Murphy Express
Eubank Blvd./Central Ave.
Albuquerque, NM

FINAL
Traffic Impact Study

October 6, 2020

Presented to:

Matthew Grush, P.E.
City of Albuquerque
Transportation Development Section
of the Planning Department

Prepared for:

Ron D. Bordelon, P.E.
Pan American Engineers, LLC
1717 Jackson Street
Alexandria, LA 71301

Terry O. Brown P.E.
P.O. Box 92051
Albuquerque, NM 87199
505 · 883 · 8807

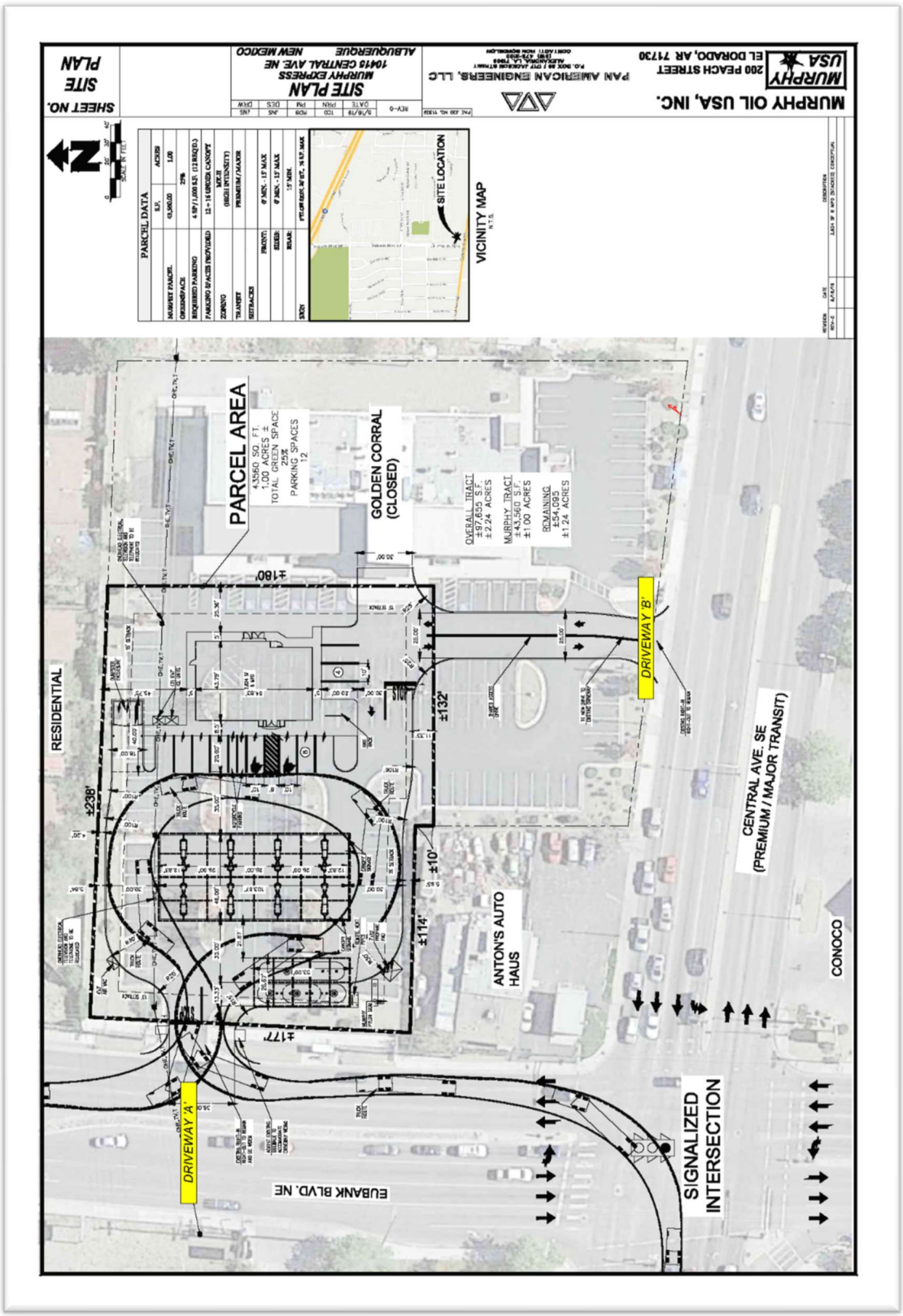
HT#L20D074
Received 10/6/2020,
accepted 10/30/2020

Murphy Express - Albuquerque, NM
(Central Ave./Eubank Blvd.)
Traffic Impact Study

Executive Summary

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed the Murphy Express gas station with convenience store to determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared in accordance with the requirements of the City of Albuquerque Transportation Development Section of the Planning Department.

The proposed Murphy Express is located at 10415 Central Ave. N.E, within the City of Albuquerque, New Mexico, at the northeast corner of Eubank Blvd. /Central Ave. Use of two existing right-in /right-out access driveways are proposed for the new development. The driveways provided access for a previous commercial development (Golden Corral restaurant). Driveway 'A' is located on the east side of Eubank Blvd. approximately 275 feet north of Central Ave. (centerline to centerline) and Driveway 'B' is located on the north side of Central Ave. approximately 275 feet east of Eubank Blvd. (centerline to centerline). The proposed site plan is shown below.


MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730
PAN AMERICAN ENGINEERS, LLC
SITE PLAN
MURPHY EXPRESS
1015 CENTRAL AVE NE
ALBUQUERQUE NEW MEXICO
SHEET NO.
SITE PLAN
PARCEL DATA
VICINITY MAP
SITE LOCATION
PARCEL AREA
4,3560 SQ. FT.
1.00 ACRES ±
TOTAL GREEN SPACE
238
PARKING SPACES
12
GOLDEN CORRAL
(CLOSED)
OVERALL TRACT
±97,655 S.F.
±2.24 ACRES
MURPHY TRACT
±43,560 S.F.
±1.00 ACRES
REMAINING
±54,095
±1.24 ACRES
DRIVEWAY 'B'
DRIVEWAY 'A'
RESIDENTIAL
±238'
±180'
±132'
±10'
±114'
±177'
ANTON'S AUTO
HAUS
CONOCO
CENTRAL AVE. SE
(PREMIUM / MAJOR TRANSIT)
EUBANK BLVD. NE
SIGNALIZED
INTERSECTION

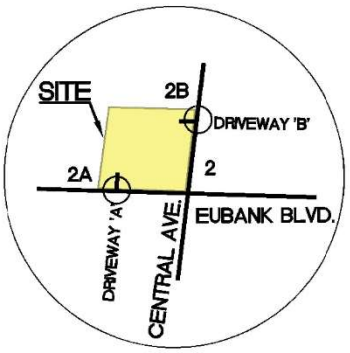
The study area includes the nine intersections listed below and shown on the following map:

1. Eubank Boulevard & Chico Road (Signalized)
2. Eubank Boulevard & Central Avenue (Signalized)

2A. Eubank Boulevard & Driveway 'A'

2B. Central Ave. & Driveway 'B'

3. Eubank Boulevard & Acoma Rd./Home Depot Driveway (Unsignalized)
4. Eubank Boulevard & Bell Ave./Costco Driveway (Unsignalized)
5. Central Avenue/ Moon Street (Signalized)
6. Central Avenue/ Elizabeth Street (Signalized)
7. Eubank Boulevard/Southern Boulevard (Signalized)



The anticipated implementation year for this project is 2024. Since the area is fully developed, a horizon year was not analyzed. According to the Institute of Traffic Engineers' (ITE) trip generation rates, the project is anticipated to generate 53 new entering trips and 51 new exiting

trips during the weekday AM Peak Hour period and 57 new entering trips and 55 new exiting trips during the PM Peak Hour period. A 50% pass-by trip rate reduction is included in the trips generated.

A summary of the Highway Capacity Manual (HCM) analysis results are included in the following tables:

Synchro Results Summary Table

Murphy Express

Eubank Blvd./Central Ave. - Albuquerque, NM

Oct. 2020

				2024 Conditions	
Intersection No.	Intersection Name	Signalization	Case	AM Peak	PM Peak
1	Eubank Boulevard & Chico Road	Signalized	NO BUILD	B-17.4	C-27.8
			BUILD	B-17.4	C-28.7
			BUILD MITIGATED[2]	B-15.1	C-25.9
2	Eubank Boulevard & Central Avenue	Signalized	NO BUILD	D-50.1	E-70.7
			BUILD	D-51.4	E-75.7
			BUILD MITIGATED[2]	C-29.0	E-57.2
2A	Eubank Boulevard & Driveway 'A'	Unsignalized	NO BUILD		
			BUILD	B-11.1	C-24.5
2B	Central Avenue & Driveway 'B'	Unsignalized	NO BUILD		
			BUILD	C-16.7	D-29.5
3	Eubank Boulevard & Acoma Rd./Home Depot Driveway	Unsignalized	NO BUILD	D-26.8[1]	D-29.7[1]
			BUILD	D-26.8[1]	D-29.2[1]
4	Eubank Boulevard & Bell Ave./Costco Driveway	Unsignalized	NO BUILD	D-30.7[1]	F-211.0[1]
			BUILD	D-30.7[1]	F-319.0[1]
5	Eubank Boulevard/Southern Boulevard	Signalized	NO BUILD	C-29.2	F-97.1
			BUILD	C-29.2	F-103.4
			BUILD MITIGATED[3]	D-46.1	D-38.9
6	Central Avenue/ Moon Street	Signalized	NO BUILD	A-4.3	E-62.0
			BUILD	A-4.2	E-61.6
			BUILD MITIGATED[2]	A-5.9	B-17.2
7	Central Avenue/ Elizabeth Street	Signalized	NO BUILD	B-14.1	B-15.2
			BUILD	B-14.0	B-15.3
			BUILD MITIGATED[2]	B-10.5	A-8.4

1. LOS for movement with greatest delay
2. Signal Timing Modification Only
3. Signal Timing and Lane Geometry Modification

As shown in the table above, LOS remains constant for all intersections for the NO BUILD and BUILD conditions. Delays are worse for the BUILD condition by less than five seconds except for Intersection 4 (Eubank & Costco Driveway) which had a NO BUILD delay of 211.0 seconds/vehicle and a BUILD delay of 319 seconds/vehicle. Intersections 4 (Eubank & Costco Driveway) and 5 (Central & Moon) have NO BUILD and BUILD LOS=F during the PM Peak Hour. However, the excessive delays and poor LOS at Intersection 4 are generated by the Westbound (WB) traffic exiting the Costco Driveway and are not caused be the traffic generated by the project. Similarly, the delays at Intersection 5 are not worsened by the project's traffic. The southbound left (SBL) and northbound left (NBL) movements have LOS=F but have the same delay times for the NO BUILD and BUILD conditions.

In summary, the proposed Murphy Express will have minimal adverse impact to the adjacent transportation system and therefore no mitigation measures are proposed in this study. Level of service (LOS) at the intersections in the study area do not meet the Minimum Acceptable Level of Service Standards (LOS=D or better, State Access Management Manual) for NO BUILD and BUILD conditions for all intersections in the study area, however, the conditions are not worsened by the traffic generated by this project.

Recommendations

2024 (Implementation Year) Conditions:

No significant vertical or horizontal curves exist along Central Ave. or Eubank Blvd. in the vicinity of the driveways and there are no structures blocking sight distances into and out of the entrances. Driveways shall be modified as necessary to ensure access for delivery vehicles and to maintain adequate site distances.

Murphy Express - Albuquerque, NM
(US 285 / CR 73)
Traffic Impact Study

Contents

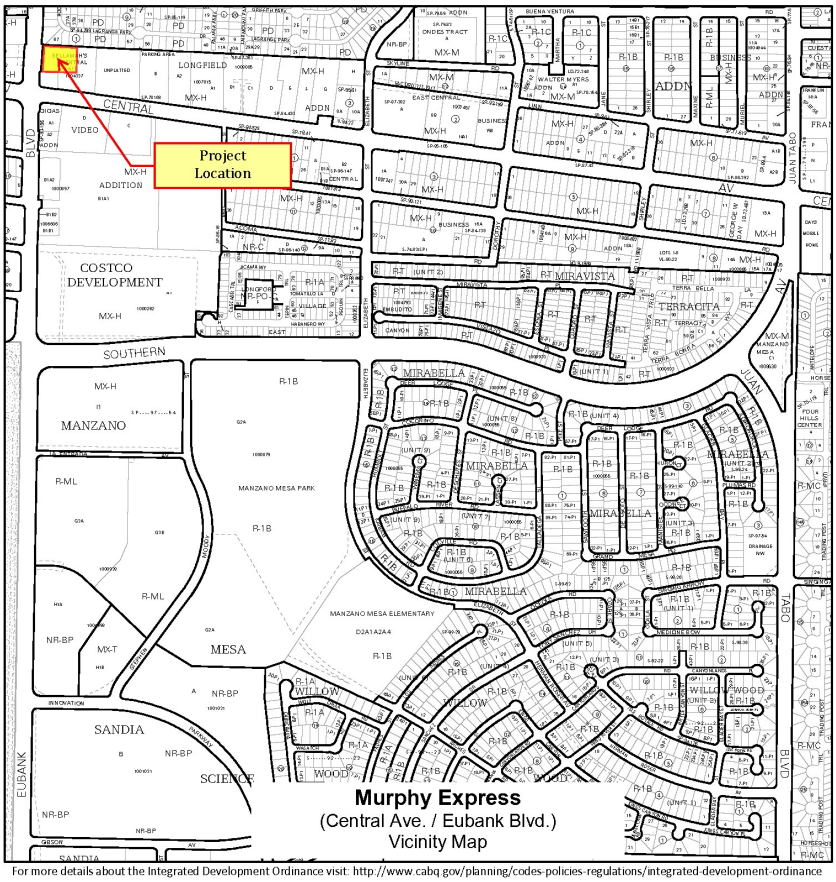
Murphy Express - Albuquerque, NM
(Central Ave./Eubank Blvd.)
Traffic Impact Study

Introduction

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed the Murphy Express gas station with convenience store to determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared in accordance with the requirements of the City of Albuquerque Transportation Development Section of the Planning Department.

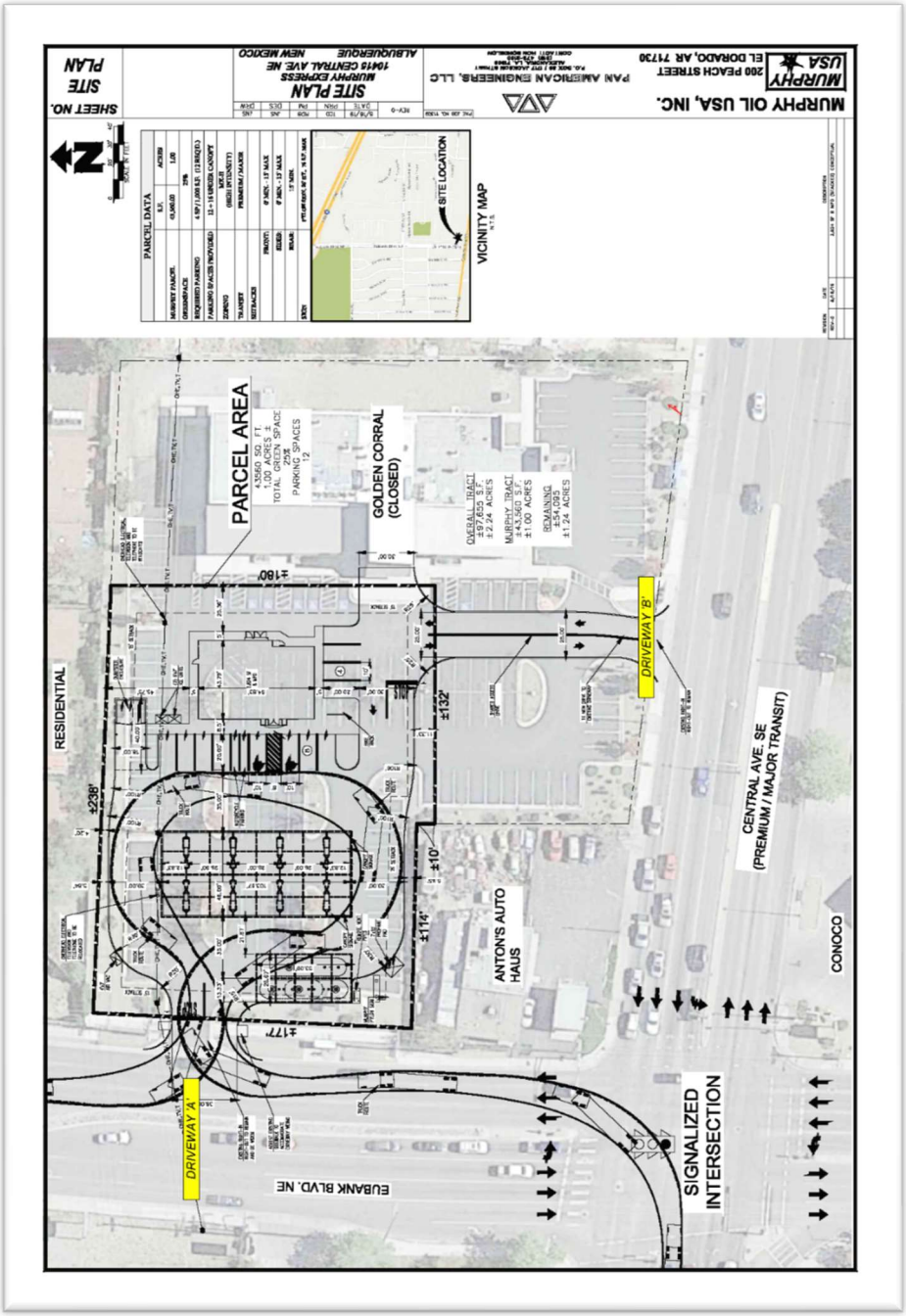
Description of Proposed Development

The proposed Murphy Express is located within the City of Albuquerque, New Mexico, at the northeast corner of Central Ave. / Eubank Blvd. and is to be developed as a gas station with a convenience store. Following is a vicinity map depicting the location of the proposed project:



For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

The Murphy Express gas station, consisting of four bays and eight pumps, and the 2,824 square feet convenience store are to be built on a 1.00-acre tract of land previously used as a parking area for a restaurant. Two existing right-in\right-out, unsignalized driveways are proposed as access to the site. Driveway 'A' is located on the east side of Eubank Blvd. approximately 275 feet north of Central Ave. (centerline to centerline) and Driveway 'B' is located on the north side of Central Ave. approximately 275 feet east of Eubank Blvd. (centerline to centerline). The proposed site plan is shown below.



The study area includes the nine intersections listed below and shown on the following map:

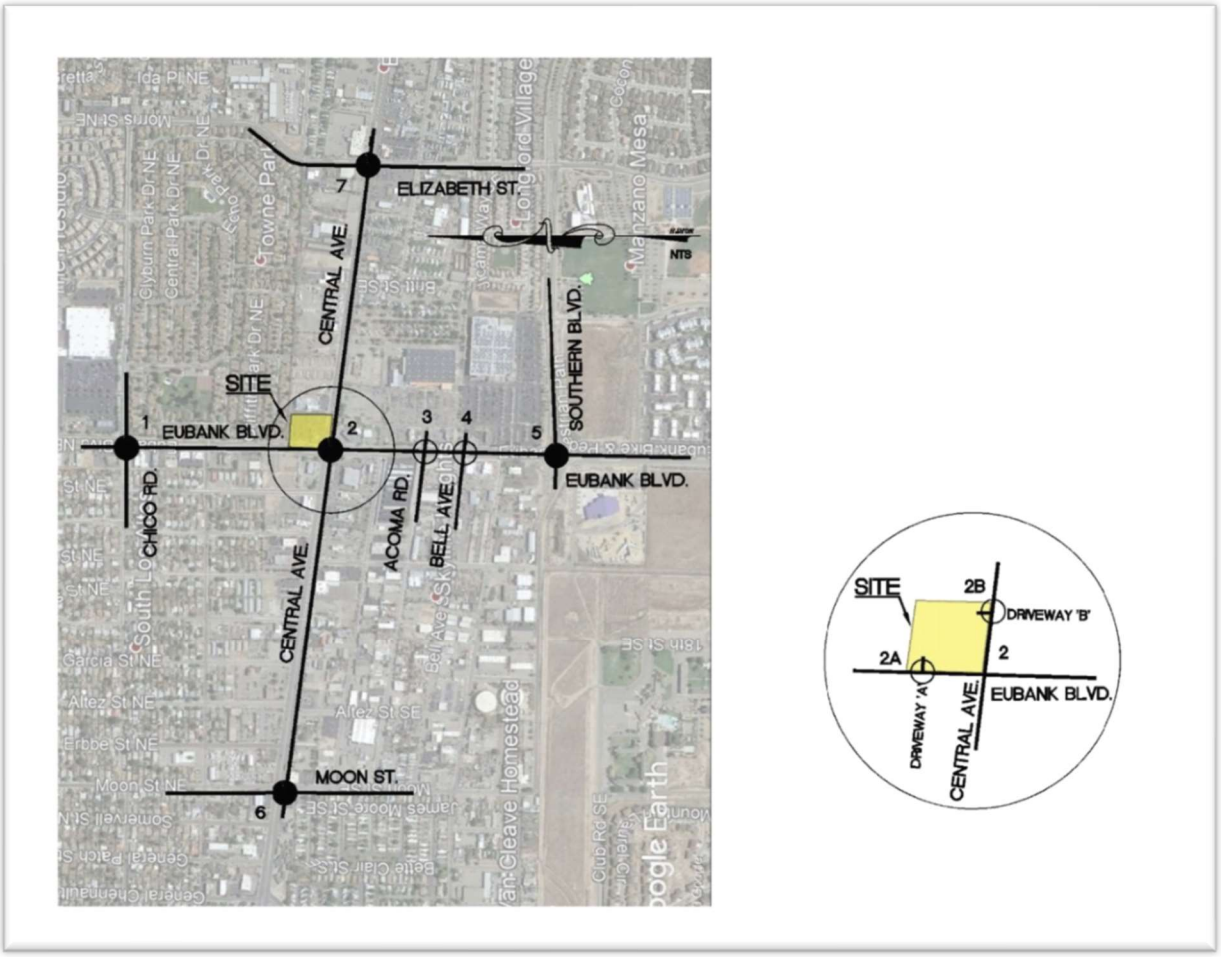
1. Eubank Boulevard & Chico Road (Signalized)
2. Eubank Boulevard & Central Avenue (Signalized)

2A. Eubank Boulevard & Driveway 'A'

2B. Central Ave. & Driveway 'B'

3. Eubank Boulevard & Acoma Rd./Home Depot Driveway (Unsignalized)
4. Eubank Boulevard & Bell Ave./Costco Driveway (Unsignalized)
5. Central Avenue/ Moon Street (Signalized)
6. Central Avenue/ Elizabeth Street (Signalized)
7. Eubank Boulevard/Southern Boulevard (Signalized)

See the intersection map below.

