dist (ft)		145			1097			790			919	
Turn Bay Length (ft)												
Base Capacity (vph)	1624	2548			1000		304	947	439			
Starvation Cap Reductn	615	1260			0		0	0	0			
Spillback Cap Reductn	0	0			127		0	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	1.53	1.35			2.01		1.14	1.15	0.24			

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 85 (57%), Referenced to phase 6:EBWB, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.26
Intersection Signal Delay: 158.7 Intersection LOS: F
Intersection Capacity Utilization 185.5% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	21.0	16.0	28.0	10.0	10.0
Total Split (s)	57.0	42.0	43.0	28.0	8.0	8.0
Total Split (%)	38%	28%	29%	19%	5%	5%
Maximum Green (s)	51.0	36.0	37.0	22.0	2.0	2.0
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)		5.0		7.0		
Flash Dont Walk (s)		10.0		15.0		
Pedestrian Calls (#/hr)		0		0		
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

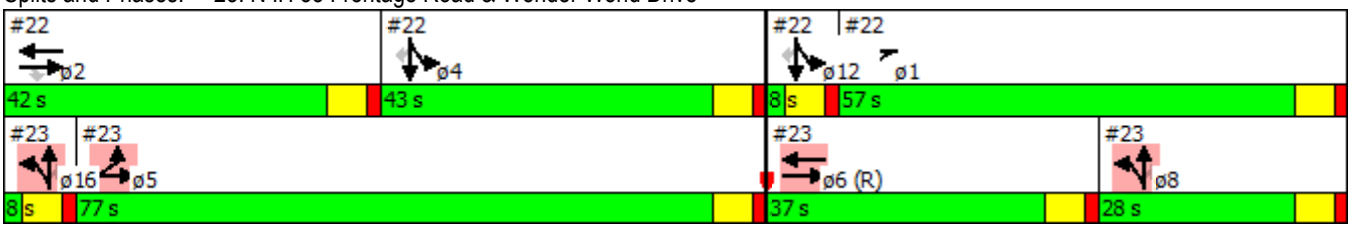
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 23: N IH 35 Frontage Road & Wonder World Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	41	23	14	43	665	0	0	745	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		230	85		0	0		100
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850						0.850
Flt Protected					0.969		0.950					
Satd. Flow (prot)	0	0	0	0	3364	1553	1736	3471	0	0	3471	1553
Flt Permitted					0.969		0.950					
Satd. Flow (perm)	0	0	0	0	3364	1553	1736	3471	0	0	3471	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						160						164
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		657			473			305			552	
Travel Time (s)		14.9			10.8			3.5			6.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	0	0	87	49	30	92	1416	0	0	1586	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	136	30	92	1416	0	0	1586	121
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	1
Detector Template				Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (ft)				20	100	20	20	100			100	20
Trailing Detector (ft)				0	0	0	0	0			0	0
Detector 1 Position(ft)				0	0	0	0	0			0	0
Detector 1 Size(ft)				20	6	20	20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				4 12	4 12		1	1 2			2	

Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	4	5	6	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						4 12						2
Detector Phase				4 12	4 12	4 12	1	1 2			2	2
Switch Phase												
Minimum Initial (s)							7.0				10.0	10.0
Minimum Split (s)							13.0				22.0	22.0
Total Split (s)							60.0				57.0	57.0
Total Split (%)							42.9%				40.7%	40.7%
Maximum Green (s)							54.0				51.0	51.0
Yellow Time (s)							4.5				4.5	4.5
All-Red Time (s)							1.5				1.5	1.5
Lost Time Adjust (s)							0.0				0.0	0.0
Total Lost Time (s)							6.0				6.0	6.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)							2.0				2.5	2.5
Recall Mode							Min				Min	Min
Act Effct Green (s)					17.0	17.0	54.0	111.0			51.0	51.0
Actuated g/C Ratio					0.12	0.12	0.39	0.79			0.36	0.36
v/c Ratio					0.33	0.09	0.14	0.51			1.25	0.18
Control Delay					58.8	0.5	3.2	8.4			159.2	2.0
Queue Delay					0.0	0.0	0.0	49.7			0.6	0.0
Total Delay					58.8	0.5	3.2	58.2			159.8	2.0
LOS					E	A	A	E			F	A
Approach Delay					48.3			54.8			148.6	
Approach LOS					D			D			F	
Queue Length 50th (ft)					60	0	5	682			~948	0
Queue Length 95th (ft)					90	0	m5	m8			#992	10
Internal Link Dist (ft)		577			393			225			472	
Turn Bay Length (ft)						230	85					100
Base Capacity (vph)					408	329	669	2752			1264	669
Starvation Cap Reductn					0	0	0	1662			0	0
Spillback Cap Reductn					0	0	0	0			170	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.33	0.09	0.14	1.30			1.45	0.18

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 101.9 Intersection LOS: F
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