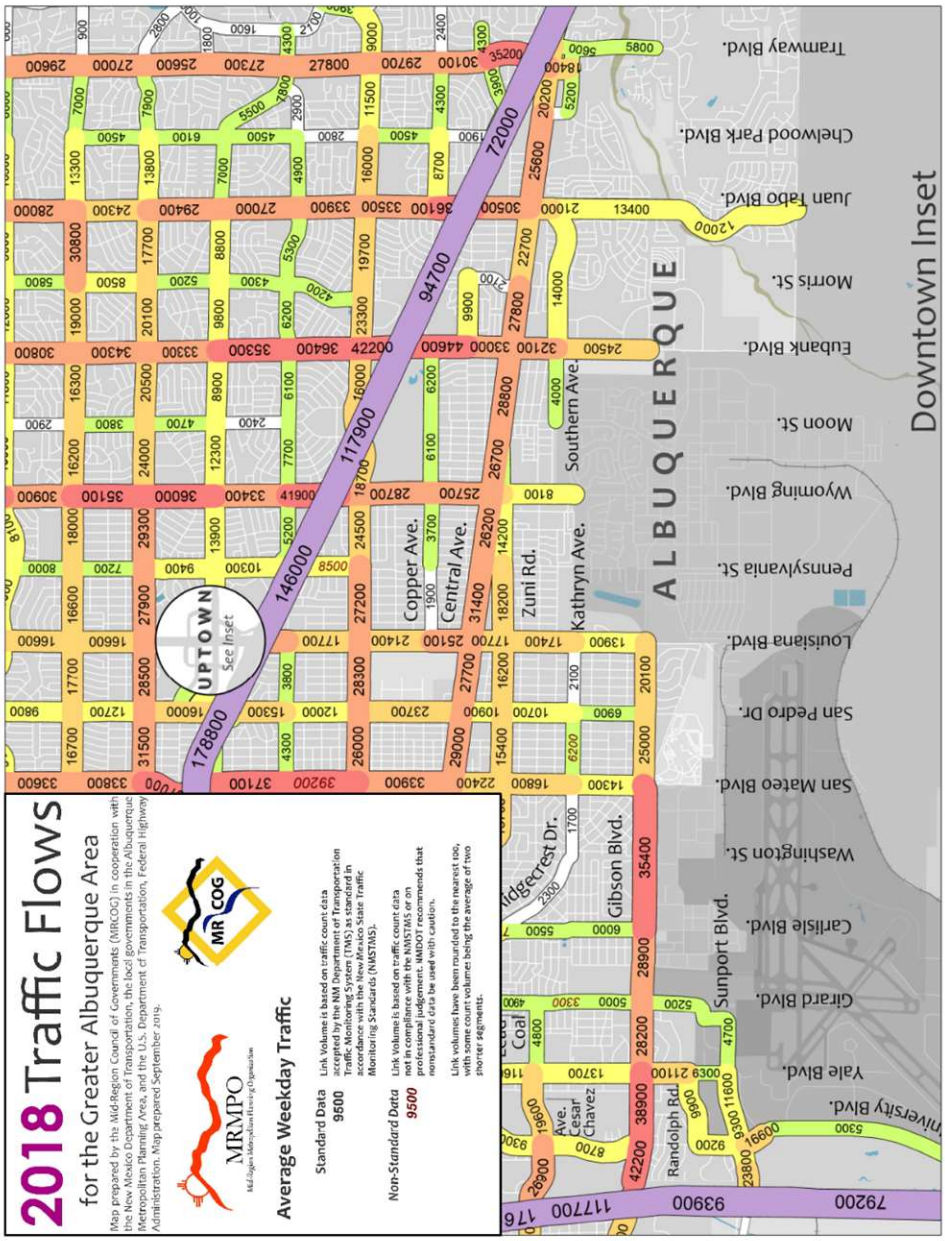


Study Area Conditions

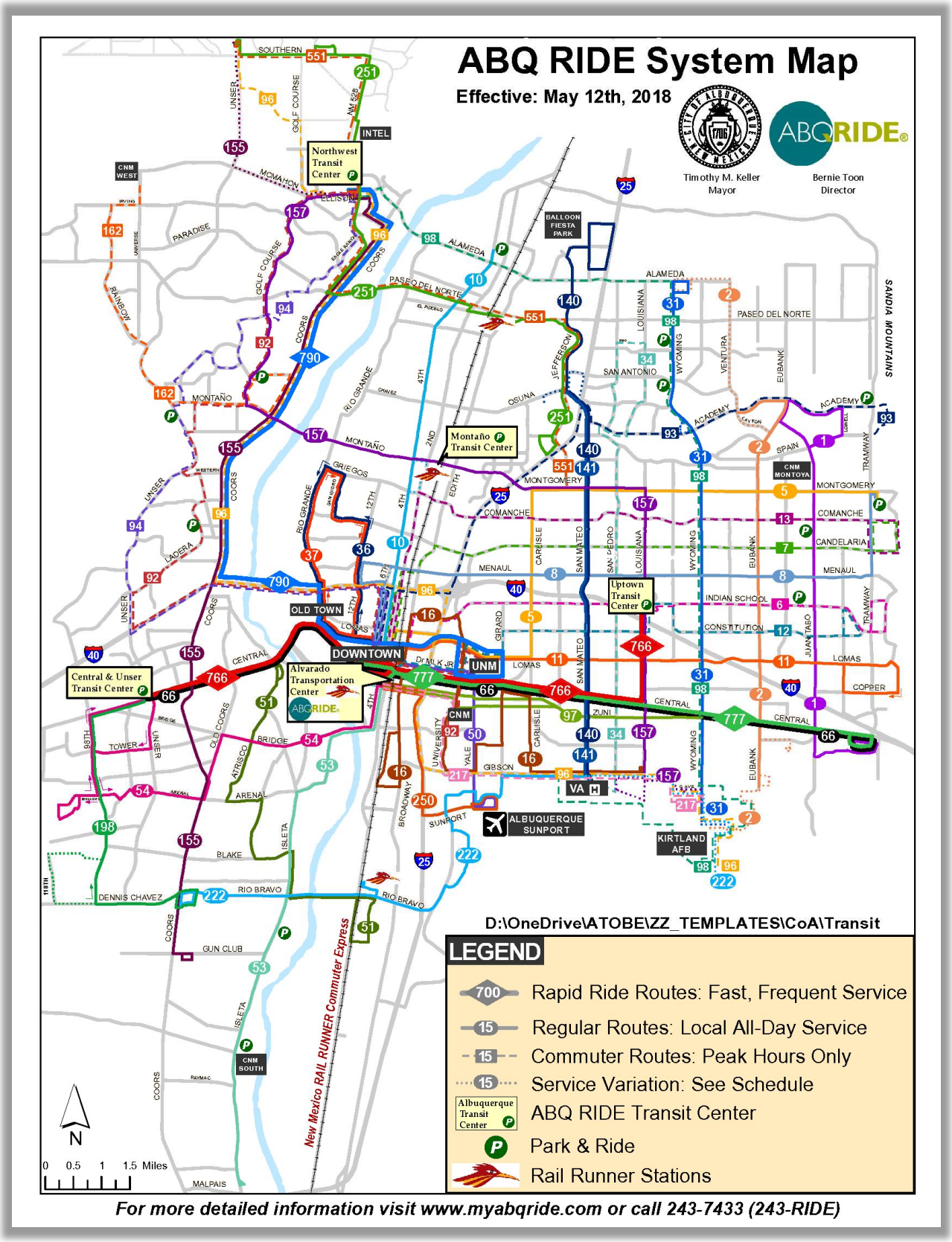
A Traffic Impact Study Scoping Meeting was held (online) on February 25, 2020 with City of Albuquerque staff and the consultant team. At the Scoping Meeting, it was determined that the study area for the TIS would include the intersections listed in the section above. The characteristics of the study area used in the analysis are as follows:

- There are two existing right-in/right-out driveways that will be used to access the new development.
- There are existing pedestrian facilities in the project area – sidewalks, trails, or paths.
- There are no bike lanes/shoulders along Central Ave. or Eubank Blvd. in the vicinity of the project.
- Eubank Blvd. and Central Ave. are classified as urban principal arterial roadways on the NMDOT Regional Roadway Functional Class Map. They are four-lane roadways with a raised divided median, curb and gutter and a posted speed limit of 45-mph.
- Southern Blvd. is classified as a major collector on the NMDOT Regional Roadway Functional Class Map. It has a raised divided median, curb and gutters and a 35-mph speed limit.
- Acoma Rd., Bell Ave., & Moon St. are two-lane minor collectors with curb and gutters and no medians. Speed limits range from 30 to 35 mph.
- Elizabeth St. is a two-lane major collector with a center turn lane, curb and gutters, and 35-mph speed limit.
- All existing signalized intersections have lighting.

Following are portions of the following regional transportation maps for more information. These include the 2018 Traffic Flow Map, ABQ Ride (Bus) System Map, Futures 2040 Long Range Bikeway System Map.



Portion of 2018 Traffic Flow Map
(from Mid-Region Council of Governments)


ABQ RIDE System Map
Effective: May 12th, 2018
Timothy M. Keller
Mayor
Bernie Toon
Director
Northwest Transit Center
Montaño Transit Center
Uptown Transit Center
Central & Unser Transit Center
Alvarado Transportation Center
DOWNTOWN
OLD TOWN
ALBUQUERQUE SUNPORT
KIRTLAND AFB
VA
UNM
CNM
CNM WEST
CNM SOUTH
CNM MONTOYA
BALLOON FIESTA PARK
SANDIA MOUNTAINS
New Mexico RAIL RUNNER Commuter Express
D:\OneDrive\ATOBE\ZZ_TEMPLATES\CoA\Transit
LEGEND
Rapid Ride Routes: Fast, Frequent Service
Regular Routes: Local All-Day Service
Commuter Routes: Peak Hours Only
Service Variation: See Schedule
ABQ RIDE Transit Center
Park & Ride
Rail Runner Stations
0 0.5 1 1.5 Miles
For more detailed information visit www.myabqride.com or call 243-7433 (243-RIDE)

Portion of Futures 2040 Long Range Bikeway System
(from Mid-Region Council of Governments)

Analysis of Existing Conditions

Starting in March of this year a shutdown of all non-essential businesses was ordered by the Governor of New Mexico due to the COVID-19 virus. It is estimated that traffic volumes in New Mexico are reduced from 20% to 40% on average due to the employment layoffs and furloughs and the high percentage of people working from their homes during this crisis period. Since normal traffic counts could not be obtained due the COVID-19 shutdown, existing traffic volumes (turning movement counts) used in this study were determined using the Streetlight Data Model and Transportation Analysis & Querying Application (TAQA) data provided by the Mid-Region Council of Governments (MRCOG). The methodology used for producing the existing traffic volume data is as follows.

1. The Streetlight Data Model was used to generate 2019 (pre COVID-19) traffic volumes for each movement at each intersection for the AM and PM Peak Hours. Streetlights does not generate 15-minute volumes, so the peak period volumes were approximated by simply dividing the peak hour volumes by four.
2. TAQA data was used to calibrate the Streetlights Data volumes. TAQA data is generated by tube counts so it is considered more accurate than the Streetlights Data model, but it only provides approach volumes, not volumes for each movement. So, the TAQA data was used to develop approach specific calibration factors.
3. For approaches where no TAQA data was available, the average of TAQA calibration factors for the other approaches was used. For example, if TAQA data was only available for the NB and SB movements, the average calibration factor from these movements was applied the WB and EB Streetlights Data volumes.
4. The Streetlights Data volumes were then multiplied by calibration factors to obtain the existing traffic volumes for each movement. See equations below.

$$\text{Existing Traffic Volume (per movement)} = \text{Streetlights Data Traffic Volume (per movement)} \times \textit{TAQA Calibration Factor}$$

Where,

$$\textit{TAQA Calibration Factor} = \frac{\text{Total TAQA Approach Volume}}{\text{Total Streetlights Data Approach Volume}}$$

The existing traffic volume based on this approach are in Appendix Pages A-4 thru A-10. These volumes are the basis of this Study.

An analysis of existing conditions was not conducted for this Study because the implementation year analysis is only a few years into the future.

Analysis of Implementation Year and Horizon Year Conditions

The anticipated implementation year for this project is 2024. No Horizon Year analysis was conducted since the study area is fully developed and the calculated **growth rates** at the intersections are 0.5 to 2%. See Appendix A-11 thru A-18.

Background traffic volumes were calculated by applying historical annual background traffic growth rates to the existing traffic volumes for the implementation year. The MRCOG Regional Transportation Model data from 2009 to 2018 was used to determine the historical growth rates.

Projected trips were calculated based on the Institute of Traffic Engineers (ITE) Trip Generation Manual (10th Edition). The number of trips generated by the facility during the AM and PM Peak Hours have been approximated using ITE Code 945 (Gasoline/Service Station w/ Convenience Market), for the facilities in the development.

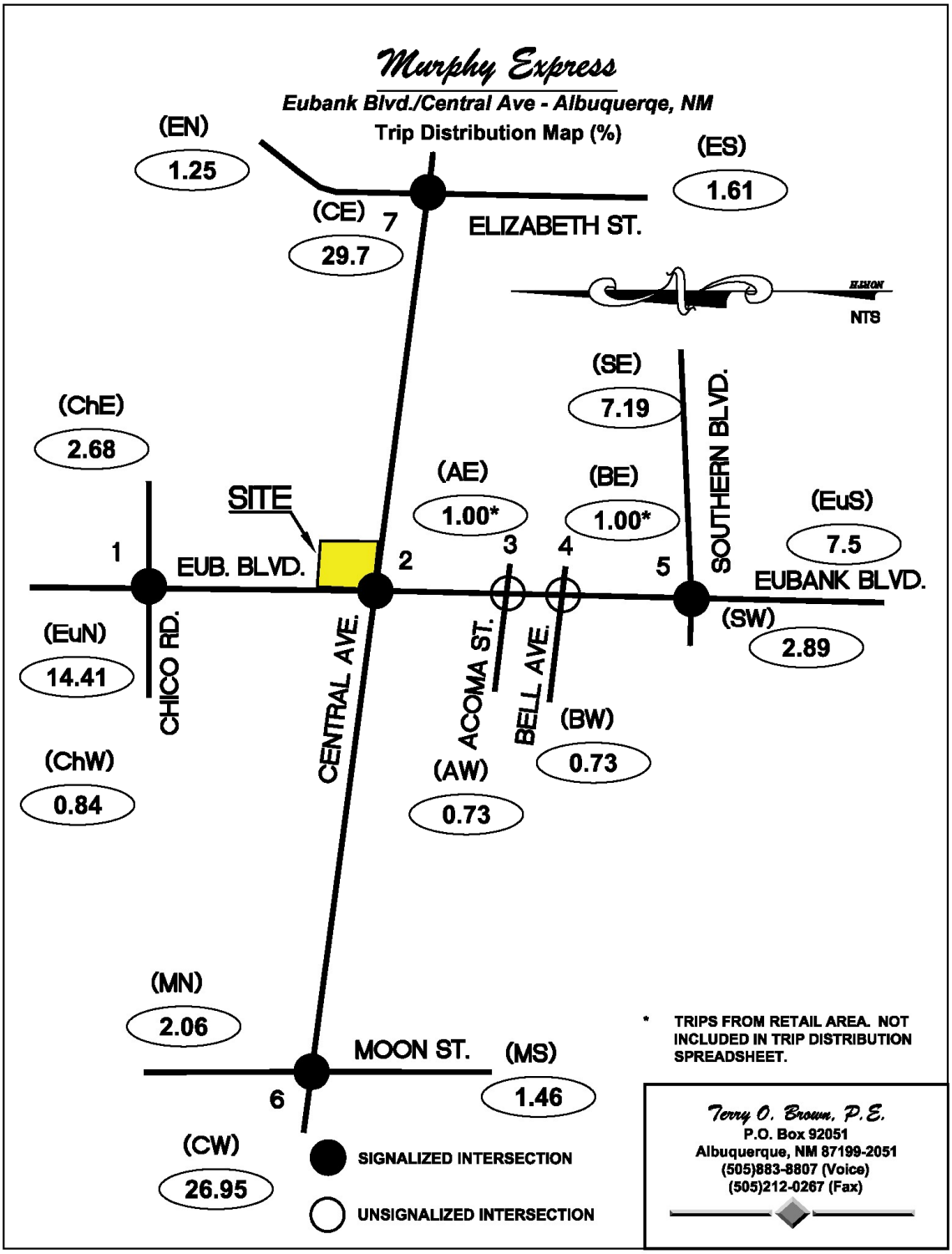
According to the Institute of Traffic Engineers' (ITE) trip generation rates, the weekday AM Peak Hour period is anticipated to generate 53 new entering trips and 51 new exiting trips during the AM Peak Hour. During the weekday PM Peak Hour period, it is anticipated that it will generate 57 new entering trips and 55 new exiting trips. Pass-by trip rate reduction of 50% is applied to the trips generated. See the Trip Generation Data Table below.

Murphy Express - Albuquerque (Central Ave. / Eubank Blvd.)

Trip Generation Data (ITE Trip Generation Manual - 10th Edition)

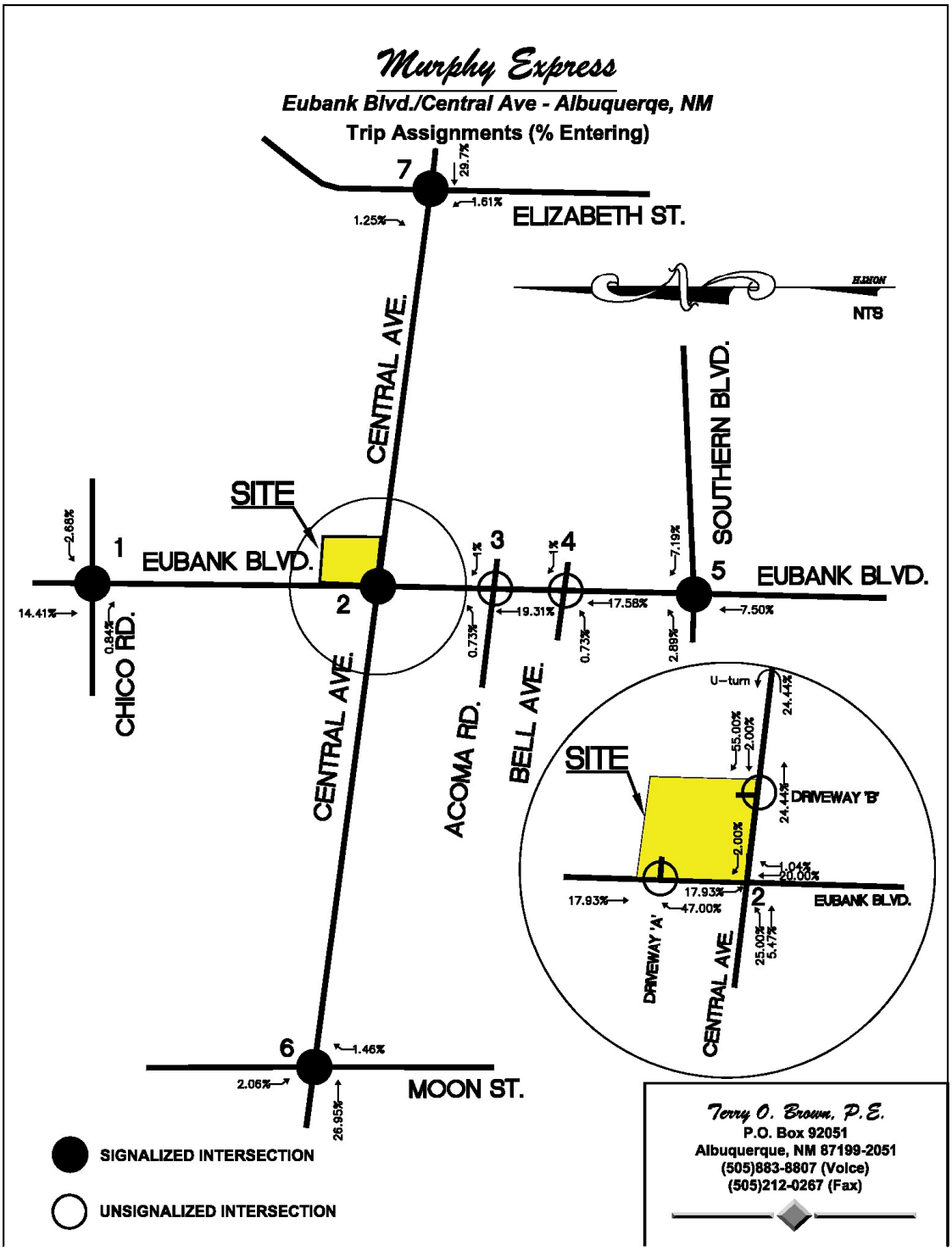
USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		*GROSS*	*ENTER*	*EXIT*	*ENTER*	*EXIT*
Summary Sheet	Units					
Gasoline / Service Station w/ Convenience Market (945)	16	3,134	106	102	114	110
Subtotal		**3,134**	**106**	**102**	**114**	**110**
Pass-By Trips	50%		*-53*	*-51*	*-57*	*-55*
Total Primary Trips			**53**	**51**	**57**	**55**

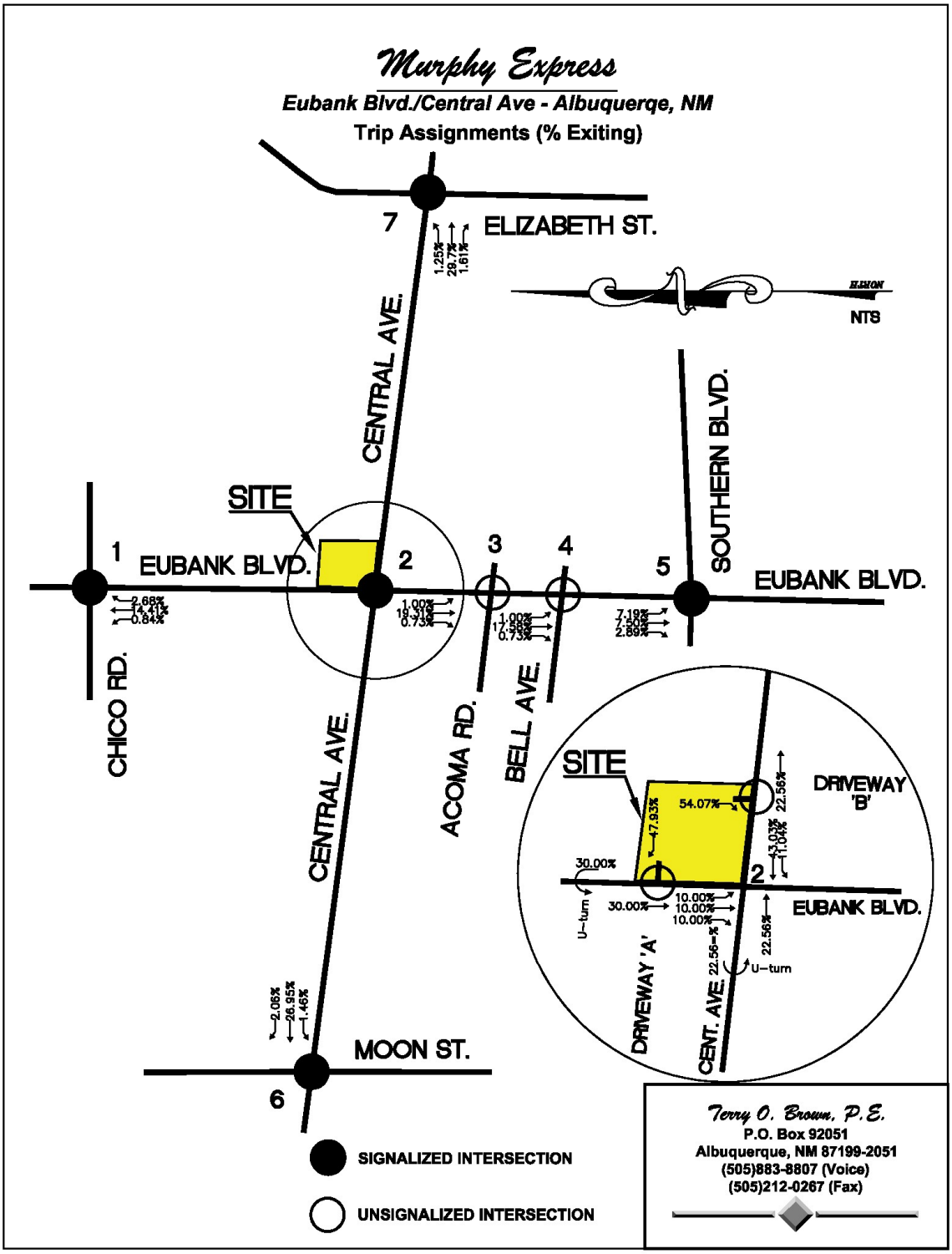
The Gravity Model was used to determine trip distribution where primary trips for the commercial land use development were distributed proportionally to the 2024 projected population of Data Analysis Subzones (DASZ) within a 2.0-mile radius. Population data for the years 2012 and 2040 were taken from the 2040 Socioeconomic Forecasts by Subareas for the Mid-Region of New Mexico supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2012 and 2040 was interpolated linearly to obtain 2024 population data to utilize for this analysis. Population Subzones were grouped based on the major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones are shown in the Appendix on Pages A-21 thru A-24. The commercial Trip Distribution map can be found below and in the Appendix on Page A-25.


Murphy Express
Eubank Blvd./Central Ave - Albuquerqe, NM
Trip Distribution Map (%)
(EN)
1.25
(ES)
1.61
(CE)
29.7
7
ELIZABETH ST.
NTS
(SE)
7.19
SOUTHERN BLVD.
(ChE)
2.68
SITE
(AE)
1.00*
(BE)
1.00*
(EuS)
7.5
1
EUB. BLVD.
2
3
4
5
EUBANK BLVD.
(EuN)
14.41
CHICO RD.
CENTRAL AVE.
ACOMA ST.
BELL AVE.
(SW)
2.89
(BW)
0.73
(ChW)
0.84
(AW)
0.73
(MN)
2.06
MOON ST.
(MS)
1.46
6
(CW)
26.95
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
* TRIPS FROM RETAIL AREA. NOT INCLUDED IN TRIP DISTRIBUTION SPREADSHEET.
Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

Trip assignments are first made on a percentage basis derived from data established in the trip distribution determination process and logical routing. Those percentages are then applied to the projected trips to determine individual traffic movements. Percentage trip assignments for commercial trips are shown below and on Appendix on Pages A-26 thru A-27. The trip assignments maps in this Study assume that the proposed right-in, right-out driveways on the east side of Eubank Blvd. and on the north of Central Ave.

Peak hour volumes for BUILD, and NO BUILD conditions for the implementation and horizon years were calculated in accordance with the Highway Capacity Manual (HCM), 6th Edition by multiplying the peak 15-minute period turning movement counts for each condition by four. **Existing traffic volumes** were based on the analysis method described in the "Analysis of Existing Conditions" section above. **NO BUILD volumes** were generated by adjusting the demand volumes with the background traffic growth and adding the traffic volumes generated by the recent developments in the area **BUILD volumes** were calculated by adding the trips generated by the project to the NO BUIID volumes. The projected turning movement worksheets are provided in Appendix Pages A-29 thru A-37.


Murphy Express
Eubank Blvd./Central Ave - Albuquerqe, NM
Trip Assignments (% Entering)
7
29.7%
1.61%
1.25%
ELIZABETH ST.
NTS
CENTRAL AVE.
SOUTHERN BLVD.
SITE
1
2.68%
EUBANK BLVD.
2
3
4
5
EUBANK BLVD.
14.41%
0.84%
CHICO RD.
1%
1%
7.19%
0.73%
19.31%
0.73%
17.58%
2.89%
7.50%
CENTRAL AVE.
ACOMA RD.
BELL AVE.
U-turn
24.44%
55.00%
2.00%
SITE
DRIVEWAY 'B'
24.44%
2.00%
1.04%
20.00%
17.93%
17.93%
47.00%
2
EUBANK BLVD.
DRIVEWAY 'A'
CENTRAL AVE.
25.00%
5.47%
6
1.46%
2.06%
MOON ST.
26.95%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)


Murphy Express
Eubank Blvd./Central Ave - Albuquerqe, NM
Trip Assignments (% Exiting)
ELIZABETH ST.
CENTRAL AVE.
SOUTHERN BLVD.
SITE
EUBANK BLVD.
CHICO RD.
ACOMA RD.
BELL AVE.
MOON ST.
NTS
DRIVEWAY 'B'
DRIVEWAY 'A'
CENT. AVE.
U-turn
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

Traffic Analysis

The Highway Capacity Manual, 6th Edition defines signalized and unsignalized intersection levels-of-service (LOS) based on the calculated average control delay of a turning movement, lane group, or overall intersection. The thresholds for various levels-of-service are summarized in the following tables:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Average Delay (secs)	Level-of-Service
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

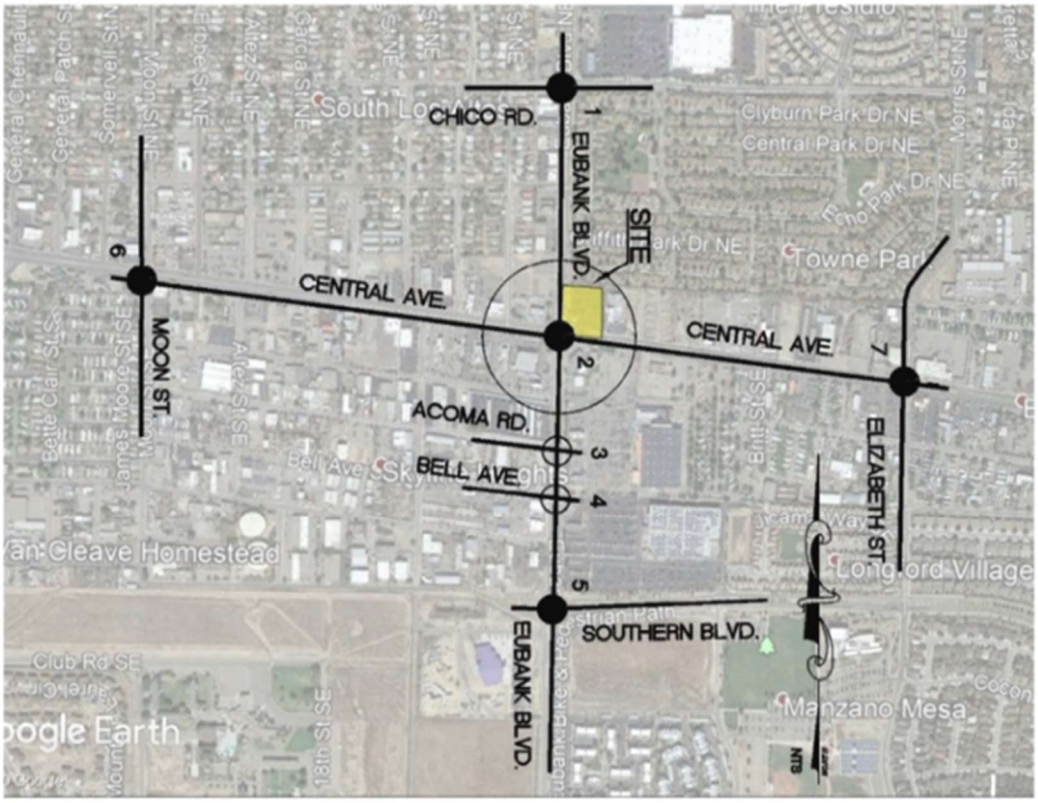
Average Delay (secs)	Level-of-Service
≤ 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

A Level-of-Service D or better is an acceptable parameter in urban areas for design purposes.

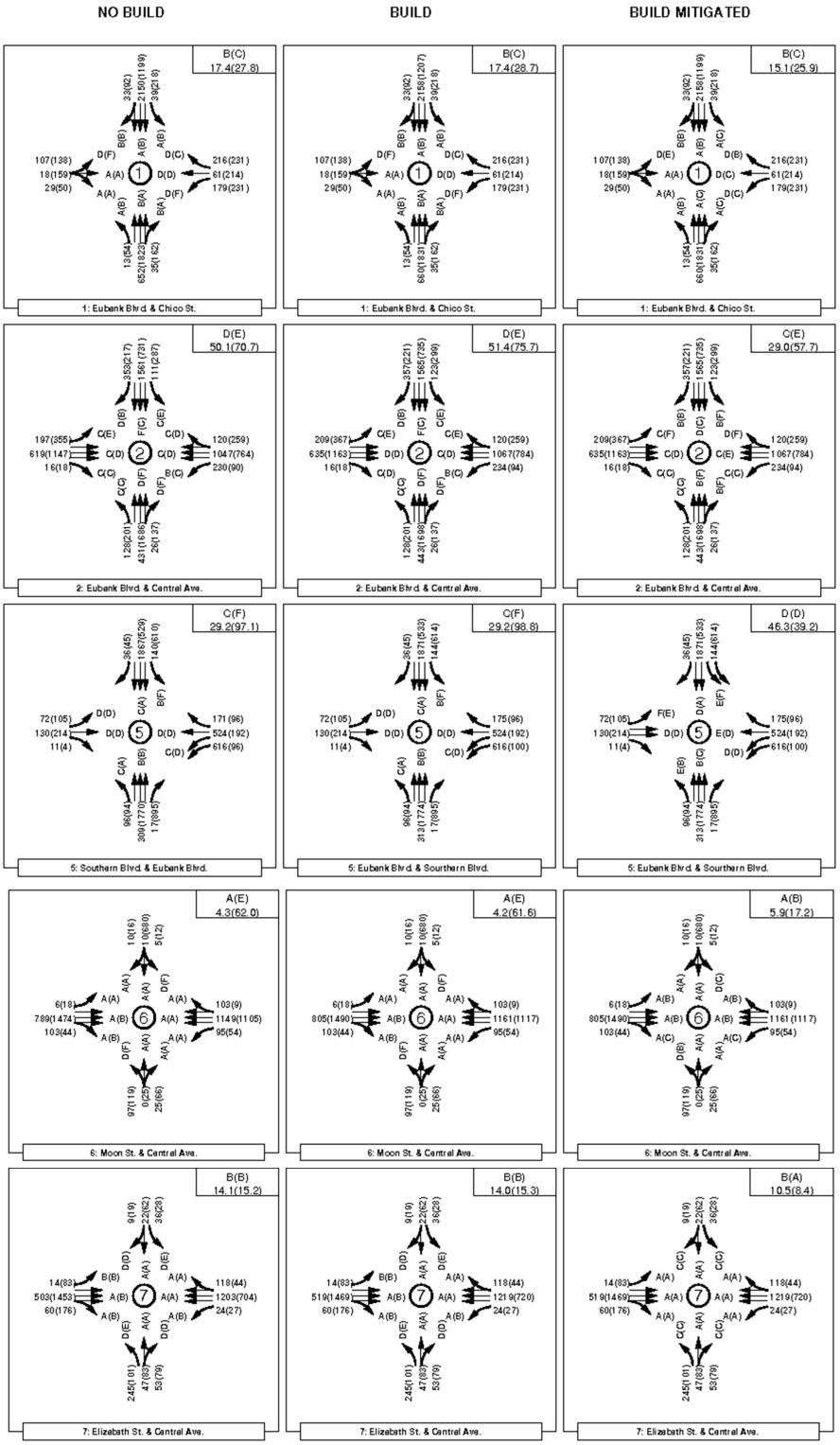
A capacity analysis was conducted in accordance with the HCM6 for the signalized and unsignalized intersections using Synchro 10 (Build 10.3.122.0).

The Lanes Volumes Analysis Maps for the intersections and driveways (2024 Implementation Year) are on the following pages.

Intersection Map

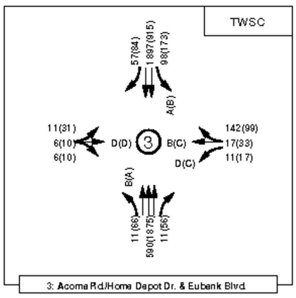


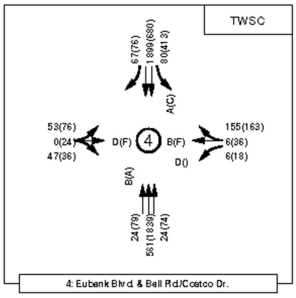
LOS/Volume Analysis Maps for
Signalized Intersections 1, 2, 5, 6 & 7



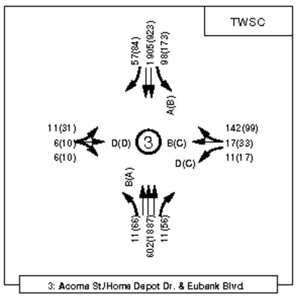
LOS/Volume Analysis Maps for
Unsignalized Intersections 3 & 4 and Driveways 2A & 2B

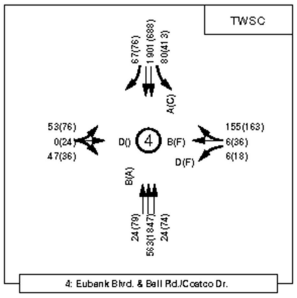
NO BUILD

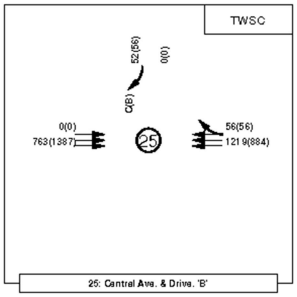


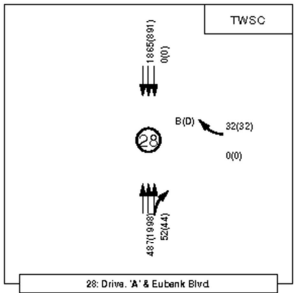


BUILD









MITIGATED

The results of the analysis for the intersections in the study area are summarized in a table the Executive Summary and detailed in the following sections:

INTERSECTION 1 – Eubank Blvd. & Chico Rd. (Signalized, Existing)

The following table summarizes the 2024 (Implementation Year) analysis results for the signalized intersection of Eubank Blvd.& Chico Rd. See Appendix pages A-38 thru A-49 for analysis reports for all conditions.

Signalized

1: Eubank Blvd. & Chico St.	EB (Chico St.)			WB (Chico St.)			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	1	1	1	1	3>	0	1	3>	0
AM Peak Hour												
NO BUILD Volumes	107	18	29	179	61	216	13	652	35	39	2,150	33
V/C Ratio	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Level-of-Service	D	A	A	D	D	D	A	B	B	A	A	B
Control Delay (Seconds)	46.8	0.0	0.0	45.6	40.0	44.1	7.5	17.8	17.9	5.4	9.5	10.4
Intersection LOS	**B - 17.4**											
95th Percentile Queue (veh)	7.6	0.0	0.0	8.4	2.6	9.6	0.1	8.3	9.0	0.4	11.5	12.7
BUILD Volumes	107	18	29	179	61	216	13	660	35	39	2,158	33
V/C Ratio	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Level-of-Service	D	A	A	D	D	D	A	B	B	A	A	B
Control Delay (Seconds)	46.8	0.0	0.0	45.6	40.0	44.1	7.6	17.8	18.0	5.4	9.5	10.4
Intersection LOS	**B - 17.4**											
95th Percentile Queue (veh)	7.6	0.0	0.0	8.4	2.6	9.6	0.1	8.7	9.3	0.4	11.5	12.8
Mitigage Lane Geometry	0	<1>	0	1	1	1	1	3>	0	1	3>	0
BUILD MITIGATED Volumes	107	18	29	179	61	216	13	660	35	39	2,158	33
V/C Ratio	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Level-of-Service	D	A	A	D	D	D	A	A	A	A	A	B
Control Delay (Seconds)	46.8	0.0	0.0	45.6	40.0	44.1	7.5	6.2	6.4	4.9	9.5	10.4
Intersection LOS	**B - 15.1**											
95th Percentile Queue (veh)	7.6	0.0	0.0	8.4	2.6	9.6	0.1	2.9	3.2	0.4	11.5	12.8
PM Peak Hour												
NO BUILD Volumes	138	159	50	231	214	231	54	1,823	162	218	1,199	92
V/C Ratio	1.29	0.00	0.00	0.92	0.45	0.45	0.18	0.68	0.68	0.72	0.41	0.41
Level-of-Service	F	A	A	F	D	C	B	A	A	B	B	B
Control Delay (Seconds)	206.0	0.0	0.0	82.2	37.9	32.6	10.8	0.2	0.3	12.2	13.1	13.6
Intersection LOS	**C - 27.8**											
95th Percentile Queue (veh)	30.9	0.0	0.0	14.6	9.2	9.2	0.9	0.1	0.2	4.1	9.4	10.1
BUILD Volumes	138	159	50	231	214	231	54	1,831	162	218	1,207	92
V/C Ratio	1.29	0.00	0.00	0.92	0.45	0.45	0.18	0.68	0.68	0.72	0.41	0.41
Level-of-Service	F	A	A	F	D	C	B	A	A	B	B	B
Control Delay (Seconds)	206.0	0.0	0.0	82.2	37.9	32.6	10.9	2.0	3.8	12.4	13.1	13.7
Intersection LOS	**C - 28.7**											
95th Percentile Queue (veh)	30.9	0.0	0.0	14.6	9.2	9.2	1.0	0.9	1.9	4.1	9.5	10.2
Mitigage Lane Geometry	0	<1>	0	1	1	1	1	3>	0	1	3>	0
BUILD MITIGATED Volumes	138	159	50	231	214	231	54	1,831	162	218	1,199	92
V/C Ratio	0.93	0.00	0.00	0.72	0.40	0.39	0.19	0.87	0.87	0.81	0.50	0.50
Level-of-Service	E	A	A	C	C	B	B	C	C	C	B	B
Control Delay (Seconds)	57.9	0.0	0.0	33.8	21.7	17.4	11.5	26.2	32.0	31.8	13.6	14.6
Intersection LOS	**C - 25.9**											
95th Percentile Queue (veh)	14.3	0.0	0.0	8.1	5.3	5.1	0.8	15.2	17.6	4.6	7.4	8.1

Analysis of the intersection of Eubank Blvd.& Chico Rd. demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. LOS remains the same for the AM and PM Peak Hours, from the NO BUILD to the BUILD condition. The calculated intersection delay stays the same during the AM Peak Hour and only worsens by less than 1 second in the PM Peak Hour in the BUILD Condition.

There are, however, several movements with LOS<D and volume to capacity ratios (V/C) greater than one for the PM NO BUILD and BUILD conditions. As shown in the table for the mitigated case, conditions for these movements can be improved with re-timing the signal. The overall intersection delay improves by three seconds. The LOS for WBL movement improves from LOS=F with a 82.2 s/veh delay to LOS=C with a 33.8 s/veh delay. Also, the v/c ratio decreases from 1.27 to 0.93. The LOS for the EBL movement improves from LOS=F with 206 s/veh delay to LOS=E with 57.9 s/veh delay. Although LOSs' for some of the other movements are worse with the signal retiming, all movements other than the EBL have LOS of D or greater. Adding a dedicated EBL turn lane should further improve the performance of the intersection.

In summary, the project does not significantly impact the performance of the Eubank Blvd./Chico Rd. intersection as demonstrated by the minor deterioration of delays and LOS's for the movements at the intersection. Therefore, no mitigation measures are proposed as part of this project. A mitigated scenario was developed for the City of Albuquerque to improve those movements where the LOS for the existing, NO BUILD, condition is less than D. As shown in the table above, signal re-timing will improve traffic conditions. Constructing an EBL lane should further improve performance.

INTERSECTION 2 – Eubank Blvd./Central Ave. (Signalized, Existing)

The following table summarizes the 2024 (Implementation Year) analysis results for the signalized intersection of Eubank Blvd.& Central Ave. See Appendix pages A-50 thru A-61 for analysis reports for all conditions.

Signalized

2: Eubank Blvd. & Central Ave.	EB (Central Ave.)			WB (Central Ave.)			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	3	1	1	3>	0	1	3>	0	1	3	1
AM Peak Hour												
NO BUILD Volumes	197	619	16	230	1,047	120	128	431	26	111	1,561	353
V/C Ratio	0.65	0.31	0.03	0.51	0.54	0.54	0.69	0.30	0.30	0.30	1.07	0.63
Level-of-Service	C	C	C	B	C	C	C	D	D	C	F	D
Control Delay (Seconds)	24.8	35.0	29.8	17.5	25.7	26.9	34.1	39.4	39.6	26.6	90.8	39.8
Intersection LOS	**D - 50.1**											
95th Percentile Queue (veh)	6.0	9.2	0.7	5.7	11.6	12.3	4.5	7.0	7.6	3.7	27.1	13.7
BUILD Volumes	209	635	16	234	1,067	120	128	443	26	123	1,565	357
V/C Ratio	0.70	0.32	0.03	0.52	0.55	0.55	0.69	0.31	0.31	0.33	1.07	0.64
Level-of-Service	C	D	C	B	C	C	C	D	D	C	F	D
Control Delay (Seconds)	27.6	35.2	29.9	17.7	26.0	27.4	34.1	39.8	40.1	26.7	94.7	40.8
Intersection LOS	**D - 51.4**											
95th Percentile Queue (veh)	6.7	9.5	0.7	5.8	12.1	12.9	4.5	7.2	7.8	4.1	28.9	14.7
Mitigage Lane Geometry	1	3	1	1	3>	0	1	3>	0	1	3	1
BUILD MITIGATED Volumes	209	635	16	234	1,067	120	128	443	26	123	1,565	357
V/C Ratio	0.76	0.44	0.04	0.59	0.77	0.78	0.59	0.27	0.27	0.27	0.93	0.55
Level-of-Service	C	C	C	C	C	D	C	B	B	B	D	B
Control Delay (Seconds)	31.7	24.4	20.9	20.0	31.5	36.5	21.4	19.8	20.0	16.0	35.3	19.1
Intersection LOS	**C - 29.0**											
95th Percentile Queue (veh)	5.9	5.6	0.4	5.3	11.2	12.6	2.6	3.4	3.8	2.4	15.2	8.1
PM Peak Hour												
NO BUILD Volumes	355	1,147	18	90	764	259	201	1,686	137	287	731	217
V/C Ratio	0.92	0.64	0.03	0.41	0.84	0.85	0.54	1.15	1.15	0.92	0.41	0.27
Level-of-Service	E	D	C	C	D	D	C	F	F	E	C	B
Control Delay (Seconds)	57.2	47.3	35.0	31.0	38.6	48.1	27.1	133.0	142.0	58.0	29.4	16.5
Intersection LOS	**E - 70.7**											
95th Percentile Queue (veh)	15.6	17.3	0.8	3.3	11.3	12.4	7.3	39.9	43.8	10.8	8.6	5.8
BUILD Volumes	367	1,163	18	94	784	259	201	1,698	137	299	735	221
V/C Ratio	0.94	0.66	0.03	0.43	0.94	0.95	0.54	1.16	1.16	0.92	0.40	0.26
Level-of-Service	E	D	D	C	D	E	C	F	F	E	C	B
Control Delay (Seconds)	69.5	48.4	35.6	32.7	54.9	70.1	27.0	136.0	145.0	63.0	28.9	15.0
Intersection LOS	**E - 75.7**											
95th Percentile Queue (veh)	18.0	17.6	0.8	3.5	14.2	15.8	7.3	40.6	44.6	12.0	8.8	5.5
Mitigage Lane Geometry	1	3	1	1	3>	0	1	3>	0	1	3	1
BUILD MITIGATED Volumes	367	1,163	18	94	784	259	201	1,698	137	299	735	221
V/C Ratio	1.09	0.74	0.04	0.44	0.96	0.97	0.51	1.03	1.04	1.00	0.38	0.26
Level-of-Service	F	D	C	C	E	F	C	F	F	F	C	B
Control Delay (Seconds)	92.6	35.7	26.7	32.4	68.4	84.6	20.8	71.6	82.2	84.6	24.7	14.2
Intersection LOS	**E - 57.7**											
95th Percentile Queue (veh)	17.2	12.5	0.6	3.4	17.2	18.8	5.7	28.3	31.9	13.3	7.8	5.0

Analysis of the intersection of Eubank Blvd.& Central Ave. demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. LOS remains the same for the AM (LOS=D) and PM (LOS=E) Peak Hours, from the NO BUILD to the BUILD condition. The calculated intersection delay worsens by only 1.3 secs during the AM Peak Hour and by 5 seconds during in the PM Peak Hour in the BUILD Condition. During the PM Peak Hour, several movements (EBL, NBT, NBR, & SBL) have LOS of E or F for the NO BUILD and BUILD conditions. Delays worsen for these movements with the addition of traffic from

the project, however, intersection is already stressed so small increases in traffic volume (less than 2% increase from the project) have a disproportionate impact on delays. Therefore, no mitigation measures are recommended for the intersection of Eubank Blvd.& Central Ave.

To improve the existing (NO BUILD) conditions at the Eubank Blvd./Central Ave. intersection, the traffic signal should be re-timed. As demonstrated for the mitigated condition in the table above, signal re-timing improves the intersection delay for the AM and PM peak hours by 20 s/veh. Unfortunately, several movements (EBL, WBR, NBT, NBR, and SBL) during the PM peak hour remain at LOS=E or F. The high volume of NBT traffic from Kirkland Air Force Base (KAFB) is a major contributor to this problem. However, since the area is fully developed, constructing an additional NBT lane is not practical. Further analysis is required to determine if alternative routing for the KAFB traffic, such as adding an EB lane to Southern Blvd., would be beneficial.

In summary, the new development has a minimal adverse impact to the performance of the intersection of Eubank Blvd./Central Ave., therefore, no mitigation measures are recommended for this project. However, since there are existing (NO BUILD) performance issues, a mitigated scenario has been developed to be used by the City of Albuquerque to improve the LOS for some of the failing movements. At this time, signal re-timing is the only method that can be proposed to alleviate the congestion at this intersection. Given that the area is fully developed, proposing any structural or alternative routing solutions requires more analysis than the scope of this study allows.

INTERSECTION 2A – Eubank Blvd./Driveway 'A' (unsignalized, Existing)

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of Eubank Blvd./Driveway 'A' (Right-in/Right-out). See Appendix pages A-62 thru A-63 for analysis reports for all conditions.

Unsignalized

2A: Drive. 'A' & Eubank Blvd.	EB (Driveway 'A')			WB (Driveway 'A')			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry												
AM Peak Hour												
BUILD Volumes				0		32		487	52	0	1,865	
V/C Ratio						0.05						
Level-of-Service						B						
Control Delay (Seconds)						11.1						
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)						0.2						
PM Peak Hour												
BUILD Volumes				0		32		1,998	44	0	891	
V/C Ratio						0.16						
Level-of-Service						D						
Control Delay (Seconds)						26.3						
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)						0.6						

The NO BUILD condition was not analyzed for Driveway 'A' even though the driveway exists because there is currently no active development on the site. LOS for the BUILD condition is B for the AM Peak Hour and D for the PM Peak Hour, therefore, no mitigation measures are recommended.

INTERSECTION 2B – Central Ave./Driveway 'B' (unsignalized, Existing)

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of Central Ave./Driveway 'B' (Right-in/Right-out). See Appendix pages A-64 thru A-65 for analysis reports for all conditions.

Unsignalized

2B: Central Ave. & Drive. 'B'	EB (Central Ave.)			WB (Central Ave.)			NB (Driveway B)			SB (Driveway B)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry												
AM Peak Hour												
BUILD Volumes	0	763			1,219	56				0		52
V/C Ratio												0.15
Level-of-Service												C
Control Delay (Seconds)												16.7
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)												0.5

PM Peak Hour												
BUILD Volumes	0	1,387			884	56				0		56
V/C Ratio												0.12
Level-of-Service												B
Control Delay (Seconds)												13.9
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)												0.4

The NO BUILD condition was not analyzed for Driveway 'B' even though the driveway exists because there is currently no active development on the site. LOS for the BUILD condition is C for the AM Peak Hour and B for the PM Peak Hour, therefore, no mitigation measures are recommended.

INTERSECTION 3 – Eubank Blvd. & Acoma Rd./Home Depot Driveway

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of Eubank Blvd. & Acoma Rd./Home Depot Driveway. See Appendix pages A-66 thru A-69 for analysis reports for all conditions.

Unsignalized

3: Acoma Rd./Home Depot Dr. & Eubank Blvd.	EB (Acoma Rd./Home Depot)			WB (Acoma Rd./Home Depot)			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	1	1>	0	1	3	1	1	2	1
AM Peak Hour												
NO BUILD Volumes	11	6	6	11	17	142	11	590	11	98	1,897	57
V/C Ratio		0.12		0.06	0.28		0.03			0.10		
Level-of-Service		D		D	B		B			A		
Control Delay (Seconds)		25.3		26.8	13.8		13.9			9.0		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		0.4		0.2	1.1		0.1			0.3		
Volumes	11	6	6	11	17	142	11	602	11	98	1,905	57
V/C Ratio		0.12		0.06	0.28		0.03			0.10		
Level-of-Service		D		D	B		B			A		
Control Delay (Seconds)		25.3		26.8	13.8		13.9			9.1		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		0.4		0.2	1.1		0.1			0.3		
PM Peak Hour												
NO BUILD Volumes	31	10	10	17	33	99	66	1,875	56	173	915	84
V/C Ratio		0.26		0.06	0.37		0.06			0.29		
Level-of-Service		D		C	C		A			B		
Control Delay (Seconds)		29.7		17.9	21.0		8.6			13.3		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		1.0		0.2	1.7		0.2			1.2		
Volumes	31	10	10	17	33	99	66	1,887	56	173	923	84
V/C Ratio		0.26		0.06	0.38		0.06			0.28		
Level-of-Service		D		C	C		A			B		
Control Delay (Seconds)		29.2		19.1	21.2		8.6			13.2		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		1.0		0.2	1.7		0.2			1.2		

Analysis of the intersection of Eubank Blvd.& Acoma Rd./Home Depot Driveway demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. The LOSs' and delays remain the same for the AM and PM Peak Hours, from the NO BUILD to the BUILD condition for all movements (See Traffic Analysis Section and Appendix A-66 thru A-69). Therefore, no mitigation measures are recommended for this intersection.

INTERSECTION 4 – Eubank Blvd. & Bell Ave./Costco Driveway

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of Eubank Blvd. & Bell Rd./Costco Driveway. See Appendix pages A-70 thru A-73 for analysis reports for all conditions.