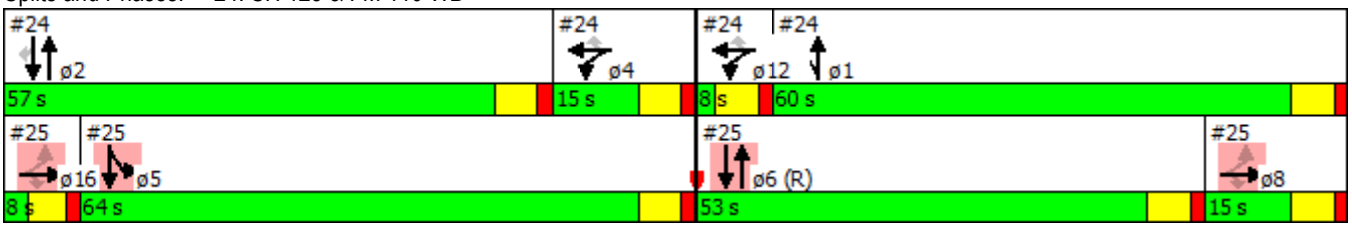
Lane Group	ø4	ø5	ø6	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	7.0	10.0	10.0	4.0	4.0
Minimum Split (s)	22.0	13.0	22.0	22.0	22.0	35.0
Total Split (s)	15.0	64.0	53.0	15.0	8.0	8.0
Total Split (%)	11%	46%	38%	11%	6%	6%
Maximum Green (s)	9.0	58.0	47.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.5	2.0	3.0	3.0
Recall Mode	Min	None	C-Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: SH 123 & FM 110 WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	60	84	0	0	0	0	695	76	39	747	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		240	0		0	0		0	120		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850					0.985				
Flt Protected		0.991								0.950		
Satd. Flow (prot)	0	3440	1553	0	0	0	0	3419	0	1736	3471	0
Flt Permitted		0.991								0.950		
Satd. Flow (perm)	0	3440	1553	0	0	0	0	3419	0	1736	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164					9				
Link Speed (mph)		30			30			60			60	
Link Distance (ft)		409			489			309			305	
Travel Time (s)		9.3			11.1			3.5			3.5	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.92	0.93	0.92	0.93	0.93	0.93	0.93	0.92
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	26	118	165	0	0	0	0	1353	148	76	1454	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	165	0	0	0	0	1501	0	76	1454	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Detector 1 Position(ft)	0	0	0					0		0	0	
Detector 1 Size(ft)	20	6	20					6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8 16						6		5	5 6	

Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Growth Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type						
Protected Phases	1	2	4	8	12	16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8 16		8 16									
Detector Phase	8 16	8 16	8 16					6		5	5 6	
Switch Phase												
Minimum Initial (s)								10.0		7.0		
Minimum Split (s)								22.0		13.0		
Total Split (s)								53.0		64.0		
Total Split (%)								37.9%		45.7%		
Maximum Green (s)								47.0		58.0		
Yellow Time (s)								4.5		4.5		
All-Red Time (s)								1.5		1.5		
Lost Time Adjust (s)								0.0		0.0		
Total Lost Time (s)								6.0		6.0		
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)								2.5		2.0		
Recall Mode								C-Min		None		
Act Effct Green (s)		17.0	17.0					47.0		58.0	111.0	
Actuated g/C Ratio		0.12	0.12					0.34		0.41	0.79	
v/c Ratio		0.35	0.50					1.30		0.11	0.53	
Control Delay		59.0	13.6					172.2		1.2	7.1	
Queue Delay		0.0	1.9					0.9		0.0	49.3	
Total Delay		59.0	15.5					173.1		1.2	56.4	
LOS		E	B					F		A	E	
Approach Delay		35.8						173.1			53.6	
Approach LOS		D						F			D	
Queue Length 50th (ft)		64	1					~904		0	705	
Queue Length 95th (ft)		100	70					m#1040		m1	m0	
Internal Link Dist (ft)		329			409			229			225	
Turn Bay Length (ft)			240							120		
Base Capacity (vph)		417	332					1153		719	2752	
Starvation Cap Reductn		0	0					154		0	1549	
Spillback Cap Reductn		0	72					197		0	1533	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.35	0.63					1.57		0.11	1.21	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 6:NBSB, Start of 1st Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 105.7 Intersection LOS: F
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

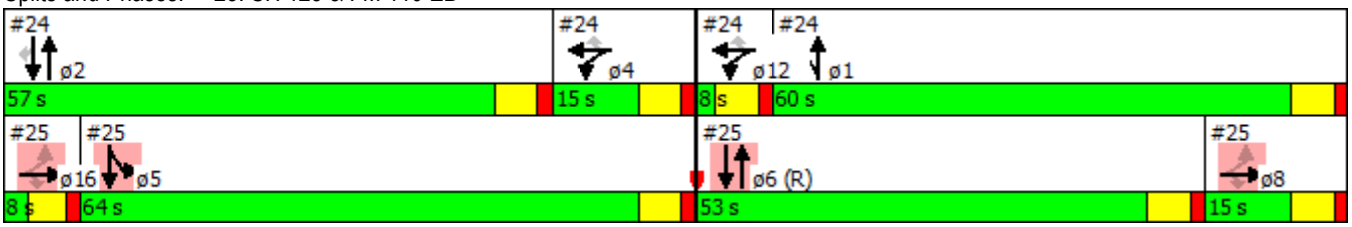
Lane Group	ø1	ø2	ø4	ø8	ø12	ø16
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	7.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	13.0	22.0	22.0	22.0	22.0	35.0
Total Split (s)	60.0	57.0	15.0	15.0	8.0	8.0
Total Split (%)	43%	41%	11%	11%	6%	6%
Maximum Green (s)	54.0	51.0	9.0	9.0	2.0	2.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5	2.0	2.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: SH 123 & FM 110 EB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	701	10	11	730	73	4	8	13	39	28	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.987			0.930			0.934	
Flt Protected		0.999			0.999			0.992			0.985	
Satd. Flow (prot)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Flt Permitted		0.999			0.999			0.992			0.985	
Satd. Flow (perm)	0	1876	0	0	3524	0	0	1736	0	0	1731	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			1298			180			322	
Travel Time (s)		4.3			29.5			4.1			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%	181%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	34	1394	20	22	1452	145	8	16	26	78	56	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1448	0	0	1619	0	0	50	0	0	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 119.8%		ICU Level of Service H	
Analysis Period (min) 15			