Unsignalized

4: Eubank Blvd. & Bell Rd./Costco Dr.	EB (Bell Rd./Costco Dr.)			WB (Bell Rd./Costco Dr.)			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1>	0	1	1>	0	0	3	0	1	2	1
AM Peak Hour												
NO BUILD Volumes	53	0	47	6	6	155	24	561	24	80	1,899	67
V/C Ratio		0.42		0.04	0.23		0.06			0.08		
Level-of-Service		D		D	B		B			A		
Control Delay (Seconds)		30.7		30.5	11.7		14.2			8.9		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		2.0		0.1	0.9		0.2			0.3		
BUILD Volumes	53	0	47	6	6	155	24	563	24	80	1,901	67
V/C Ratio		0.42		0.04	0.23		0.06			0.08		
Level-of-Service		D		D	B		B			A		
Control Delay (Seconds)		30.7		30.5	11.7		14.2			8.9		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		2.0		0.1	0.9		0.2			0.3		
PM Peak Hour												
NO BUILD Volumes	76	24	36	18	36	163	79	1,839	74	413	680	76
V/C Ratio		1.06			1.25		0.07			0.66		
Level-of-Service		F			F		A			C		
Control Delay (Seconds)		164.0			211.0		8.2			20.9		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)		7.7			11.5		0.2			4.8		
BUILD Volumes	76	24	36	18	36	163	79	1,847	74	413	688	76
V/C Ratio				0.26	1.50		0.06			0.67		
Level-of-Service				F	F		A			C		
Control Delay (Seconds)				73.4	319.0		8.1			22.1		
Intersection LOS	**TWSC**											
95th Percentile Queue (veh)				0.9	13.7		0.2			5.1		

Analysis of the intersection of Eubank Blvd.& Bell Ave/Costco Driveway demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. The LOSs' and delays remain the same for the AM and PM Peak Hours, from the NO BUILD to the BUILD condition for all movements (See Traffic Analysis Section and Appendix A-70 thru A-73). The excessive delays and poor LOS for the WBL and WBT movements are generated by the traffic exiting the Costco Driveway and are not caused by the traffic generated by the project. Therefore, no mitigation measures are recommended for this intersection.

INTERSECTION 5 – Eubank Blvd./Southern Blvd.

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of Eubank Blvd./Southern Blvd. See Appendix pages A-74 thru A-85 for analysis reports for all conditions.

Signalized

5: Southern Blvd. & Eubank Blvd.	EB (Southern Blvd.)			WB (Southern Blvd.)			NB (Eubank Blvd.)			SB (Eubank Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	2	1	1	1	3	1	1	3	1
AM Peak Hour												
NO BUILD Volumes	72	130	11	616	524	171	96	309	17	140	1,867	36
V/C Ratio	0.47	0.39		0.68	0.79		0.53	0.14		0.23	0.79	
Level-of-Service	D	D		C	D		C	B		B	C	
Control Delay (Seconds)	49.3	40.0	0.0	31.6	37.2	0.0	23.6	18.0	0.0	14.6	27.9	0.0
Intersection LOS	**C - 29.2**											
95th Percentile Queue (veh)	3.5	5.6	0.0	10.8	19.0	0.0	2.3	2.7	0.0	3.2	19.5	0.0
Volumes	72	130	11	616	524	175	96	313	17	144	1,871	36
V/C Ratio	0.47	0.39		0.68	0.79		0.53	0.14		0.24	0.79	
Level-of-Service	D	D		C	D		C	B		B	C	
Control Delay (Seconds)	49.3	40.0	0.0	31.6	37.2	0.0	23.7	18.1	0.0	14.6	28.0	0.0
Intersection LOS	**C - 29.2**											
95th Percentile Queue (veh)	3.5	5.6	0.0	10.8	19.0	0.0	2.3	2.8	0.0	3.3	19.6	0.0
Mitigage Lane Geometry	1	2	1	2	1	1	1	3	1	2	2	1
Volumes	72	130	11	616	524	175	96	313	17	144	1,871	36
V/C Ratio	0.75	0.18		0.76	0.90		0.84	0.12		0.72	0.99	
Level-of-Service	F	D		D	E		E	B		E	D	
Control Delay (Seconds)	83.0	39.1	0.0	43.9	56.9	0.0	66.6	15.9	0.0	58.6	46.3	0.0
Intersection LOS	**D - 46.3**											
95th Percentile Queue (veh)	5.1	2.9	0.0	8.5	24.0	0.0	4.5	2.7	0.0	4.0	37.9	0.0
PM Peak Hour												
NO BUILD Volumes	105	214	4	96	192	96	94	1,770	895	610	529	45
V/C Ratio	0.54	0.84		0.31	0.50		0.15	0.60		1.95	0.16	
Level-of-Service	D	D		D	D		A	B		F	A	
Control Delay (Seconds)	52.7	53.5	0.0	41.6	42.8	0.0	9.4	17.1	0.0	468.0	9.2	0.0
Intersection LOS	**F - 97.1**											
95th Percentile Queue (veh)	5.6	10.6	0.0	2.1	8.7	0.0	1.7	15.0	0.0	65.4	3.2	0.0
Volumes	105	214	4	100	192	96	94	1,774	895	614	533	45
V/C Ratio	0.54	0.84		0.32	0.50		0.15	0.60		1.97	0.17	
Level-of-Service	D	D		D	D		A	B		F	A	
Control Delay (Seconds)	52.5	53.5	0.0	41.6	42.7	0.0	9.4	17.2	0.0	477.0	9.3	0.0
Intersection LOS	**F - 98.8**											
95th Percentile Queue (veh)	5.6	10.6	0.0	2.2	8.7	0.0	1.7	15.1	0.0	66.3	3.3	0.0
Mitigage Lane Geometry	1	2	1	2	1	1	1	3	1	2	2	1
Volumes	105	214	4	100	192	96	94	1,774	895	614	533	45
V/C Ratio	0.59	0.46		0.24	0.53		0.16	0.68		1.03	0.23	
Level-of-Service	E	D		D	D		B	C		F	A	
Control Delay (Seconds)	59.9	52.7	0.0	45.0	47.3	0.0	13.9	25.1	0.0	97.5	9.8	0.0
Intersection LOS	**D - 39.2**											
95th Percentile Queue (veh)	6.3	5.9	0.0	2.5	9.5	0.0	2.3	19.3	0.0	19.4	5.5	0.0

Analysis of the intersection of Eubank Blvd.& Southern Blvd. demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. The LOSs' and delays for the intersection remain the same for the AM Peak Hour and worsen by only 1.7 seconds for the PM Peak Hour from the NO BUILD to the BUILD condition. The excessive delay and poor LOS for the SBL movement and the intersection during the PM Peak Hour is an existing problem. The small amount of traffic generated by the project does not significantly contribute to the delay, therefore, no mitigation measures are recommended for this intersection.

However, since there are existing (NO BUILD) performance issues, a mitigated scenario (see table above) has been developed to be used by the City of Albuquerque to improve the LOS for some of the failing movements. The LOS for SBL during the PM peak hour for the NO BUILD and NO BUILD conditions is LOS= F with delays exceeding 475 s/veh and v/c ratios approach 2 v/c. Signal retiming alone did improve delays, however, the SBL remained at LOS=F. Further improvement was realized when one of the three SBT lanes was converted to a second SBL lane. LOS for the intersection went from F to D with a 40 sec/veh delay improvement. The compromises to this solution are lower LOS for the AM peak hour when traffic patterns are reversed and poorer performance for the low traffic volume movements such as the EBL which went from LOS=D to LOS=E.

In summary, the new development has a minimal adverse impact to the performance of the intersection of Eubank Blvd./Southern Blvd., therefore, no mitigation measures are recommended for this project. However, since there are existing (NO BUILD) performance issues, a mitigated scenario has been developed to be used by the City of Albuquerque to improve the LOS for some of the failing movements. At this time, signal re-timing and converting a SBT lane to a second SBL are the only solutions that can be proposed to alleviate the congestion for the SBL movement. Development of any structural or alternative routing solutions requires more analysis than the scope of this study allows.

INTERSECTION 6 – Central Ave./Moon St.

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of *Central Ave./Moon St.* See Appendix pages A-86 thru A-97 for analysis reports for all conditions.

Signalized

6: Moon St. & Central Ave.	EB (Moon St.)			WB (Moon St.)			NB (Central Ave.)			SB (Central Ave.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	3>	0	1	3>	0	0	<1>	0	0	<1>	0
AM Peak Hour												
NO BUILD Volumes	6	789	103	95	1,149	103	97	0	25	5	10	10
V/C Ratio	0.01	0.22	0.22	0.18	0.30	0.30	0.56	0.00	0.00	0.11	0.00	0.00
Level-of-Service	A	A	A	A	A	A	D	A	A	D	A	A
Control Delay (Seconds)	2.3	2.8	3.0	0.7	0.2	0.4	49.6	0.0	0.0	44.5	0.0	0.0
Intersection LOS	**A - 4.3**											
95th Percentile Queue (veh)	0.0	1.7	1.9	0.2	0.2	0.3	6.1	0.0	0.0	1.1	0.0	0.0
BUILD Volumes	6	805	103	95	1,161	103	97	0	25	5	10	10
V/C Ratio	0.01	0.22	0.22	0.18	0.30	0.30	0.56	0.00	0.00	0.11	0.00	0.00
Level-of-Service	A	A	A	A	A	A	D	A	A	D	A	A
Control Delay (Seconds)	2.3	2.9	3.0	0.7	0.2	0.4	49.6	0.0	0.0	44.5	0.0	0.0
Intersection LOS	**A - 4.2**											
95th Percentile Queue (veh)	0.0	1.8	2.0	0.2	0.2	0.3	6.1	0.0	0.0	1.1	0.0	0.0
PM Peak Hour												
NO BUILD Volumes	18	1,474	44	54	1,105	9	119	25	66	12	680	16
V/C Ratio	0.05	0.44	0.44	0.23	0.32	0.32	1.27	0.00	0.00	1.39	0.00	0.00
Level-of-Service	A	B	B	A	A	A	F	A	A	F	A	A
Control Delay (Seconds)	7.5	10.5	11.0	3.5	0.2	0.4	208.0	0.0	0.0	232.0	0.0	0.0
Intersection LOS	**E - 62.0**											
95th Percentile Queue (veh)	0.3	9.5	10.3	0.3	0.1	0.2	20.4	0.0	0.0	62.1	0.0	0.0
BUILD Volumes	18	1,490	44	54	1,117	9	119	25	66	12	680	16
V/C Ratio	0.05	0.44	0.44	0.23	0.32	0.32	1.27	0.00	0.00	1.39	0.00	0.00
Level-of-Service	A	B	B	A	A	A	F	A	A	F	A	A
Control Delay (Seconds)	7.5	10.5	11.1	3.5	0.2	0.3	208.0	0.0	0.0	232.0	0.0	0.0
Intersection LOS	**E - 61.6**											
95th Percentile Queue (veh)	0.3	9.6	10.5	0.4	0.1	0.2	20.4	0.0	0.0	62.1	0.0	0.0
Mitigage Lane Geometry	1	3>	0	1	3>	0	0	<1>	0	0	<1>	0
BUILD MITIGATED Volumes	18	1,490	44	54	1,117	9	119	25	66	12	680	16
V/C Ratio	0.07	0.77	0.77	0.29	0.56	0.56	0.48	0.00	0.00	0.83	0.00	0.00
Level-of-Service	B	B	C	C	B	B	B	A	A	C	A	A
Control Delay (Seconds)	16.6	17.8	21.3	24.5	13.1	13.8	11.6	0.0	0.0	20.3	0.0	0.0
Intersection LOS	**B - 17.2**											
95th Percentile Queue (veh)	0.3	7.7	9.1	1.2	4.4	4.9	2.7	0.0	0.0	12.0	0.0	0.0

Analysis of the intersection of Central Ave. & Moon St. demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. The LOS and delay for the intersection worsen by only 0.1 seconds for the AM Peak Hour from the NO BUILD to the BUILD condition. The intersection delay improves by 0.4 seconds for the PM Peak Hour. The intersection delay is a volume based weighted average, therefore, adding more traffic to a movement with a good LOS, such as the EBT movement, can improve the overall delay of the intersection. The excessive delay and poor LOS for the NBL and SBL movements are not caused by the traffic generated by the project, therefore, no mitigation measures are recommended for this intersection.

There are, however, two movements (NBL and SBL) with LOS<D and volume to capacity ratios (V/C) greater than one for the PM NO BUILD and BUILD conditions. As shown in the table for the mitigated case, conditions for these movements can be improved with re-timing the signal. The overall intersection delay improves by more than 45 sec/veh. The LOS for NBL movement improves from LOS=F with a 208 s/veh delay to LOS=B with a 12 s/veh delay. Also, the v/c ratio decreases from 1.27 to 0.48. Similarly, the LOS for the SBL movement improves from LOS=F with 232 s/veh delay to LOS=C with 23 s/veh delay. Although LOSs' for some of the other movements are made worse with signal retiming, all movements have LOS of D or greater.

In summary, the project does not significantly impact the performance of the Eubank Blvd./Moon St. intersection as demonstrated by the minor deterioration of delays and LOS's for the movements at the intersection. Therefore, no mitigation measures are proposed as part of this project. A mitigated scenario was developed for the City of Albuquerque to improve those movements where the LOS for the existing, NO BUILD, condition is less than D. As shown in the table above, signal re-timing will significantly improve traffic conditions.

INTERSECTION 7 – Central Ave./Elizabeth St.

The following table summarizes the 2024 (Implementation Year) analysis results for the unsignalized intersection of *Central Ave./Elizabeth St*. See Appendix pages A-98 thru A-109 for analysis reports for all conditions.

Signalized

7: Elizabeth St. & Central Ave.	EB (Central Ave.)			WB (Central Ave.)			NB (Elizabeth St.)			SB (Elizabeth St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	3>	0	1	3>	0	1	1>	0	1	1>	0
AM Peak Hour												
NO BUILD Volumes	14	503	60	24	1,203	118	245	47	53	36	22	9
V/C Ratio	0.05	0.15	0.16	0.04	0.36	0.36	0.72	0.00	0.27	0.13	0.00	0.08
Level-of-Service	B	A	A	A	A	A	D	A	D	D	A	D
Control Delay (Seconds)	10.0	6.0	6.1	6.9	7.4	7.8	51.0	0.0	39.7	43.1	0.0	37.6
Intersection LOS	**B - 14.1**											
95th Percentile Queue (veh)	0.3	2.7	2.9	0.4	7.5	8.0	12.0	0.0	4.5	1.7	0.0	1.3
BUILD Volumes	14	519	60	24	1,219	118	245	47	53	36	22	9
V/C Ratio	0.05	0.16	0.16	0.04	0.37	0.37	0.72	0.00	0.27	0.13	0.00	0.08
Level-of-Service	B	A	A	A	A	A	D	A	D	D	A	D
Control Delay (Seconds)	10.1	6.0	6.2	7.0	7.5	7.9	51.0	0.0	39.7	43.1	0.0	37.6
Intersection LOS	**B - 14.0**											
95th Percentile Queue (veh)	0.3	2.7	3.0	0.4	7.6	8.1	12.0	0.0	4.5	1.7	0.0	1.3
Mitigage Lane Geometry	1	3>	0	1	3>	0	1	1>	0	1	1>	0
BUILD MITIGATED Volumes	14	519	60	24	1,219	118	245	47	53	36	22	9
V/C Ratio	0.05	0.17	0.18	0.04	0.40	0.40	0.61	0.00	0.25	0.11	0.00	0.07
Level-of-Service	A	A	A	A	A	A	C	A	C	C	A	C
Control Delay (Seconds)	9.5	5.7	5.9	6.6	7.2	7.7	29.8	0.0	23.8	25.7	0.0	22.4
Intersection LOS	**B - 10.5**											
95th Percentile Queue (veh)	0.2	1.9	2.1	0.3	5.3	5.8	7.6	0.0	2.6	1.0	0.0	0.8
PM Peak Hour												
NO BUILD Volumes	83	1,453	176	27	704	44	101	83	79	28	62	19
V/C Ratio	0.14	0.40	0.41	0.11	0.18	0.19	0.52	0.00	0.66	0.22	0.00	0.32
Level-of-Service	B	B	B	B	A	A	E	A	D	E	A	D
Control Delay (Seconds)	10.8	12.1	12.4	12.2	3.6	3.8	55.3	0.0	52.9	56.2	0.0	47.1
Intersection LOS	**B - 15.2**											
95th Percentile Queue (veh)	2.5	13.5	14.1	0.7	2.4	2.7	5.6	0.0	8.5	1.6	0.0	4.0
BUILD Volumes	83	1,469	176	27	720	44	101	83	79	28	62	19
V/C Ratio	0.14	0.41	0.41	0.11	0.19	0.19	0.52	0.00	0.66	0.22	0.00	0.32
Level-of-Service	B	B	B	B	A	A	E	A	D	E	A	D
Control Delay (Seconds)	11.1	12.4	12.9	12.4	3.6	3.8	55.3	0.0	52.9	56.2	0.0	47.1
Intersection LOS	**B - 15.3**											
95th Percentile Queue (veh)	2.6	15.0	15.7	0.7	2.5	2.8	5.6	0.0	8.5	1.6	0.0	4.0
Mitigage Lane Geometry	1	3>	0	1	3>	0	1	1>	0	1	1>	0
BUILD MITIGATED Volumes	83	1,469	176	27	720	44	101	83	79	28	62	19
V/C Ratio	0.15	0.45	0.45	0.10	0.21	0.21	0.39	0.00	0.57	0.15	0.00	0.28
Level-of-Service	A	A	A	A	A	A	C	A	C	C	A	C
Control Delay (Seconds)	5.5	5.2	5.8	8.2	3.9	4.1	32.5	0.0	31.5	33.2	0.0	28.2
Intersection LOS	**A - 8.4**											
95th Percentile Queue (veh)	0.9	4.9	5.5	0.4	1.8	2.0	3.2	0.0	5.0	0.9	0.0	2.3

Analysis of the intersection of Eubank Blvd.& Elizabeth St. demonstrates that the proposed Murphy Express will have minimal adverse impact on the traffic movements at this intersection. The LOSs' and delays for the intersection remain within 0.1 second difference between the NO BUILD to the BUILD condition, therefore, no mitigation measures are recommended for this intersection.

There are, however, two movements (NBL and SBL) with LOS<D and volume to capacity ratios (V/C) greater than one for the PM NO BUILD and BUILD conditions. As shown in the table for the mitigated case, conditions for these movements can be improved with re-timing the signal. The overall intersection delay improves by 7 sec/veh. The LOS for NBL movement improves from LOS=E with a 55.3 s/veh delay to LOS=C with a 32.5 s/veh delay. Similarly, the LOS for the SBL movement improves from LOS=E with 56.2 s/veh delay to LOS=C with 33.2 s/veh delay. Although LOSs' for some of the other movements are made worse with signal retiming, all movements have LOS of D or greater.

In summary, the project does not significantly impact the performance of the Eubank Blvd./Elizabeth St. intersection as demonstrated by the minor deterioration of delays and LOS's for the movements at the intersection. Therefore, no mitigation measures are proposed as part of this project. A mitigated scenario was developed for the City of Albuquerque to improve those movements where the LOS for the existing, NO BUILD, condition is less than D. As shown in the table above, signal re-timing will significantly improve traffic conditions.

Impact Assessment

The proposed Murphy Express will have insignificant adverse impacts on the adjacent transportation system; therefore, no mitigation measures are recommended for intersections in the study area for this project.

Access Design Specifications

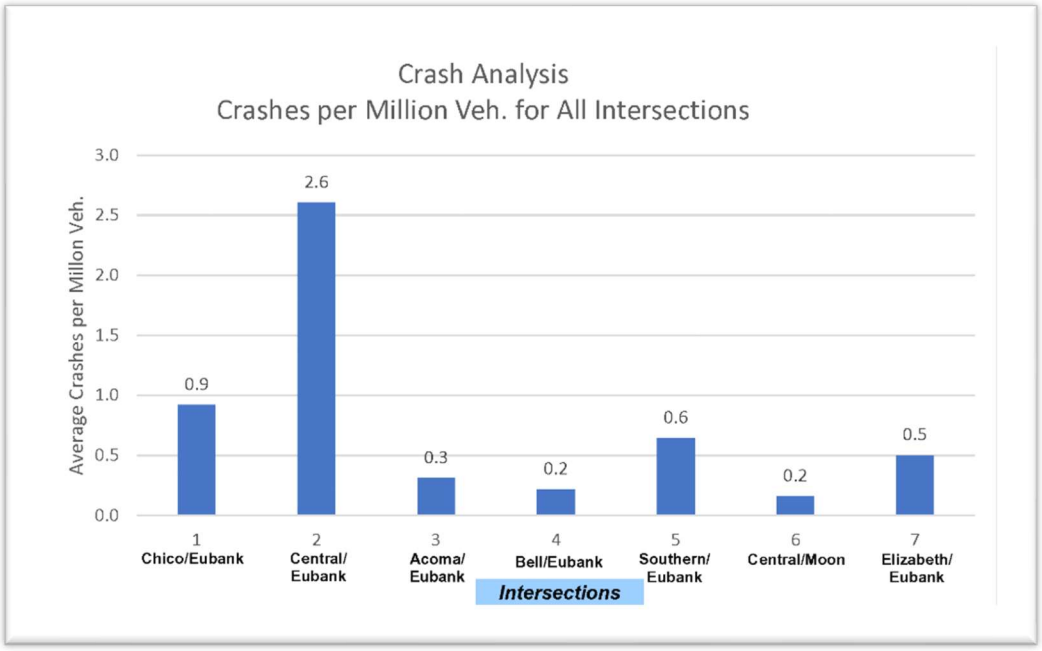
No significant vertical or horizontal curves exist along Central Ave. or Eubank Blvd. in the vicinity of the driveways and there are no structures blocking sight distances into and out of the entrances. Existing Driveways should be modified as necessary to ensure access for delivery vehicles, however, adequate site distances shall be maintained.

Crash Analysis

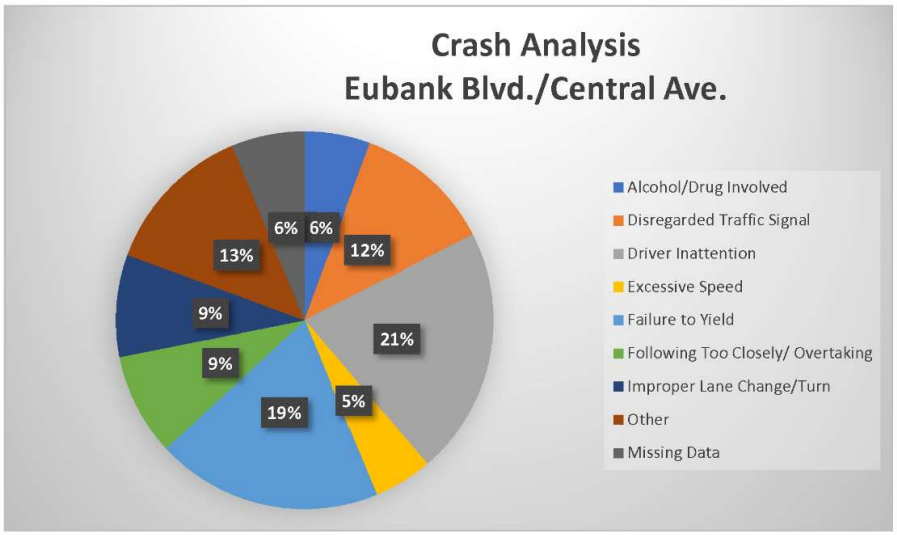
All the intersections in the study area have adequate lighting and a combination of permissive and protected/permissive left-turn phasing, and medium to low pedestrian activity level. The total number of observed crashes from 2016 through 2018 (inclusive) at each of the seven intersections in the study area was provided by the New Mexico Department of Transportation, Traffic Safety Division (Traffic Records). Data was sorted according to intersection, year, and "highest contributing factor to crash". The "highest contributing factor to crash" data was grouped into nine categories.

1. Alchohol/Drug Involved
2. Disregarded Traffic Signal
3. Driver Inattention
4. Excessive Speed
5. Failure to Yield
6. Following Too Closely/Overtaking
7. Improper Lane Change
8. Other (i.e vehicle malfunction, animal crossing, etc.)
9. Missing Data (no explanation for crash)

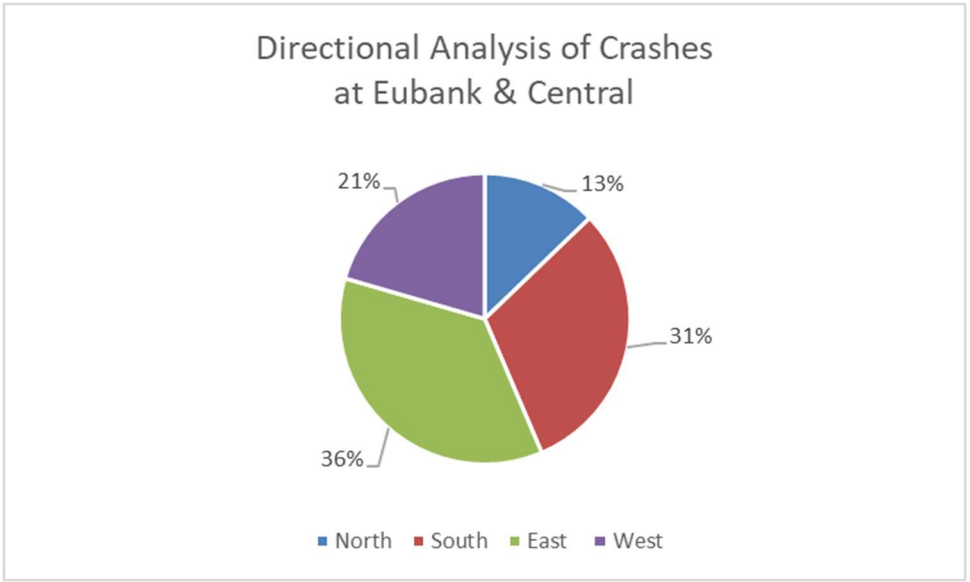
A summary of the crash rates (crashes per million vehicles entering) at each intersection is presented in the Crash Analysis Summary graph below. The crash data tables are provided in Appendix pages A-118 thru A-119.



The average intersection Crash Rate for the Albuquerque Metropolitan Planning Area as published by the MRCOG in the "Safety Doesn't Happen by Accident, General Crash Data Trends, 2001-2010 for the Albuquerque Metropolitan Planning Area (AMPA) is 1.14 Crashes per million vehicles entering. As shown in the graph, the existing crash rate at each analyzed intersection is less than 1 crash per million vehicles entering at six of the seven intersections. Only Intersection 2 (Central Ave./Eubank Blvd.) is higher than the AMPA average at 2.6 Crashes per Million Vehicles. As shown in the pie chart below, over half of the crashes at this intersection are caused by driver inattention, failure to yield, or disregard of the traffic signal.



When only driver error (inattention, excessive speed, disregard of traffic signal, etc) was analyzed from a directional basis (North, South, East, & West) it was found that 67% of crashes originated from the East and South legs of the intersection (see chart below). Since driver inattention is the most prevalent cause of these crashes, advance warning signs on these approaches may reduce the incidence of crashes, especially rear-end collisions. This intersection also has pedestrians standing and sitting in the medians at various times of the day. Since the medians are only 4 to 5 feet wide, this may be contributing to driver distraction. Police presence to enforce speeds, cell phone usage restrictions, and prevent loitering in the medians may also help reduce accidents at this intersection. However, the crash rate problem at this intersection is based on historical crash data and is not the result of the impact of the proposed Murphy Express facility.



Summary of Deficiencies, Anticipated Impacts, and Recommendations

Some intersections and/or movements in the study area do not have Level of Services that meets the Minimum Acceptable Level of Service Standards (LOS=D or better, City of Albuquerque DPM), however, traffic volumes generated by the project do not significantly contribute to the problem. For these cases, the intersections and/or movements have BUILD delays that are not significantly worse than the NO BUILD delays and in almost all cases the LOS is the same from the NO BUILD to the BUILD condition. Therefore, no mitigation measures are recommended for this project.

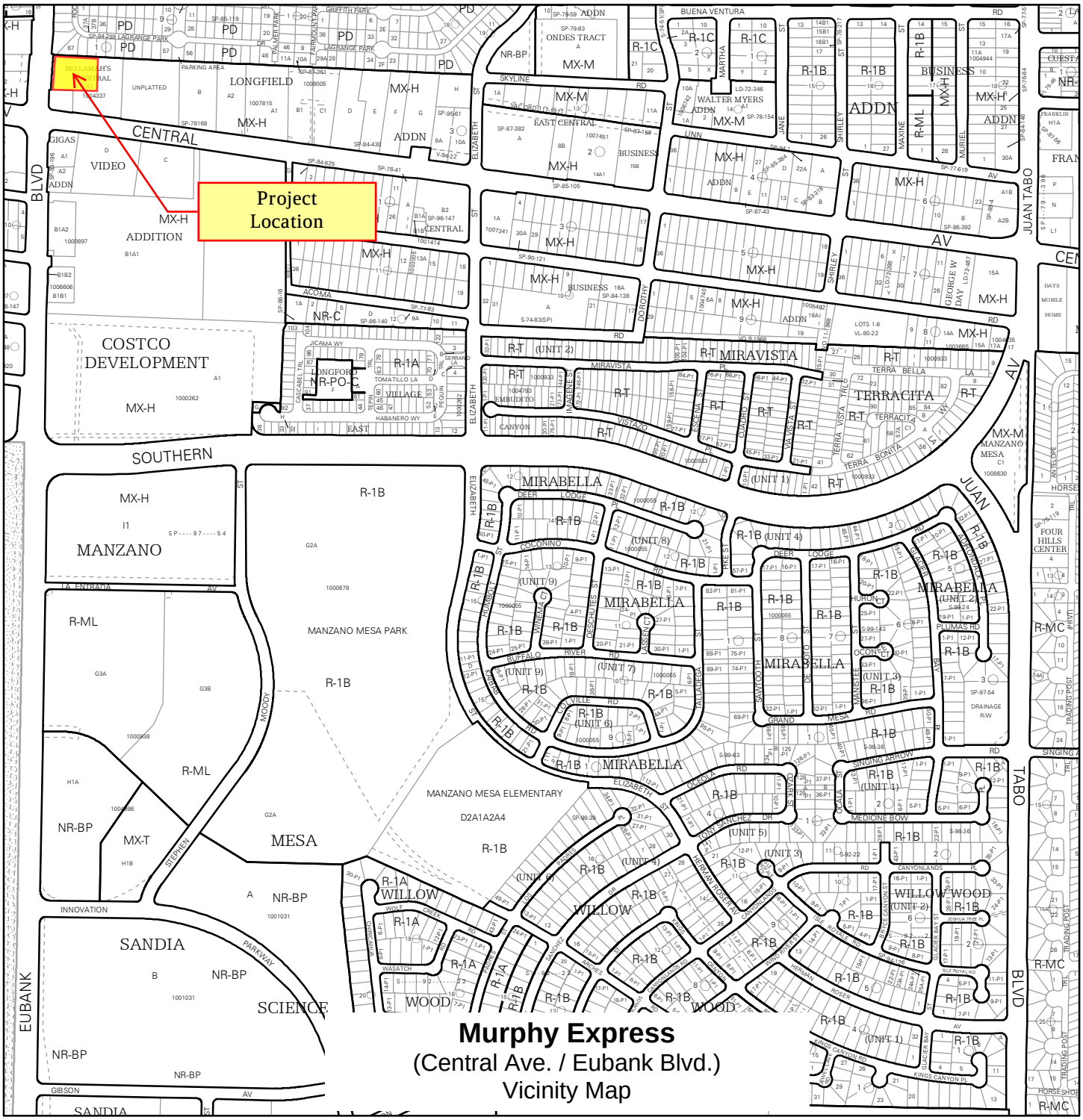
Mitigated scenarios were developed for intersections containing movements with poor or failing LOSs for the existing, NO BUILD, conditions as requested by the City of Albuquerque to help improve these intersections. For most of these intersections, signal re-timing was sufficient to establish an acceptable LOS. At the Eubank Blvd./Central Ave. intersection signal re-timing only slightly improved traffic flow conditions and structural modifications appear impractical since the area is fully developed. Providing additional traffic routing alternatives may improve traffic flow but further study is required to make that determination. The performance of Eubank Blvd./Southern Blvd. was improved by signal re-timing and converting a SBT lane to a second SBL lane. Although overall conditions improved for the SBL turning movement during the PM Peak period, LOS decreased for the AM peak period and for some of the lower volume movements.

The crash analysis performed for this Study did not reveal any conclusive single cause of crashes at the intersection of Central Ave. / Eubank Blvd. There were several contributing factors which, considered together, constituted the totality of crashes at the intersection. The crash rate for Central / Eubank is above average, but there is no single action that could be taken to fully mitigate the crash problem. Driver inattention was the most frequent contributing factor to crashes, but remedying driver inattention issues are difficult to address. The only suggestions that can be considered are 1) advanced warning signal flashers upstream of the stop bar, 2) stronger enforcement of texting while driving, 3) eliminating panhandling in the medians at the intersection, or 4) increasing visual impact of the red lights at the signal (adding additional signal heads in critical locations).

In summary, the proposed Murphy Express will have insignificant adverse impact to the adjacent transportation system. Therefore, no mitigation measures are proposed as part of this project. The mitigation measures presented in this report are provided to the City of Albuquerque as suggestions to improve existing (NO BUILD) problems identified as part of the analysis contained herein.

Appendix

APPENDIX



Murphy Express
(Central Ave. / Eubank Blvd.)
Vicinity Map

For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

IDO Zone Atlas
May 2018

Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

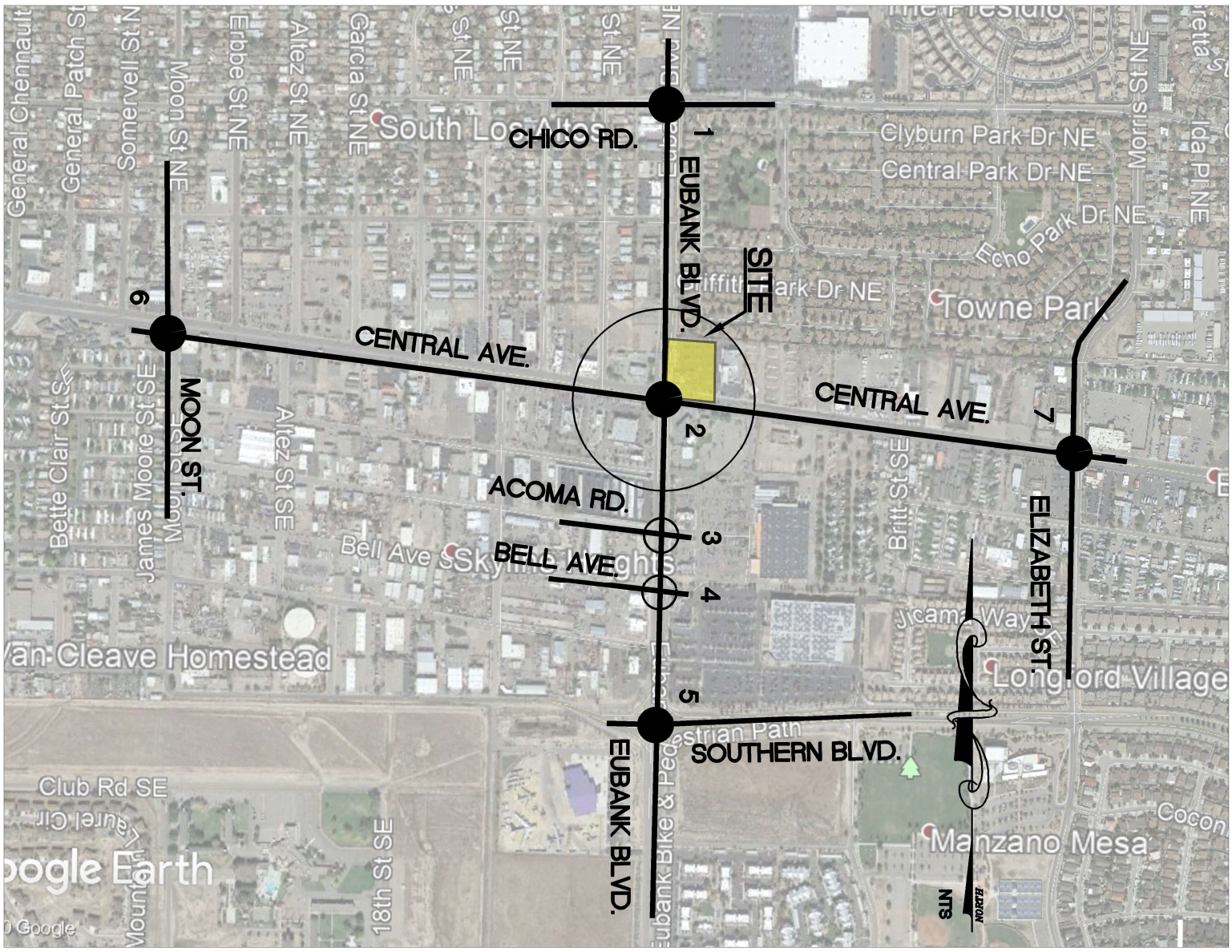
The Zone Districts and Overlay Zones are established by the Integrated Development Ordinance (IDO).

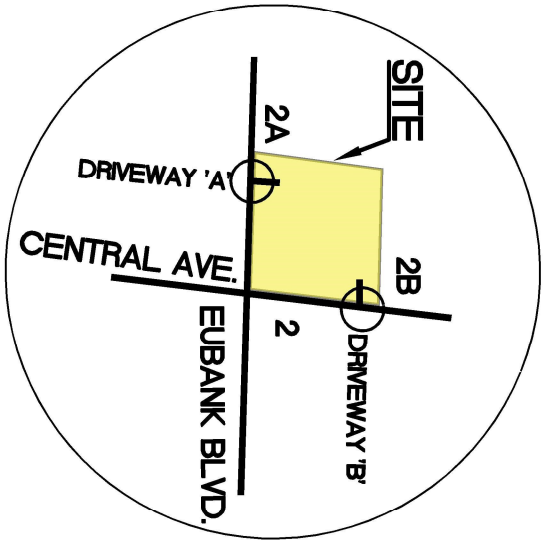
Zone Atlas Page:
L-21-Z

- Easement
- Escarpment
- Petroglyph National Monument
- Areas Outside of City Limits
- Airport Protection Overlay (APO) Zone
- Character Protection Overlay (CPO) Zone
- Historic Protection Overlay (HPO) Zone
- View Protection Overlay (VPO) Zone

Feet
0 250 500 1,000

10/5/2020


CHICO RD.
EUBANK BLVD.
SITE
CENTRAL AVE.
CENTRAL AVE.
MOON ST.
ACOMA RD.
BELL AVE.
ELIZABETH ST.
SOUTHERN BLVD.
EUBANK BLVD.
1
2
3
4
5
6
7
South Los Altos
Clyburn Park Dr NE
Central Park Dr NE
Echo Park Dr NE
Towne Park
Skyline Heights
Van Cleave Homestead
Longford Village
Manzano Mesa
Club Rd SE
Google Earth
NTS


SITE
2A
DRIVEWAY 'A'
CENTRAL AVE.
2B
2
DRIVEWAY 'B'
EUBANK BLVD.

PARCEL AREA

38,904 SQ. FT.
0.893 ACRES ±

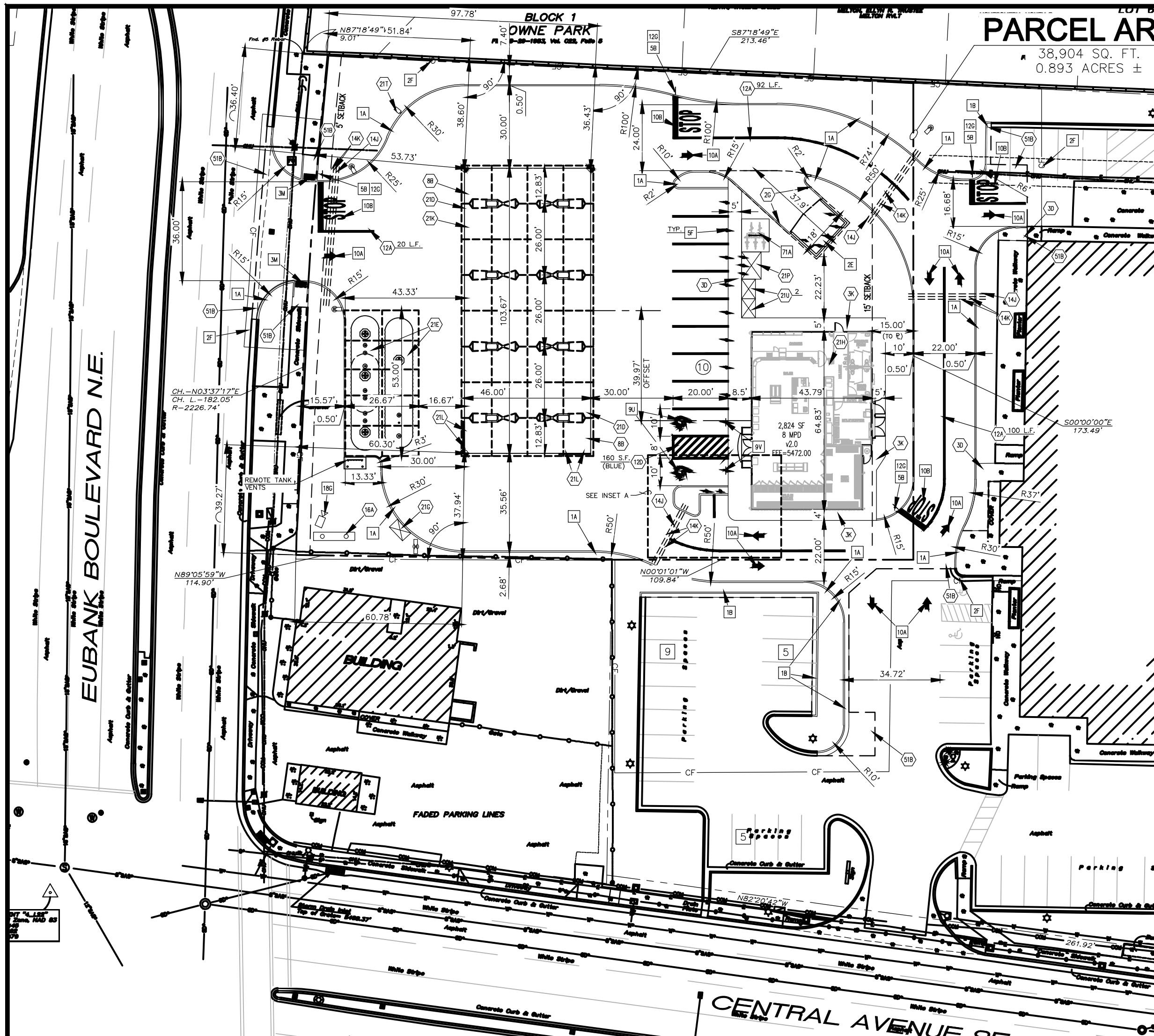
BUILDING SETBACKS:

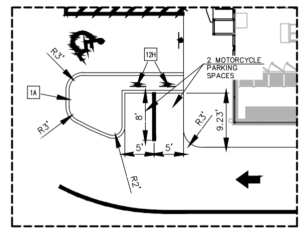
SEE SITE PLAN

ZONING: MX-H
(MIXED USE - HIGH INTENSITY)

CONTRACTOR SHALL BE RESPONSIBLE FOR AND HIRE A NEW MEXICO REGISTERED LAND SURVEYOR TO ESTABLISH PROPERTY CORNERS, BUILDING CORNERS, CANOPY, ETC. AS REQUIRED FOR CONSTRUCTION LAYOUT.

CONTRACTOR TO ENSURE THE LIGHT POLES AND SIGNS ARE AT LEAST 2' FROM THE BACK OF THE CURB TO PREVENT THE VEHICLES STRIKING THE LIGHT POLE OR SIGN.





INSET A
MOTORCYCLE PARKING AREA
SCALE: 1"=10'

0 20' 30' 40'
SCALE IN FEET

EXISTING			
	Storm Drain Manhole		Hydrant
	Sanitary Sewer Manhole		Cable Pedstal
SAS	Sanitary Sewer Line		Electric Pedstal
SD	Storm Drain Line		Utility Vault
	Storm Drain Inlet		Traffic Box
E	Underground Electric line		Telephone Pedestal
COM	Underground Communications Line		Utility Box
G	Underground Gas Line	FO	Fiber Optic Box
W	Underground Water Line		Light Pole
	Sanitary Sewer Clean-out		Bollard
	Water Meter		Concrete Symbol
	Water Valve	R.T.D.M.	Raised Truncated Dome Mat
			Control Point

PROPOSED	
	BOUNDARY LINE
	CONCRETE CURB AND GUTTER
	BUILDING CONTROL POINT
CF	CONSTRUCTION FENCE

GENERAL SITE NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL CURB RETURN RADII SHALL BE 3', AS SHOWN TYPICAL ON THIS PLAN, UNLESS OTHERWISE NOTED.

C. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON:
ALL CURB AND GUTTER ADJACENT TO PAVING SHALL BE INSTALLED PER DETAIL.

PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE PAVING PLAN OVER THE ENTIRE PARKING LOT AREA AND ALL APPROACH DRIVES.

SEE ASSOCIATED PLANS FOR CANOPY, COLUMN, PUMP ISLAND DETAILS AND LAYOUT.

D. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.

E. THE LOCATION OF THE CONSTRUCTION FENCE ON THE DRAWINGS IS FOR GRAPHICAL REPRESENTATION ONLY. THE CONTRACTOR IS TO ENSURE THAT THE CONSTRUCTION FENCE ENCOMPASSES THE ENTIRE WORK AREA.

F. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND GROUND COVER ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE STABILIZED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

G. CONTRACTOR SHALL PURCHASE AND INSTALL A MAILBOX AND SHALL COORDINATE LOCATION OF MAILBOX WITH MURPHY CONSTRUCTION MANAGER AND/OR ON-SITE REPRESENTATIVE AND LOCAL POSTMASTER.

H. ALL PROPOSED PAVEMENT STRIPING OR MARKINGS SHALL FOLLOW THE SPECIFICATIONS FOR PAINT INCLUDED IN DETAIL 10A.

SITE NOTES

- 2G DRILL (4) 3/4"øx4" DEEP HOLES (1) EACH FOR OPEN & CLOSE POSITION OF GATES TO BE USED ON BOTH SIDES OF GATE. SEE DUMPSTER DETAIL.
- 8B OVER HEAD CANOPY (TYP. PER CANOPY PLANS)
- 12A 4" TRAFFIC YELLOW LANE STIPE (SEE LENGTH INDICATED AT SYMBOL)
- 12D 4" WIDE PAINTED STRIPES. 2' O.C. @ 45° (SEE SIZE INDICATED AT SYMBOL)
- 14J GC TO INSTALL (1) 4" PVC SLEEVE FOR IRRIGATION LINE. (SEE UTILITY PLAN FOR INSTALLATION REQUIREMENTS)
- 14K GC TO INSTALL (2) 4" PVC SLEEVES FOR FUTURE USE (SEE UTILITY PLAN FOR INSTALLATION REQUIREMENTS)
- 16A MURPHY PYLON SIGN PER APPROVED ELEVATIONS. SEE TANK/PIPING PLANS FOR INSTALLATION OF CONDUITS.
- 21D EDGE OF CONCRETE SLAB (PER TANK/PIPING PLANS)
- 21E UNDERGROUND STORAGE TANKS (1-25,000 GAL. & 1-26,000 GAL.)
- 21G AIR VACUUM UNIT WITH 4'x7' CONCRETE SLAB
- 21H ATM LOCATION
- 21K MURPHY EXPRESS ID SIGN PER APPROVED ELEVATION
- 21L PRICE SIGN PER APPROVED ELEVATION
- 21P 7'x10' CONCRETE SLAB FOR PROPANE TANKS
- 21T MAILBOX (CONTRACTOR SHALL COORDINATE LOCATION WITH MURPHY AND POSTMASTER PRIOR TO INSTALLATION)
- 21U 5'x7' ICE UNIT (SEE NUMBER INDICATED AT SYMBOL)
- 51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL

SITE DETAILS

- 1A INTEGRAL CONCRETE CURB
- 1B CURB AND GUTTER
- 2E DUMPSTER ENCLOSURE
- 2F CONSTRUCTION FENCE
- 3D CONCRETE SIDEWALK
- 3K CONCRETE SIDEWALK AROUND BUILDING
- 3M DETECTABLE WARNING AREA
- 5B TRAFFIC SIGN IN BOLLARD
- 5F GUARD POST (SINGLE)
- 9U ACCESSIBLE PARKING SYMBOL (SEE PAINT COLOR INDICATED AT SYMBOL)
- 9V ACCESSIBLE / VAN ACCESSIBLE PARKING SIGN MOUNTED IN BOLLARD
- 10A TRAFFIC FLOW ARROW (TYP.)
- 10B STOP BAR (TYP.)
- 12G "STOP" SIGN
- 12H "MOTORCYCLE PARKING" SIGN
- 13A SITE LIGHT POLE (SEE PHOTOMETRIC PLANS FOR POLE BASE DETAIL, FIXTURE TYPE AND MOUNTING DETAILS)
- 18G CONSTRUCTION CAMERA (COORDINATE WITH MOUSA PM FOR LOCATION)
- 71A WAVE BIKE RACK (5 BIKE RACK)

PARKING INFORMATION: MURPHY OIL

DESCRIPTION	BUILDING AREA (S.F)	RATIO	REGULAR	UNDER CANOPY	ACCESSIBLE	TOTAL	MOTORCYCLE	BICYCLE
		REQUIRED:					REQUIRED:	
LIGHT VEHICLE FUELING STATION	2,824	4/1,000 S.F.	10		2	12	1	3
		PROVIDED:					PROVIDED:	
		4/435 S.F.	8	16	2	26	2	5

NO. OF FUEL ISLANDS: 8
NO. OF VEHICLE FUELING POINTS: 16

PRE-CONSTRUCTION

IMPERVIOUS SITE RATIO (ISR)		
AREA	SQUARE FEET	%
IMPERVIOUS (ROOF AND PAVING)	30,637	79
LANDSCAPE AREA	8,267	21
GROSS SITE	38,904	100

POST-CONSTRUCTION

IMPERVIOUS SITE RATIO (ISR)		
AREA	SQUARE FEET	%
IMPERVIOUS (ROOF AND PAVING)	32,211	83
LANDSCAPE AREA	6,693	17
GROSS SITE	38,904	100

SHEET NO.
C-1

THOMAS C. DAVID JR.
NEW MEXICO
24592
PROFESSIONAL ENGINEER
8/31/20

JNS	DRW
JNS	DES
RDB	PM
TCD	PRN
8/31/20	DATE
REV-1	

SITE PLAN
MURPHY EXPRESS
110 EUBANK BOULEVARD N.E.
ALBUQUERQUE NEW MEXICO

PAE JOB NO. 11309

PAN AMERICAN ENGINEERS, LLC
1717 JACKSON STREET
ALEXANDRIA, LA. 71301
(318) 473-2100
CONTACT: RON BORDELON

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730

MURPHY USA

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Chico Rd.** Speed Limit (Chico Rd.)= **45** MPH
N-S Street: **Eubank Blvd.** Speed Limit (Eubank Blvd.)= **45** MPH
Signalized **7/26/19**

Begin Time	End Time	Eastbound (Chico Rd.)				Westbound (Chico Rd.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	**16**	**3**	**4**	**0**	**20**	**7**	**24**	**0**	**3**	**132**	**7**	**0**	**6**	**334**	**5**	**0**
7:15 AM	7:30 AM	**16**	**3**	**4**	**0**	**20**	**7**	**24**	**0**	**3**	**132**	**7**	**0**	**6**	**334**	**5**	**0**
7:30 AM	7:45 AM	**16**	**3**	**4**	**0**	**20**	**7**	**24**	**0**	**3**	**132**	**7**	**0**	**6**	**334**	**5**	**0**
7:45 AM	8:00 AM	**16**	**3**	**4**	**0**	**20**	**7**	**24**	**0**	**3**	**132**	**7**	**0**	**6**	**334**	**5**	**0**
8:00 AM	8:15 AM	~~11~~	~~7~~	~~4~~	~~0~~	~~13~~	~~7~~	~~15~~	~~0~~	~~3~~	~~122~~	~~12~~	~~0~~	~~15~~	~~252~~	~~8~~	~~0~~
8:15 AM	8:30 AM	~~11~~	~~7~~	~~4~~	~~0~~	~~13~~	~~7~~	~~15~~	~~0~~	~~3~~	~~122~~	~~12~~	~~0~~	~~15~~	~~252~~	~~8~~	~~0~~
8:30 AM	8:45 AM	~~11~~	~~7~~	~~4~~	~~0~~	~~13~~	~~7~~	~~15~~	~~0~~	~~3~~	~~122~~	~~12~~	~~0~~	~~15~~	~~252~~	~~8~~	~~0~~
8:45 AM	9:00 AM	~~11~~	~~7~~	~~4~~	~~0~~	~~13~~	~~7~~	~~15~~	~~0~~	~~3~~	~~122~~	~~12~~	~~0~~	~~15~~	~~252~~	~~8~~	~~0~~
AM Peak Hour Volumes		**64**	**12**	**16**	0	**80**	**28**	**96**	0	**12**	**528**	**28**	0	**24**	**1336**	**20**	0
Turning Movement Percent		*3%*	*1%*	*1%*		*4%*	*1%*	*4%*		*1%*	*24%*	*1%*		*1%*	*60%*	*1%*	
Approach Total			92				204				568				1380		
Calibrated TAQA Approach Volume			N/A	Avg. Cal. Factor:WB, NB, & SB TAQA			416				637				2018		
TAQA Adjustment Factor			1.54				2.04				1.12				1.46		
AM Peak Adj. Vol.		**99**	**18**	**25**		**163**	**57**	**196**		**13**	**592**	**31**		**35**	**1,954**	**29**	
AM Peak Hour/4		**25**	**5**	**6**	**0**	**41**	**14**	**49**	**0**	**3**	**148**	**8**	**0**	**9**	**489**	**7**	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Chico Rd.)				Westbound (Chico Rd.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	**22**	**25**	**8**	**0**	**25**	**23**	**25**	**0**	**13**	**433**	**38**	**0**	**40**	**220**	**17**	**0**
4:15 PM	4:30 PM	**22**	**25**	**8**	**0**	**25**	**23**	**25**	**1**	**13**	**433**	**38**	**0**	**40**	**220**	**17**	**0**
4:30 PM	4:45 PM	**22**	**25**	**8**	**0**	**25**	**23**	**25**	**0**	**13**	**433**	**38**	**0**	**40**	**220**	**17**	**0**
4:45 PM	5:00 PM	**22**	**25**	**8**	**0**	**25**	**23**	**25**	**0**	**13**	**433**	**38**	**0**	**40**	**220**	**17**	**0**
5:00 PM	5:15 PM	~~24~~	~~24~~	~~8~~	~~0~~	~~31~~	~~19~~	~~28~~	~~0~~	~~7~~	~~356~~	~~38~~	~~0~~	~~43~~	~~228~~	~~18~~	~~0~~
5:15 PM	5:30 PM	~~24~~	~~24~~	~~8~~	~~0~~	~~31~~	~~19~~	~~28~~	~~1~~	~~7~~	~~356~~	~~38~~	~~0~~	~~43~~	~~228~~	~~18~~	~~0~~
5:30 PM	5:45 PM	~~24~~	~~24~~	~~8~~	~~0~~	~~31~~	~~19~~	~~28~~	~~0~~	~~7~~	~~356~~	~~38~~	~~0~~	~~43~~	~~228~~	~~18~~	~~0~~
5:45 PM	6:00 PM	~~24~~	~~24~~	~~8~~	~~0~~	~~31~~	~~19~~	~~28~~	~~0~~	~~7~~	~~356~~	~~38~~	~~0~~	~~43~~	~~228~~	~~18~~	~~0~~
PM Peak Hour Volumes		**88**	**100**	**32**	0	**100**	**92**	**100**	1	**52**	**1732**	**152**	0	**160**	**880**	**68**	0
Turning Movement Percent		*2%*	*3%*	*1%*		*3%*	*3%*	*3%*		*1%*	*49%*	*4%*		*4%*	*25%*	*2%*	
Approach Total			220				292				1936				1108		
Calibrated TAQA Approach Volume			N/A	Avg. Cal. Factor:WB, NB, & SB TAQA			615				1854				1374		
TAQA Adjustment Factor			1.43				2.11				0.96				1.24		
PM Peak Adj. Vol.		**126**	**143**	**46**		**211**	**194**	**211**		**50**	**1,659**	**146**		**198**	**1,091**	**84**	
PM Peak Hour/4		**31.5**	**36**	**12**	**0**	**53**	**49**	**53**	**0**	**13**	**415**	**37**	**0**	**50**	**273**	**21**	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Central Ave.** Speed Limit (Central Ave.)= **45** MPH
N-S Street: **Eubank Blvd.** Speed Limit (Eubank Blvd.)= **45** MPH
Signalized **7/26/19**

Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	**23**	**72**	**2**	**0**	**45**	**206**	**24**	**0**	**28**	**96**	**6**	**0**	**19**	**264**	**60**	**0**
7:15 AM	7:30 AM	**23**	**72**	**2**	**0**	**45**	**206**	**24**	**0**	**28**	**96**	**6**	**0**	**19**	**264**	**60**	**0**
7:30 AM	7:45 AM	**23**	**72**	**2**	**0**	**45**	**206**	**24**	**0**	**28**	**96**	**6**	**0**	**19**	**264**	**60**	**0**
7:45 AM	8:00 AM	**23**	**72**	**2**	**0**	**45**	**206**	**24**	**0**	**28**	**96**	**6**	**0**	**19**	**264**	**60**	**0**
8:00 AM	8:15 AM	~~27~~	~~77~~	~~3~~	~~0~~	~~38~~	~~116~~	~~15~~	~~0~~	~~27~~	~~93~~	~~6~~	~~0~~	~~24~~	~~198~~	~~43~~	~~0~~
8:15 AM	8:30 AM	~~27~~	~~77~~	~~3~~	~~0~~	~~38~~	~~116~~	~~15~~	~~0~~	~~27~~	~~93~~	~~6~~	~~0~~	~~24~~	~~198~~	~~43~~	~~0~~
8:30 AM	8:45 AM	~~27~~	~~77~~	~~3~~	~~0~~	~~38~~	~~116~~	~~15~~	~~0~~	~~27~~	~~93~~	~~6~~	~~0~~	~~24~~	~~198~~	~~43~~	~~0~~
8:45 AM	9:00 AM	~~27~~	~~77~~	~~3~~	~~0~~	~~38~~	~~116~~	~~15~~	~~0~~	~~27~~	~~93~~	~~6~~	~~0~~	~~24~~	~~198~~	~~43~~	~~0~~
AM Peak Hour Volumes		**92**	**288**	**8**	0	**180**	**824**	**96**	0	**112**	**384**	**24**	0	**76**	**1056**	**240**	0
Turning Movement Percent		*3%*	*9%*	*0%*		*5%*	*24%*	*3%*		*3%*	*11%*	*1%*		*2%*	*31%*	*7%*	
Approach Total			388				1100				520				1372		
Calibrated TAQA Approach Volume			796				1334				556				1929		
TAQA Adjustment Factor			2.05				1.21				1.07				1.41		
AM Peak Adj. Vol.		**189**	**591**	**16**		**218**	**999**	**116**		**120**	**411**	**26**		**107**	**1,485**	**337**	
AM Peak Hour/4		**47**	**148**	**4**	**0**	**55**	**250**	**29**	**0**	**30**	**103**	**7**	**0**	**27**	**371**	**84**	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	**75**	**241**	**4**	**0**	**14**	**118**	**40**	**0**	**45**	**374**	**30**	**0**	**55**	**139**	**41**	**0**
4:15 PM	4:30 PM	**75**	**241**	**4**	**0**	**14**	**118**	**40**	**1**	**45**	**374**	**30**	**0**	**55**	**139**	**41**	**0**
4:30 PM	4:45 PM	**75**	**241**	**4**	**0**	**14**	**118**	**40**	**0**	**45**	**374**	**30**	**0**	**55**	**139**	**41**	**0**
4:45 PM	5:00 PM	**75**	**241**	**4**	**0**	**14**	**118**	**40**	**0**	**45**	**374**	**30**	**0**	**55**	**139**	**41**	**0**
5:00 PM	5:15 PM	~~80~~	~~248~~	~~3~~	~~0~~	~~12~~	~~126~~	~~40~~	~~0~~	~~43~~	~~292~~	~~36~~	~~0~~	~~57~~	~~140~~	~~47~~	~~0~~
5:15 PM	5:30 PM	~~80~~	~~248~~	~~3~~	~~0~~	~~12~~	~~126~~	~~40~~	~~1~~	~~43~~	~~292~~	~~36~~	~~0~~	~~57~~	~~140~~	~~47~~	~~0~~
5:30 PM	5:45 PM	~~80~~	~~248~~	~~3~~	~~0~~	~~12~~	~~126~~	~~40~~	~~0~~	~~43~~	~~292~~	~~36~~	~~0~~	~~57~~	~~140~~	~~47~~	~~0~~
5:45 PM	6:00 PM	~~80~~	~~248~~	~~3~~	~~0~~	~~12~~	~~126~~	~~40~~	~~0~~	~~43~~	~~292~~	~~36~~	~~0~~	~~57~~	~~140~~	~~47~~	~~0~~
PM Peak Hour Volumes		**300**	**964**	**16**	0	**56**	**472**	**160**	1	**180**	**1496**	**120**	0	**220**	**556**	**164**	0
Turning Movement Percent		*6%*	*20%*	*0%*		*1%*	*10%*	*3%*		*4%*	*32%*	*3%*		*5%*	*12%*	*3%*	
Approach Total			1280				688				1796				940		
Calibrated TAQA Approach Volume			1448				1061				1928				1175		
TAQA Adjustment Factor			1.13				1.54				1.07				1.25		
PM Peak Adj. Vol.		**339**	**1,091**	**18**		**86**	**728**	**247**		**193**	**1,606**	**129**		**275**	**695**	**205**	
PM Peak Hour/4		**84.75**	**273**	**5**	**0**	**22**	**182**	**62**	**0**	**48**	**402**	**32**	**0**	**69**	**174**	**51**	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Acoma Rd.** Speed Limit (Acoma Rd.)= **45** MPH
N-S Street: **Eubank Blvd.** Speed Limit (Eubank Blvd.)= **45** MPH
Signalized **7/26/19**

Begin Time	End Time	Eastbound (Acoma Rd.)				Westbound (Acoma Rd.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	**2**	**1**	**1**	**0**	**2**	**3**	**24**	**0**	**2**	**106**	**2**	**0**	**16**	**308**	**9**	**0**
7:15 AM	7:30 AM	**2**	**1**	**1**	**0**	**2**	**3**	**24**	**0**	**2**	**106**	**2**	**0**	**16**	**308**	**9**	**0**
7:30 AM	7:45 AM	**2**	**1**	**1**	**0**	**2**	**3**	**24**	**0**	**2**	**106**	**2**	**0**	**16**	**308**	**9**	**0**
7:45 AM	8:00 AM	**2**	**1**	**1**	**0**	**2**	**3**	**24**	**0**	**2**	**106**	**2**	**0**	**16**	**308**	**9**	**0**
8:00 AM	8:15 AM	~~1~~	~~2~~	~~0~~	~~0~~	~~3~~	~~4~~	~~15~~	~~0~~	~~0~~	~~95~~	~~3~~	~~0~~	~~21~~	~~233~~	~~5~~	~~0~~
8:15 AM	8:30 AM	~~1~~	~~2~~	~~0~~	~~0~~	~~3~~	~~4~~	~~15~~	~~0~~	~~0~~	~~95~~	~~3~~	~~0~~	~~21~~	~~233~~	~~5~~	~~0~~
8:30 AM	8:45 AM	~~1~~	~~2~~	~~0~~	~~0~~	~~3~~	~~4~~	~~15~~	~~0~~	~~0~~	~~95~~	~~3~~	~~0~~	~~21~~	~~233~~	~~5~~	~~0~~
8:45 AM	9:00 AM	~~1~~	~~2~~	~~0~~	~~0~~	~~3~~	~~4~~	~~15~~	~~0~~	~~0~~	~~95~~	~~3~~	~~0~~	~~21~~	~~233~~	~~5~~	~~0~~
AM Peak Hour Volumes		**8**	**4**	**4**	0	**8**	**12**	**96**	0	**8**	**424**	**8**	0	**64**	**1232**	**36**	0
Turning Movement Percent		*0%*	*0%*	*0%*		*0%*	*1%*	*5%*		*0%*	*22%*	*0%*		*3%*	*65%*	*2%*	
Approach Total			16				116				440				1332		
Calibrated TAQA Approach Volume			#N/A				#N/A				583				1952		
TAQA Adjustment Factor			1.40	Avg. Cal. Factor from NB & SB TAQA			1.40				1.33				1.47		
AM Peak Adj. Vol.		**11**	**6**	**6**		**11**	**17**	**134**		**11**	**562**	**11**		**94**	**1,805**	**53**	
AM Peak Hour/4		**3**	**2**	**2**	**0**	**3**	**4**	**34**	**0**	**3**	**141**	**3**	**0**	**24**	**451**	**13**	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Acoma Rd.)				Westbound (Acoma Rd.)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	**6**	**2**	**2**	**0**	**3**	**6**	**17**	**0**	**13**	**376**	**11**	**0**	**29**	**153**	**14**	**0**
4:15 PM	4:30 PM	**6**	**2**	**2**	**0**	**3**	**6**	**17**	**1**	**13**	**376**	**11**	**0**	**29**	**153**	**14**	**0**
4:30 PM	4:45 PM	**6**	**2**	**2**	**0**	**3**	**6**	**17**	**0**	**13**	**376**	**11**	**0**	**29**	**153**	**14**	**0**
4:45 PM	5:00 PM	**6**	**2**	**2**	**0**	**3**	**6**	**17**	**0**	**13**	**376**	**11**	**0**	**29**	**153**	**14**	**0**
5:00 PM	5:15 PM	~~7~~	~~3~~	~~3~~	~~0~~	~~3~~	~~5~~	~~23~~	~~0~~	~~12~~	~~298~~	~~13~~	~~0~~	~~27~~	~~154~~	~~12~~	~~0~~
5:15 PM	5:30 PM	~~7~~	~~3~~	~~3~~	~~0~~	~~3~~	~~5~~	~~23~~	~~1~~	~~12~~	~~298~~	~~13~~	~~0~~	~~27~~	~~154~~	~~12~~	~~0~~
5:30 PM	5:45 PM	~~7~~	~~3~~	~~3~~	~~0~~	~~3~~	~~5~~	~~23~~	~~0~~	~~12~~	~~298~~	~~13~~	~~0~~	~~27~~	~~154~~	~~12~~	~~0~~
5:45 PM	6:00 PM	~~7~~	~~3~~	~~3~~	~~0~~	~~3~~	~~5~~	~~23~~	~~0~~	~~12~~	~~298~~	~~13~~	~~0~~	~~27~~	~~154~~	~~12~~	~~0~~
PM Peak Hour Volumes		**24**	**8**	**8**	0	**12**	**24**	**68**	1	**52**	**1504**	**44**	0	**116**	**612**	**56**	0
Turning Movement Percent		*1%*	*0%*	*0%*		*0%*	*1%*	*3%*		*2%*	*59%*	*2%*		*5%*	*24%*	*2%*	
Approach Total			40				104				1600				784		
Calibrated TAQA Approach Volume			#N/A				#N/A				1901				1116		
TAQA Adjustment Factor			1.31	Avg. Cal. Factor from NB & SB TAQA			1.40				1.19				1.42		
PM Peak Adj. Vol.		**31**	**10**	**10**		**17**	**33**	**95**		**62**	**1,787**	**52**		**165**	**871**	**80**	
PM Peak Hour/4		**8**	**3**	**3**	**0**	**4**	**8**	**24**	**0**	**16**	**447**	**13**	**0**	**41**	**218**	**20**	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Eubank B lvd** Speed Limit (Eubank B lvd)= **45** MPH

N-S Street: **Bell Rd.** Speed Limit (Bell Rd.)= **25** MPH

Signalized **7/26/19**

Begin Time	End Time	Eastbound (Eubank B lvd)				Westbound (Eubank B lvd)				Northbound (Bell Rd.)				Southbound (Bell Rd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	8	0	7	0	1	1	24	0	4	89	4	0	12	287	10	0
7:15 AM	7:30 AM	8	0	7	0	1	1	24	0	4	89	4	0	12	287	10	0
7:30 AM	7:45 AM	8	0	7	0	1	1	24	0	4	89	4	0	12	287	10	0
7:45 AM	8:00 AM	8	0	7	0	1	1	24	0	4	89	4	0	12	287	10	0
8:00 AM	8:15 AM	~~4~~	~~1~~	~~3~~	~~0~~	~~2~~	~~1~~	~~15~~	~~0~~	~~3~~	~~78~~	~~3~~	~~0~~	~~15~~	~~214~~	~~8~~	~~0~~
8:15 AM	8:30 AM	~~4~~	~~1~~	~~3~~	~~0~~	~~2~~	~~1~~	~~15~~	~~0~~	~~3~~	~~78~~	~~3~~	~~0~~	~~15~~	~~214~~	~~8~~	~~0~~
8:30 AM	8:45 AM	~~4~~	~~1~~	~~3~~	~~0~~	~~2~~	~~1~~	~~15~~	~~0~~	~~3~~	~~78~~	~~3~~	~~0~~	~~15~~	~~214~~	~~8~~	~~0~~
8:45 AM	9:00 AM	~~4~~	~~1~~	~~3~~	~~0~~	~~2~~	~~1~~	~~15~~	~~0~~	~~3~~	~~78~~	~~3~~	~~0~~	~~15~~	~~214~~	~~8~~	~~0~~
AM Peak Hour Volumes		**32**	**0**	**28**	0	**4**	**4**	**96**	0	**16**	**356**	**16**	0	**48**	**1148**	**40**	0
Turning Movement Percent		*2%*	*0%*	*2%*		*0%*	*0%*	*5%*		*1%*	*20%*	*1%*		*3%*	*64%*	*2%*	
Approach Total			60				104				388				1236		
Calibrated TAQA Approach Volume			4	Too Low- Use Streetlights data w/ Avg.			12				581				1946		
TAQA Adjustment Factor			1.54	N&S Adj.			1.54				1.50				1.57		
AM Peak Adj. Vol.		49	0	43		6	6	147	0	24	533	24		76	1,807	63	
AM Peak Hour/4		**12**	**0**	**11**	**0**	**2**	**2**	**37**	**0**	**6**	**133**	**6**	**0**	**19**	**452**	**16**	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Eubank B lvd)				Westbound (Eubank B lvd)				Northbound (Bell Rd.)				Southbound (Bell Rd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	12	4	6	0	3	6	26	0	14	325	13	0	60	99	11	0
4:15 PM	4:30 PM	12	4	6	0	3	6	26	1	14	325	13	0	60	99	11	0
4:30 PM	4:45 PM	12	4	6	0	3	6	26	0	14	325	13	0	60	99	11	0
4:45 PM	5:00 PM	12	4	6	0	3	6	26	0	14	325	13	0	60	99	11	0
5:00 PM	5:15 PM	~~13~~	~~7~~	~~6~~	~~0~~	~~4~~	~~7~~	~~27~~	~~0~~	~~16~~	~~253~~	~~12~~	~~0~~	~~51~~	~~108~~	~~10~~	~~0~~
5:15 PM	5:30 PM	~~13~~	~~7~~	~~6~~	~~0~~	~~4~~	~~7~~	~~27~~	~~1~~	~~16~~	~~253~~	~~12~~	~~0~~	~~51~~	~~108~~	~~10~~	~~0~~
5:30 PM	5:45 PM	~~13~~	~~7~~	~~6~~	~~0~~	~~4~~	~~7~~	~~27~~	~~0~~	~~16~~	~~253~~	~~12~~	~~0~~	~~51~~	~~108~~	~~10~~	~~0~~
5:45 PM	6:00 PM	~~13~~	~~7~~	~~6~~	~~0~~	~~4~~	~~7~~	~~27~~	~~0~~	~~16~~	~~253~~	~~12~~	~~0~~	~~51~~	~~108~~	~~10~~	~~0~~
PM Peak Hour Volumes		**48**	**16**	**24**	0	**12**	**24**	**104**	1	**56**	**1300**	**52**	0	**240**	**396**	**44**	0
Turning Movement Percent		*2%*	*1%*	*1%*		*1%*	*1%*	*4%*		*2%*	*56%*	*2%*		*10%*	*17%*	*2%*	
Approach Total			88				140				1408				680		
Calibrated TAQA Approach Volume			12	Too Low- Use Streetlights data w/ Avg.			4				1896				1113		
TAQA Adjustment Factor			1.49	N&S Adj.			1.49				1.35				1.64		
PM Peak Adj. Vol.		72	24	36		18	36	155		75	1,751	70		393	648	72	
PM Peak Hour/4		**18**	**6**	**9**	**0**	**5**	**9**	**39**	**0**	**19**	**438**	**18**	**0**	**98**	**162**	**18**	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Southern** Speed Limit (Southern)= **45** MPH
N-S Street: **Eubank Blvd.** Speed Limit (Eubank Blvd.)= **45** MPH
Signalized **7/26/19**

Begin Time	End Time	Eastbound (Southern)				Westbound (Southern)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	**6**	**11**	**1**	**0**	**87**	**74**	**24**	**0**	**16**	**51**	**3**	**0**	**24**	**318**	**6**	**0**
7:15 AM	7:30 AM	**6**	**11**	**1**	**0**	**87**	**74**	**24**	**0**	**16**	**51**	**3**	**0**	**24**	**318**	**6**	**0**
7:30 AM	7:45 AM	**6**	**11**	**1**	**0**	**87**	**74**	**24**	**0**	**16**	**51**	**3**	**0**	**24**	**318**	**6**	**0**
7:45 AM	8:00 AM	**6**	**11**	**1**	**0**	**87**	**74**	**24**	**0**	**16**	**51**	**3**	**0**	**24**	**318**	**6**	**0**
8:00 AM	8:15 AM	~~4~~	~~12~~	~~2~~	~~0~~	~~60~~	~~36~~	~~15~~	~~0~~	~~7~~	~~46~~	~~4~~	~~0~~	~~23~~	~~231~~	~~9~~	~~0~~
8:15 AM	8:30 AM	~~4~~	~~12~~	~~2~~	~~0~~	~~60~~	~~36~~	~~15~~	~~0~~	~~7~~	~~46~~	~~4~~	~~0~~	~~23~~	~~231~~	~~9~~	~~0~~
8:30 AM	8:45 AM	~~4~~	~~12~~	~~2~~	~~0~~	~~60~~	~~36~~	~~15~~	~~0~~	~~7~~	~~46~~	~~4~~	~~0~~	~~23~~	~~231~~	~~9~~	~~0~~
8:45 AM	9:00 AM	~~4~~	~~12~~	~~2~~	~~0~~	~~60~~	~~36~~	~~15~~	~~0~~	~~7~~	~~46~~	~~4~~	~~0~~	~~23~~	~~231~~	~~9~~	~~0~~
AM Peak Hour Volumes		**24**	**44**	**4**	0	**348**	**296**	**96**	0	**64**	**204**	**12**	0	**96**	**1272**	**24**	0
Turning Movement Percent		*1%*	*2%*	*0%*		*14%*	*12%*	*4%*		*3%*	*8%*	*0%*		*4%*	*51%*	*1%*	
Approach Total			72				740				280				1392		
Calibrated TAQA Approach Volume			193				1191				386				1859		
TAQA Adjustment Factor			2.68				1.61				1.38				1.34		
AM Peak Adj. Vol.		64	118	11		560	476	155		88	281	17		128	1,699	32	
AM Peak Hour/4		**16**	**30**	**3**	**0**	**140**	**119**	**39**	**0**	**22**	**70**	**4**	**0**	**32**	**425**	**8**	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Southern)				Westbound (Southern)				Northbound (Eubank Blvd.)				Southbound (Eubank Blvd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	**26**	**52**	**1**	**0**	**9**	**18**	**9**	**0**	**18**	**336**	**170**	**0**	**68**	**59**	**5**	**0**
4:15 PM	4:30 PM	**26**	**52**	**1**	**0**	**9**	**18**	**9**	**1**	**18**	**336**	**170**	**0**	**68**	**59**	**5**	**0**
4:30 PM	4:45 PM	**26**	**52**	**1**	**0**	**9**	**18**	**9**	**0**	**18**	**336**	**170**	**0**	**68**	**59**	**5**	**0**
4:45 PM	5:00 PM	**26**	**52**	**1**	**0**	**9**	**18**	**9**	**0**	**18**	**336**	**170**	**0**	**68**	**59**	**5**	**0**
5:00 PM	5:15 PM	~~19~~	~~56~~	~~1~~	~~0~~	~~8~~	~~17~~	~~11~~	~~0~~	~~20~~	~~260~~	~~109~~	~~0~~	~~75~~	~~64~~	~~4~~	~~0~~
5:15 PM	5:30 PM	~~19~~	~~56~~	~~1~~	~~0~~	~~8~~	~~17~~	~~11~~	~~1~~	~~20~~	~~260~~	~~109~~	~~0~~	~~75~~	~~64~~	~~4~~	~~0~~
5:30 PM	5:45 PM	~~19~~	~~56~~	~~1~~	~~0~~	~~8~~	~~17~~	~~11~~	~~0~~	~~20~~	~~260~~	~~109~~	~~0~~	~~75~~	~~64~~	~~4~~	~~0~~
5:45 PM	6:00 PM	~~19~~	~~56~~	~~1~~	~~0~~	~~8~~	~~17~~	~~11~~	~~0~~	~~20~~	~~260~~	~~109~~	~~0~~	~~75~~	~~64~~	~~4~~	~~0~~
PM Peak Hour Volumes		**104**	**208**	**4**	0	**36**	**72**	**36**	1	**72**	**1344**	**680**	0	**272**	**236**	**20**	0
Turning Movement Percent		*3%*	*7%*	*0%*		*1%*	*2%*	*1%*		*2%*	*44%*	*22%*		*9%*	*8%*	*1%*	
Approach Total			316				144				2096				528		
Calibrated TAQA Approach Volume			295				352				2511				1076		
TAQA Adjustment Factor			0.93				2.44				1.20				2.04		
PM Peak Adj. Vol.		97	194	4		88	176	88		86	1,610	815		554	481	41	
PM Peak Hour/4		**24**	**49**	**1**	**0**	**22**	**44**	**22**	**0**	**22**	**403**	**204**	**0**	**139**	**120**	**10**	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data Model)

Year Counts Taken: 2019 E-W Street: **Central Ave.** Speed Limit (Central Ave.)= **45** MPH
N-S Street: **Moon St.** Speed Limit (Moon St.)= **25** MPH
Signalized **7/26/19**

Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (Moon St.)				Southbound (Moon St.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
7:00 AM	7:15 AM	1	124	16	0	22	271	24	0	18	0	5	0	1	2	2	0
7:15 AM	7:30 AM	1	124	16	0	22	271	24	0	18	0	5	0	1	2	2	0
7:30 AM	7:45 AM	1	124	16	0	22	271	24	0	18	0	5	0	1	2	2	0
7:45 AM	8:00 AM	1	124	16	0	22	271	24	0	18	0	5	0	1	2	2	0
8:00 AM	8:15 AM	4	135	13	0	15	179	15	0	12	0	6	0	1	3	7	0
8:15 AM	8:30 AM	4	135	13	0	15	179	15	0	12	0	6	0	1	3	7	0
8:30 AM	8:45 AM	4	135	13	0	15	179	15	0	12	0	6	0	1	3	7	0
8:45 AM	9:00 AM	4	135	13	0	15	179	15	0	12	0	6	0	1	3	7	0
AM Peak Hour Volumes		4	496	64	0	88	1084	96	0	72	0	20	0	4	8	8	0
Turning Movement Percent		*0%*	*26%*	*3%*		*5%*	*56%*	*5%*		*4%*	*0%*	*1%*		*0%*	*0%*	*0%*	
Approach Total			564				1268				92				20		
Calibrated TAQA Approach Volume			834				1251				#N/A				#N/A		
TAQA Adjustment Factor			1.48				0.99				1.23	Avg. Cal. Factor from NB & SB TAQA			1.23		
AM Peak Adj. Vol.		6	733	95		87	1,069	95		89	0	25		5	10	10	
AM Peak Hour/4		2	183	24	0	22	267	24	0	22	0	6	0	1	3	3	
								Intersection									
AM Peak Hour Factor			*1.00*				*1.00*	1.00			*1.00*				*1.00*		

Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (Moon St.)				Southbound (Moon St.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	6	353	12	0	10	213	3	0	33	4	28	0	3	5	5	0
4:15 PM	4:30 PM	6	353	12	0	10	213	3	1	33	4	28	0	3	5	5	0
4:30 PM	4:45 PM	6	353	12	0	10	213	3	0	33	4	28	0	3	5	5	0
4:45 PM	5:00 PM	6	353	12	0	10	213	3	0	33	4	28	0	3	5	5	0
5:00 PM	5:15 PM	5	375	11	0	11	226	2	0	27	6	15	0	3	154	4	0
5:15 PM	5:30 PM	5	375	11	0	11	226	2	1	27	6	15	0	3	154	4	0
5:30 PM	5:45 PM	5	375	11	0	11	226	2	0	27	6	15	0	3	154	4	0
5:45 PM	6:00 PM	5	375	11	0	11	226	2	0	27	6	15	0	3	154	4	0
PM Peak Hour Volumes		20	1500	44	0	44	904	8	1	108	24	60	0	12	616	16	0
Turning Movement Percent		*1%*	*45%*	*1%*		*1%*	*27%*	*0%*		*3%*	*1%*	*2%*		*0%*	*18%*	*0%*	
Approach Total			1564				956				192				644		
Calibrated TAQA Approach Volume			1428				1088				#N/A				#N/A		
TAQA Adjustment Factor			0.91				1.14				1.03	Avg. Cal. Factor from NB & SB TAQA			1.03		
PM Peak Adj. Vol.		18	1,370	40		50	1,029	9		111	25	62		12	632	16	
PM Peak Hour/4		5	343	10	0	13	257	2	0	28	6	16	0	3	158	4	
								Intersection									
PM Peak Hour Factor			*1.00*				*1.00*	1.00			*1.00*				*1.00*		

Traffic Count Data Sheet (From Streetlight Data

Year Counts Taken: 2019

E-W Street: **Central Ave.**

N-S Street: **Elizabeth St.**

Signalized

Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (E	
		L	T	R	Peds	L	T	R	Peds	L	T
7:00 AM	7:15 AM	2	68	8	0	5	242	24	0	43	8
7:15 AM	7:30 AM	2	68	8	0	5	242	24	0	43	8
7:30 AM	7:45 AM	2	68	8	0	5	242	24	0	43	8
7:45 AM	8:00 AM	2	68	8	0	5	242	24	0	43	8
8:00 AM	8:15 AM	~~3~~	~~79~~	~~14~~	~~0~~	~~4~~	~~166~~	~~15~~	~~0~~	~~24~~	~~9~~
8:15 AM	8:30 AM	~~3~~	~~79~~	~~14~~	~~0~~	~~4~~	~~166~~	~~15~~	~~0~~	~~24~~	~~9~~
8:30 AM	8:45 AM	~~3~~	~~79~~	~~14~~	~~0~~	~~4~~	~~166~~	~~15~~	~~0~~	~~24~~	~~9~~
8:45 AM	9:00 AM	~~3~~	~~79~~	~~14~~	~~0~~	~~4~~	~~166~~	~~15~~	~~0~~	~~24~~	~~9~~
AM Peak Hour Volumes		**8**	**272**	**32**	0	**20**	**968**	**96**	0	**172**	**32**
Turning Movement Percent		*0%*	*16%*	*2%*		*1%*	*57%*	*6%*		*10%*	*2%*
Approach Total			312				1084				240
Calibrated TAQA Approach Volume			550				1285				#N/A
TAQA Adjustment Factor			1.76				1.19				1.35
AM Peak Adj. Vol.		14	479	56		24	1,147	114		233	43
AM Peak Hour/4		**4**	**120**	**14**	**0**	**6**	**287**	**29**	**0**	**58**	**11**
								Intersection			
AM Peak Hour Factor			*1.00*				*1.00*	**1.00**			*1.00*

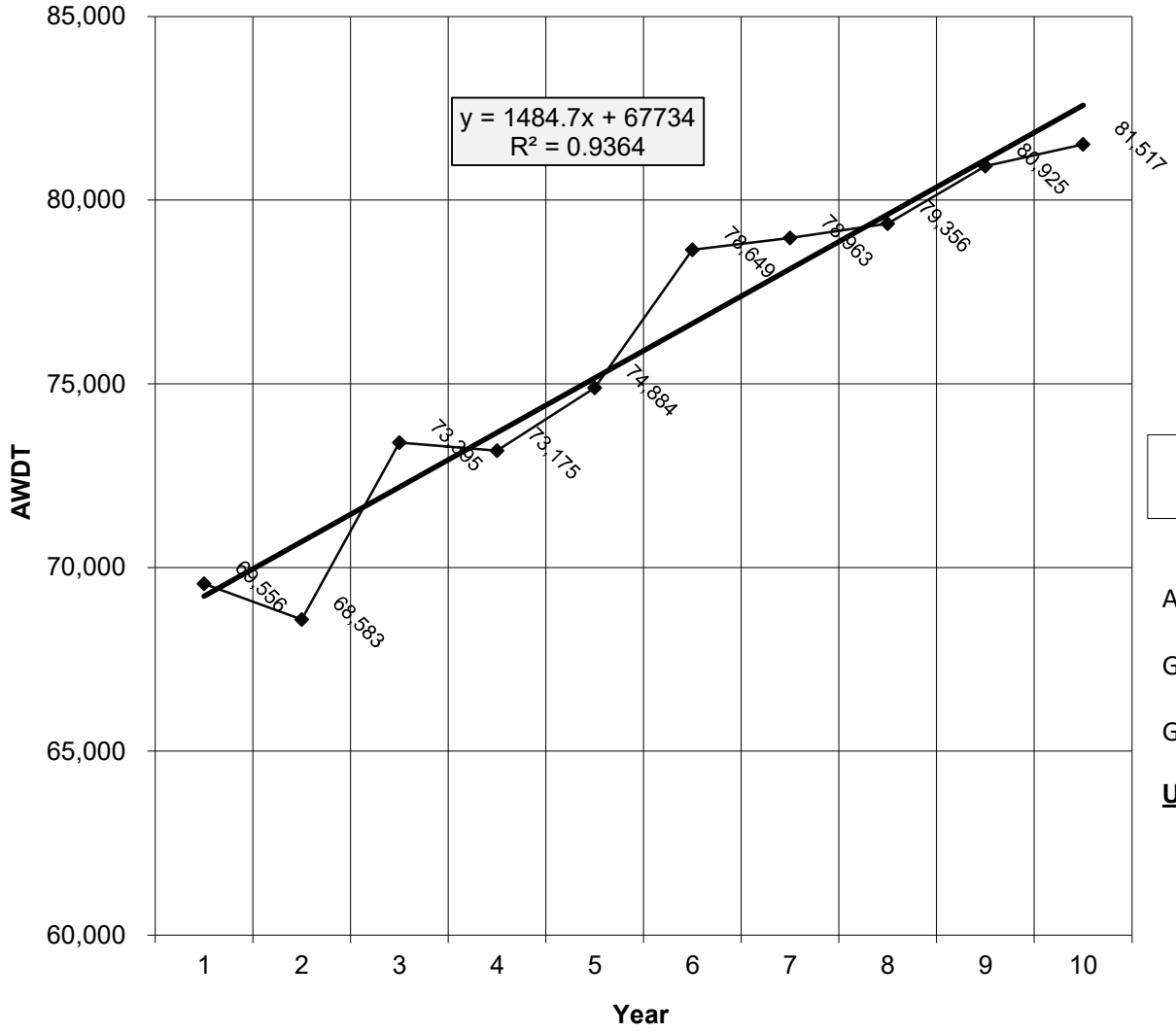
Begin Time	End Time	Eastbound (Central Ave.)				Westbound (Central Ave.)				Northbound (E	
		L	T	R	Peds	L	T	R	Peds	L	T
4:00 PM	4:15 PM	~~9~~	~~293~~	~~33~~	~~0~~	~~4~~	~~149~~	~~5~~	~~0~~	~~22~~	~~21~~
4:15 PM	4:30 PM	~~9~~	~~293~~	~~33~~	~~0~~	~~4~~	~~149~~	~~5~~	~~1~~	~~22~~	~~21~~
4:30 PM	4:45 PM	~~9~~	~~293~~	~~33~~	~~0~~	~~4~~	~~149~~	~~5~~	~~0~~	~~22~~	~~21~~
4:45 PM	5:00 PM	~~9~~	~~293~~	~~33~~	~~0~~	~~4~~	~~149~~	~~5~~	~~0~~	~~22~~	~~21~~
5:00 PM	5:15 PM	18	314	38	0	6	152	9	0	22	18
5:15 PM	5:30 PM	18	314	38	0	6	152	9	1	22	18
5:30 PM	5:45 PM	18	314	38	0	6	152	9	0	22	18
5:45 PM	6:00 PM	18	314	38	0	6	152	9	0	22	18
PM Peak Hour Volumes		**72**	**1256**	**152**	0	**24**	**608**	**36**	1	**88**	**72**
Turning Movement Percent		*3%*	*50%*	*6%*		*1%*	*24%*	*1%*		*3%*	*3%*
Approach Total			1480				668				228
Calibrated TAQA Approach Volume			1632				738				#N/A
TAQA Adjustment Factor			1.10				1.10				1.10
PM Peak Adj. Vol.		79	1,385	168		27	672	40		97	79
PM Peak Hour/4		**20**	**346**	**42**	**0**	**7**	**168**	**10**	**0**	**24**	**20**

Murphy Express - Eubank&Central

Historic Growth Rate Table

Traffic Flows from MRCOG Map	1	2	3	4	5	6	7	8	9	10
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
1 - Eubank Blvd./Chico Rd	69,556	68,583	73,395	73,175	74,884	78,649	78,963	79,356	80,925	81,517
2 - Eubank Blvd./Central Ave.	118,956	119,176	119,228	118,918	115,221	117,410	117,878	122,436	120,939	121,823
3 - Eubank Blvd./Acoma Rd.	29,441	29,029	30,045	29,955	28,713	28,598	28,712	31,694	31,916	32,149
4 - Eubank Blvd./Bell Ave.	29,441	29,029	30,045	29,955	28,713	28,598	28,712	31,694	31,916	32,149
5 - Eubank Blvd./Southern Blvd.	64,022	63,126	68,506	68,300	69,649	69,244	70,263	73,784	74,301	74,660
6 - Central Ave./Moon St.	32,840	32,381	31,988	29,990	30,366	30,376	30,497	30,773	28,621	28,830
7 - Central Ave./Elizabeth St.	25,583	27,109	27,055	28,923	26,213	26,108	26,212	27,415	27,607	27,809

Historic Growth Chart Eubank Blvd. & Chico Rd. (2009-2018)



Annual Increase (Trendline) = 1485 veh./day

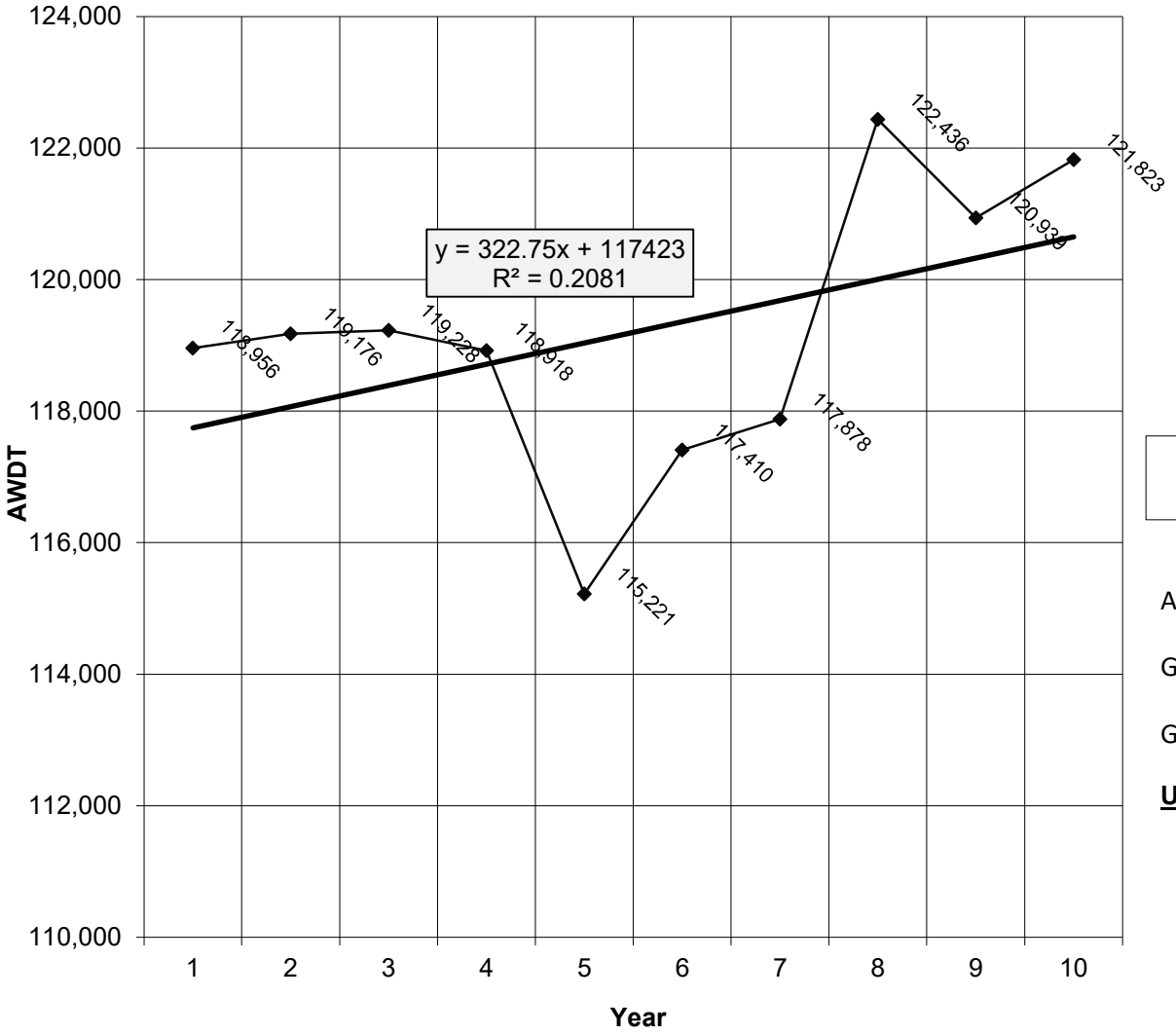
Growth Rate = 1485 / 69219

Growth Rate = 0.0215 = 2.2%

Use 2%

Murphy - Eubank&Central -Growth

Historic Growth Chart Eubank Blvd. & Central Ave. (2009-2018)



Annual Increase (Trendline) = 322 veh./day

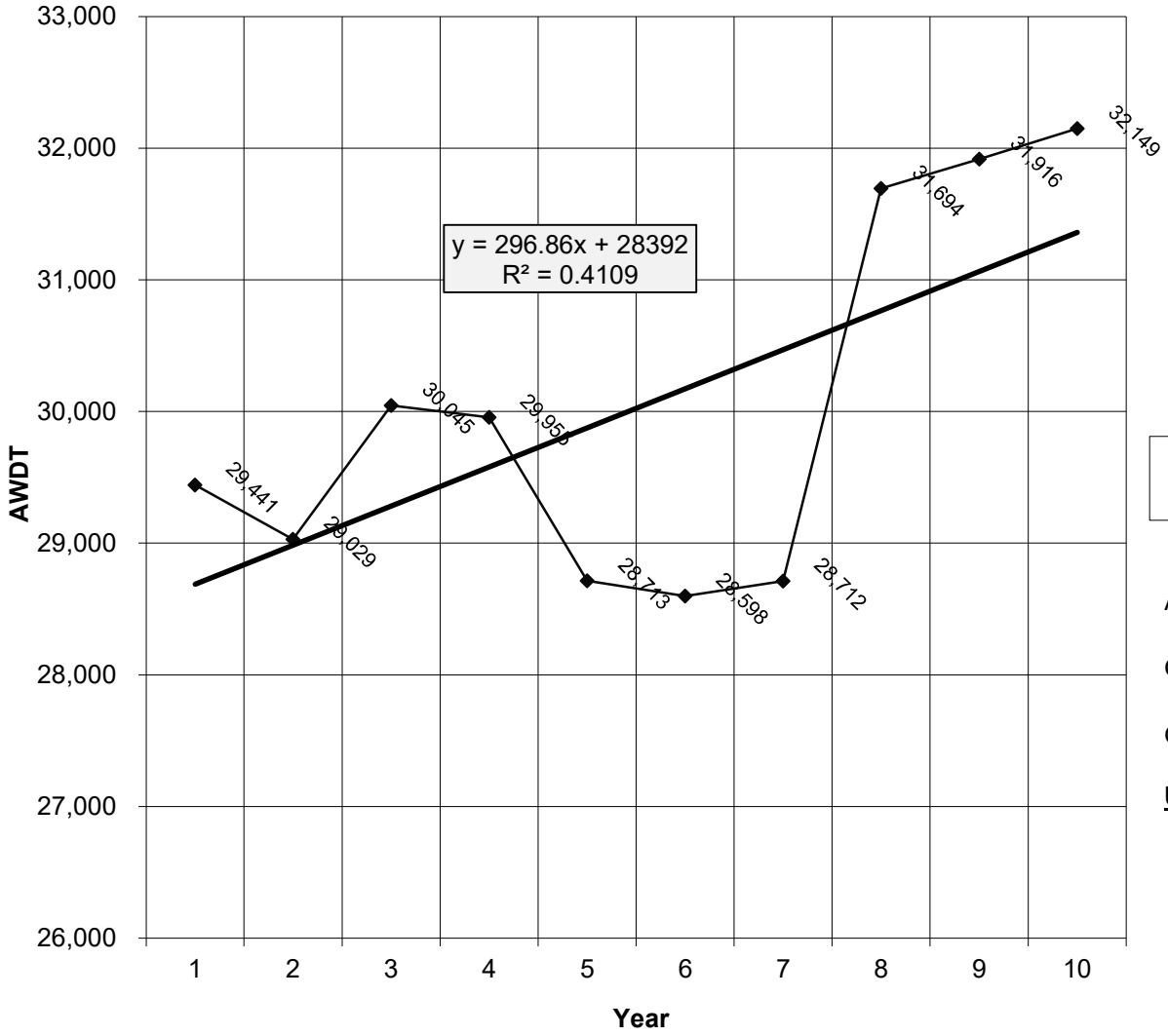
Growth Rate = 322 / 117746

Growth Rate = 0.0027 = 0.27%

Use 1%

Murphy - Eubank&Central -Growth

Historic Growth Chart Eubank Blvd. & Acoma Rd. (2009-2018)



Annual Increase (Trendline) = 297 veh./day

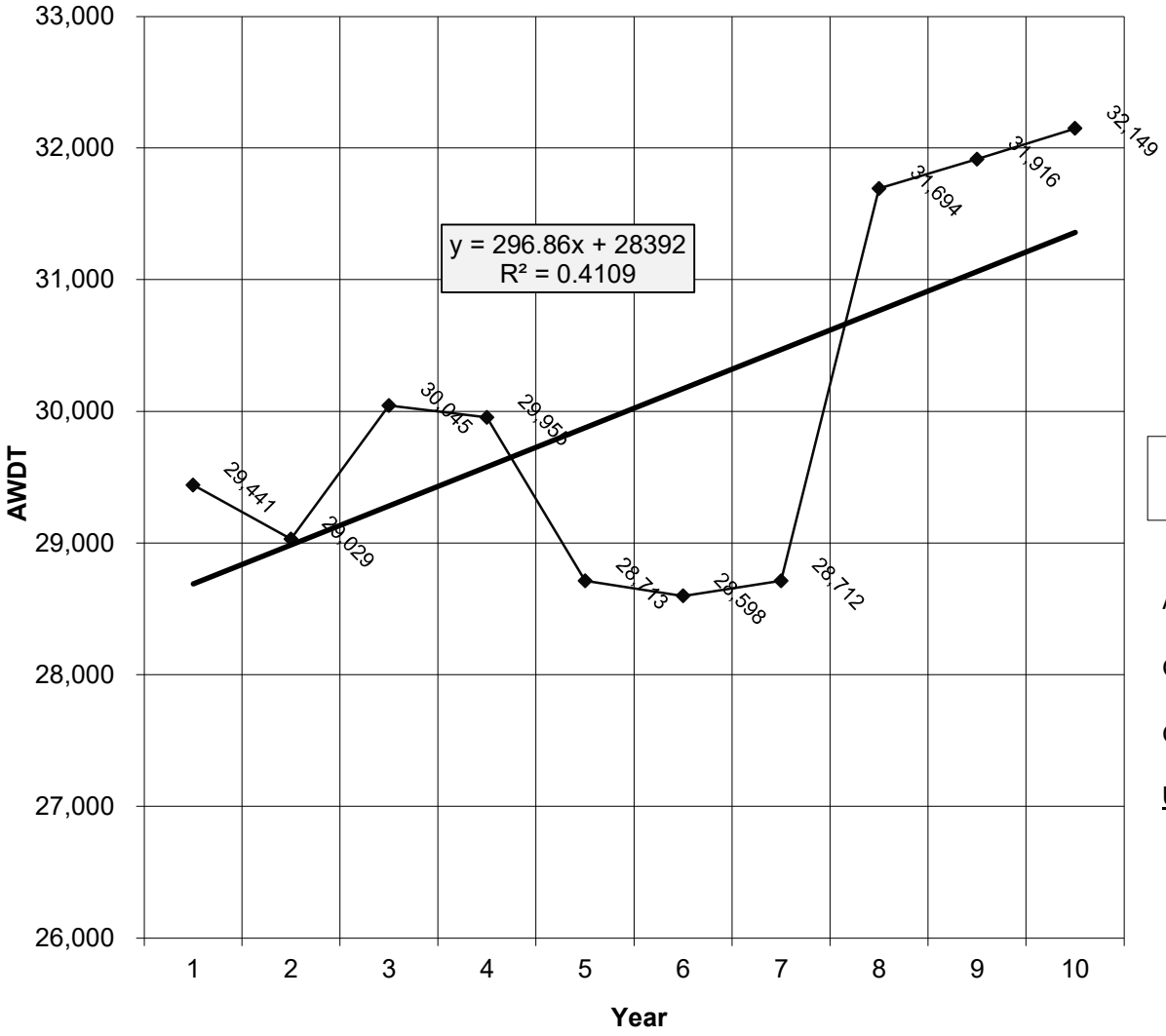
Growth Rate = 297 / 28689

Growth Rate = 0.0104 = 1.04%

Use 1%

Murphy - Eubank&Central -Growth

Historic Growth Chart Eubank Blvd. & Bell Ave. (2009-2018)



Annual Increase (Trendline) = 297 veh./day

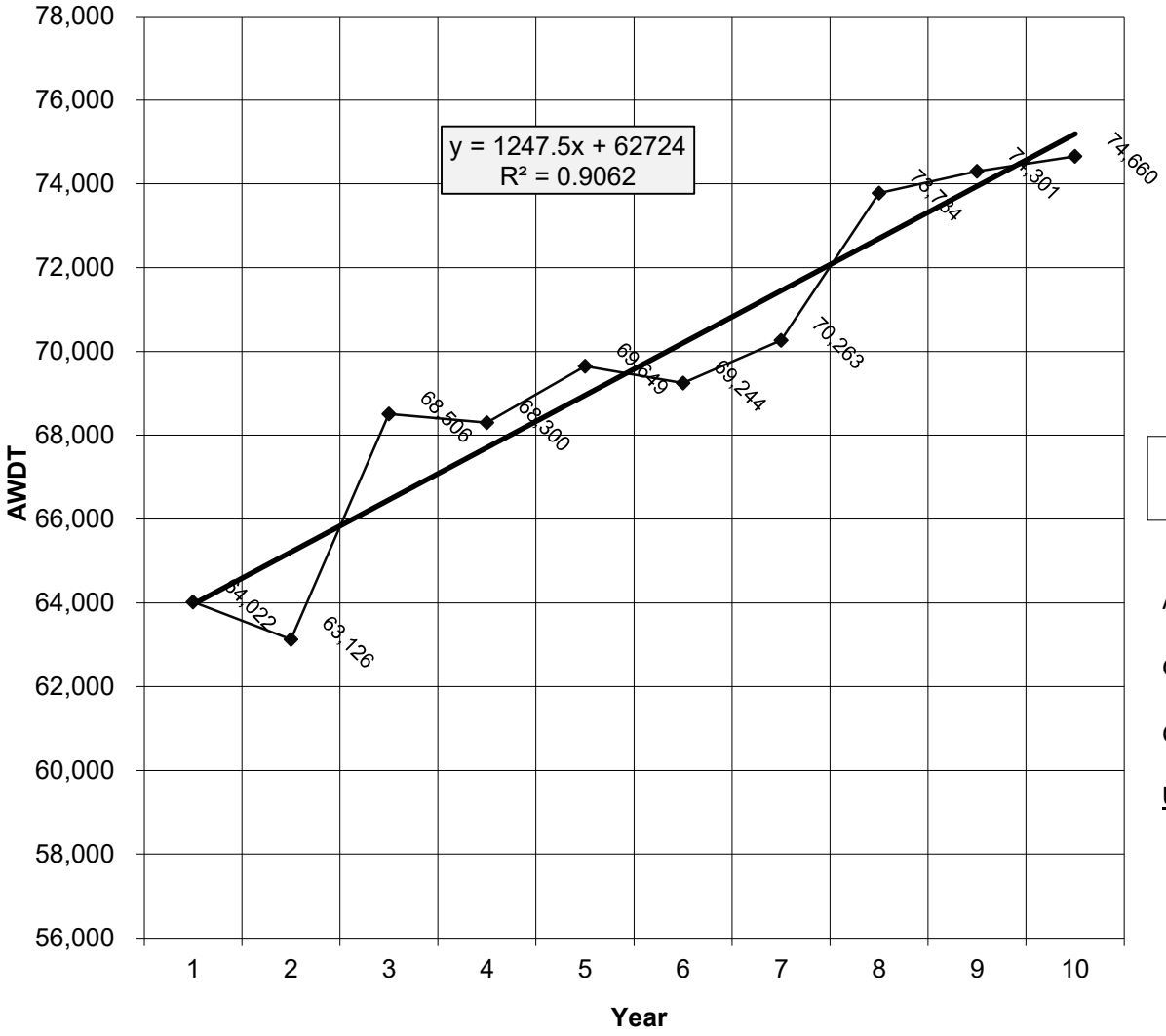
Growth Rate = 297 / 28689

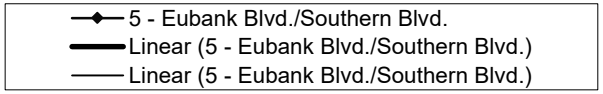
Growth Rate = 0.0104 = 1.04%

Use 1%

Murphy - Eubank&Central -Growth

Historic Growth Chart Eubank Blvd. & Southern Blvd. (2009-2018)





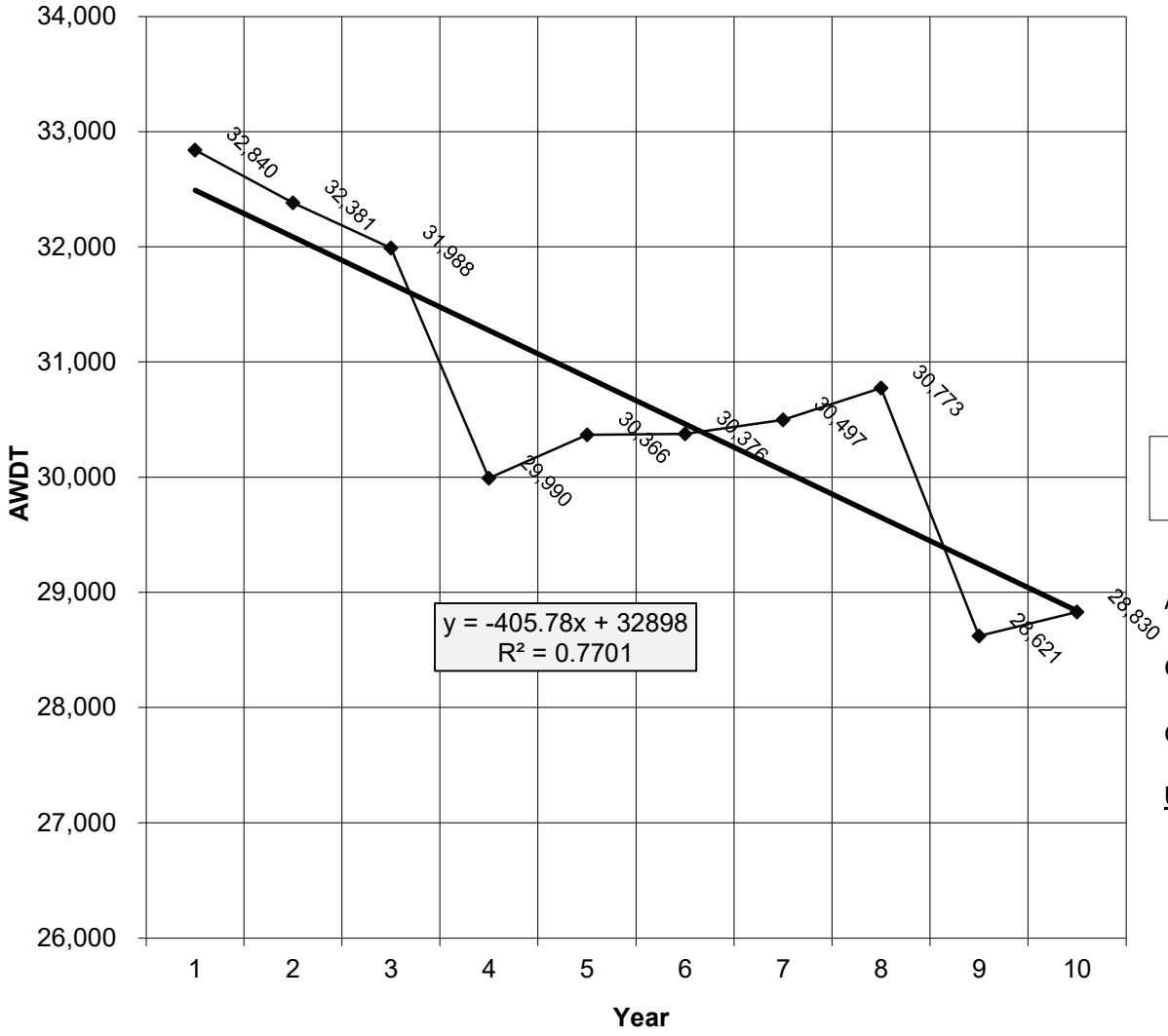
Annual Increase (Trendline) = 1248 veh./day

Growth Rate =1248/ 64000

Growth Rate = 0.0195 = 1.95%

Use 2%

Historic Growth Chart Central Ave. & Moon St. (2009-2018)



Annual Increase (Trendline) = -406 veh./day

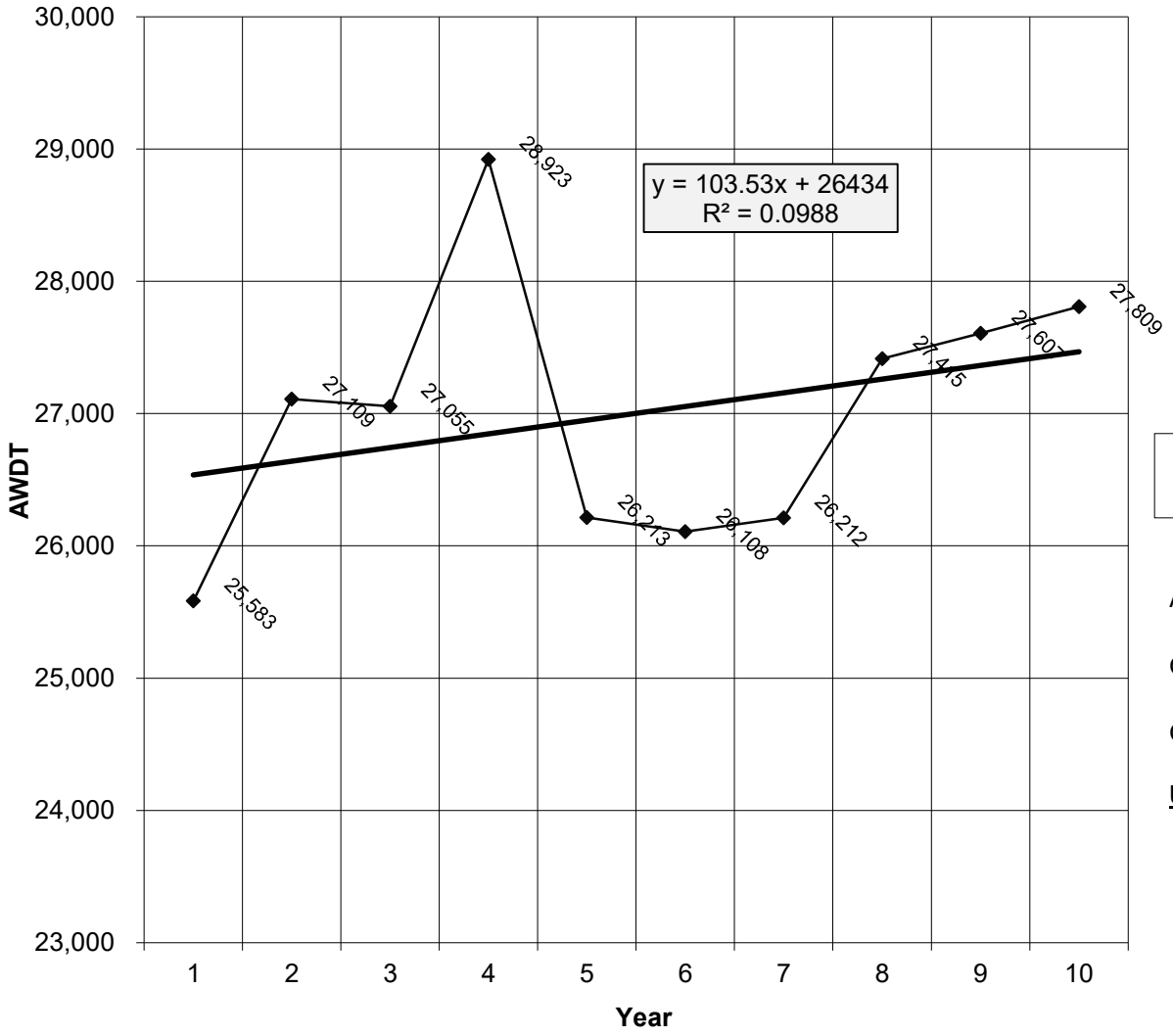
Growth Rate =--406/ 32492

Growth Rate =- 0.0125 = -1.25%

Use 1.5%

Murphy - Eubank&Central -Growth

Historic Growth Chart Central Ave. & Elizabeth St. (2009-2018)



Annual Increase (Trendline) = 104 veh./day

Growth Rate =104/ 26538

Growth Rate = 0.0039 = 0.39%

Use 1%

Murphy - Eubank&Central -Growth

Murphy Express - Albuquerque (Central Ave. / Eubank Blvd.)

Trip Generation Data (ITE Trip Generation Manual - 10th Edition)

COMMENT	USE (ITE CODE) / DESCRIPTION		24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
	Summary Sheet	Units					
Tract No.	Gasoline / Service Station w/ Convenience Market (945)	16	3,134	106	102	114	110
	Subtotal		**3,134**	**106**	**102**	**114**	**110**
	Pass-By Trips	50%		*-53*	*-51*	*-57*	*-55*
	Total Primary Trips			**53**	**51**	**57**	**55**

Murphy Express - Albuquerque (Central Ave. / Eubank Blvd.)
Trip Generation Data (ITE Trip Generation Manual - 10th Edition)

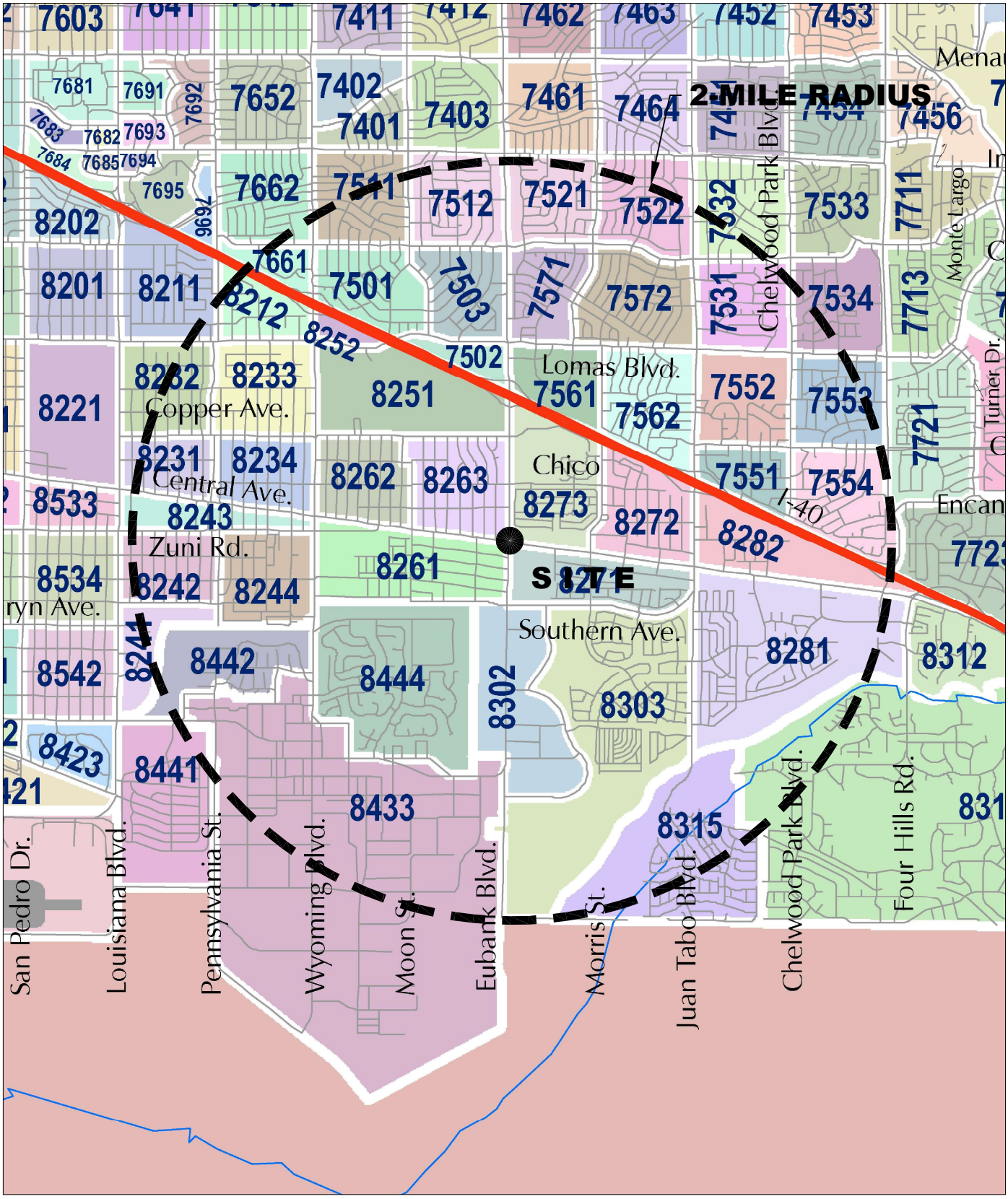
USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Gasoline / Service Station w/ Convenience Market (945)	***16***	3,134	106	102	114	110
	Fueling Positions					

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

T = ***268.46*** **(X) +** ***-1161***

50% Enter, ***50%*** Exit



DATA ANALYSIS SUBZONE (DASZ) MAP

Murphy Express - Eubank Blvd/Cental Ave.

Trip Distribution Table

Murphy Express - Eubank Blvd. & Central Ave.

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial Trips**

2012 and 2040 Data Taken from Mid-Region Council of Governments'
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(CE) Central Ave. East			(CW) Central Ave. West			(EuN) Eubank Blvd. North		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	**2040**	**2030**											
Boundary Specified on DASZ Map															
7501	100%	1367	1493	1,448	1,448	**2.08%**	0%	0.00%	0	0%	0.00%	0	**100%**	2.08%	1,448
7502	100%	0	0	0	0	**0.00%**	0%	0.00%	0	0%	0.00%	0	**100%**	0.00%	0
7503	100%	1139	1142	1,141	1,141	**1.64%**	0%	0.00%	0	0%	0.00%	0	**100%**	1.64%	1,141
7511	70%	1281	1256	1,265	886	**1.27%**	0%	0.00%	0	0%	0.00%	0	**100%**	1.27%	886
7512	90%	1354	1371	1,365	1,229	**1.77%**	0%	0.00%	0	0%	0.00%	0	**100%**	1.77%	1,229
7521	90%	1207	1350	1,299	1,169	**1.68%**	0%	0.00%	0	0%	0.00%	0	**100%**	1.68%	1,169
7522	75%	1622	1520	1,556	1,167	**1.68%**	0%	0.00%	0	0%	0.00%	0	**100%**	1.68%	1,167
7531	95%	1882	2026	1,975	1,876	**2.70%**	**100%**	2.70%	1,876	0%	0.00%	0	0%	0.00%	0
7532	20%	1531	1554	1,546	309	**0.44%**	**100%**	0.44%	309	0%	0.00%	0	0%	0.00%	0
7534	20%	2854	3207	3,081	616	**0.89%**	**100%**	0.89%	616	0%	0.00%	0	0%	0.00%	0
7551	100%	746	755	752	752	**1.08%**	**100%**	1.08%	752	0%	0.00%	0	0%	0.00%	0
7552	100%	934	1069	1,021	1,021	**1.47%**	**100%**	1.47%	1,021	0%	0.00%	0	0%	0.00%	0
7553	80%	2228	2153	2,180	1,744	**2.51%**	**100%**	2.51%	1,744	0%	0.00%	0	0%	0.00%	0
7554	100%	2016	2249	2,166	2,166	**3.11%**	**100%**	3.11%	2,166	0%	0.00%	0	0%	0.00%	0
7561	100%	152	210	189	189	**0.27%**	0%	0.00%	0	0%	0.00%	0	**100%**	0.27%	189
7562	100%	1919	1767	1,821	1,821	**2.62%**	**100%**	2.62%	1,821	0%	0.00%	0	0%	0.00%	0
7571	100%	1215	1209	1,211	1,211	**1.74%**	**100%**	1.74%	1,211	0%	0.00%	0	0%	0.00%	0
7572	100%	2045	2012	2,024	2,024	**2.91%**	**25%**	0.73%	506	0%	0.00%	0	**75%**	2.18%	1,518
7661	100%	298	503	430	430	**0.62%**	0%	0.00%	0	**50%**	0.31%	215	**50%**	0.31%	215
8212	80%	283	407	363	290	**0.42%**	0%	0.00%	0	**25%**	0.10%	73	**75%**	0.31%	218
8231	80%	1542	1609	1,585	1,268	**1.82%**	0%	0.00%	0	**100%**	1.82%	1,268	0%	0.00%	0
8232	60%	1496	1814	1,700	1,020	**1.47%**	0%	0.00%	0	**100%**	1.47%	1,020	0%	0.00%	0
8233	100%	2775	2735	2,749	2,749	**3.95%**	0%	0.00%	0	**100%**	3.95%	2,749	0%	0.00%	0
8234	100%	2086	3417	2,942	2,942	**4.23%**	0%	0.00%	0	**100%**	4.23%	2,942	0%	0.00%	0
8242	90%	3662	3958	3,852	3,467	**4.98%**	0%	0.00%	0	**100%**	4.98%	3,467	0%	0.00%	0
8243	95%	994	2228	1,787	1,698	**2.44%**	0%	0.00%	0	**100%**	2.44%	1,698	0%	0.00%	0
8244	100%	2748	4405	3,813	3,813	**5.48%**	0%	0.00%	0	**50%**	2.74%	1,907	0%	0.00%	0
8251	100%	378	499	456	456	**0.66%**	0%	0.00%	0	0%	0.00%	0	**100%**	0.66%	456
8252	100%	0	608	391	391	**0.56%**	0%	0.00%	0	0%	0.00%	0	**100%**	0.56%	391
8261	100%	1907	2103	2,033	2,033	**2.92%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8262	100%	2083	2092	2,089	2,089	**3.00%**	0%	0.00%	0	**50%**	1.50%	1,045	0%	0.00%	0
8263	100%	1843	1991	1,938	1,938	**2.79%**	0%	0.00%	0	**50%**	1.39%	969	0%	0.00%	0
8271	100%	1631	1998	1,867	1,867	**2.68%**	**30%**	0.81%	560	0%	0.00%	0	0%	0.00%	0
8272	100%	1717	1758	1,743	1,743	**2.51%**	**30%**	0.75%	523	0%	0.00%	0	0%	0.00%	0
8273	100%	1128	1732	1,516	1,516	**2.18%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8281	90%	5988	6604	6,384	5,746	**8.26%**	**70%**	5.78%	4,022	0%	0.00%	0	0%	0.00%	0
8282	95%	1731	3465	2,846	2,704	**3.89%**	**100%**	3.89%	2,704	0%	0.00%	0	0%	0.00%	0
8302	100%	810	1435	1,212	1,212	**1.74%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8303	100%	3904	4269	4,139	4,139	**5.95%**	**20%**	1.19%	828	0%	0.00%	0	0%	0.00%	0
8315	60%	1538	4196	3,247	1,948	**2.80%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8433	50%	534	570	557	279	**0.40%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8442	95%	717	702	707	672	**0.97%**	0%	0.00%	0	**30%**	0.29%	202	0%	0.00%	0
8441	5%	0	0	0	0	**0.00%**	0%	0.00%	0	**100%**	0.00%	0	0%	0.00%	0
8444	100%	2311	2425	2,384	2,384	**3.43%**	0%	0.00%	0	**50%**	1.71%	1,192	0%	0.00%	0
				78,770	69,563	100.00%			**20,659**			**18,745**			**10,027**
									29.70%			26.95%			14.41%

Trip Distribution Table

Murphy Express - Eubank Blvd. & Central Ave.

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial**

2012 and 2040 Data Taken from Mid-Region Council of Governments'
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(EuS) Eubank Blvd. South			(SE) Southern Blvd. East			(SW) Southern Blvd. West		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	**2040**	**2030**											
Boundary Specified on DASZ Map															
7501	100%	1367	1493	1,448	1,448	**2.08%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7502	100%	0	0	0	0	**0.00%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7503	100%	1139	1142	1,141	1,141	**1.64%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7511	70%	1281	1256	1,265	886	**1.27%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7512	90%	1354	1371	1,365	1,229	**1.77%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7521	90%	1207	1350	1,299	1,169	**1.68%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7522	75%	1622	1520	1,556	1,167	**1.68%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7531	95%	1882	2026	1,975	1,876	**2.70%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7532	20%	1531	1554	1,546	309	**0.44%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7534	20%	2854	3207	3,081	616	**0.89%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7551	100%	746	755	752	752	**1.08%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7552	100%	934	1069	1,021	1,021	**1.47%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7553	80%	2228	2153	2,180	1,744	**2.51%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7554	100%	2016	2249	2,166	2,166	**3.11%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7561	100%	152	210	189	189	**0.27%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7562	100%	1919	1767	1,821	1,821	**2.62%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7571	100%	1215	1209	1,211	1,211	**1.74%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7572	100%	2045	2012	2,024	2,024	**2.91%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7661	100%	298	503	430	430	**0.62%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8212	80%	283	407	363	290	**0.42%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8231	80%	1542	1609	1,585	1,268	**1.82%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8232	60%	1496	1814	1,700	1,020	**1.47%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8233	100%	2775	2735	2,749	2,749	**3.95%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8234	100%	2086	3417	2,942	2,942	**4.23%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8242	90%	3662	3958	3,852	3,467	**4.98%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8243	95%	994	2228	1,787	1,698	**2.44%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8244	100%	2748	4405	3,813	3,813	**5.48%**	0%	0.00%	0	0%	0.00%	0	**50%**	2.74%	1,907
8251	100%	378	499	456	456	**0.66%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8252	100%	0	608	391	391	**0.56%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8261	100%	1907	2103	2,033	2,033	**2.92%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8262	100%	2083	2092	2,089	2,089	**3.00%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8263	100%	1843	1991	1,938	1,938	**2.79%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8271	100%	1631	1998	1,867	1,867	**2.68%**	0%	0.00%	0	**10%**	0.27%	187	0%	0.00%	0
8272	100%	1717	1758	1,743	1,743	**2.51%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8273	100%	1128	1732	1,516	1,516	**2.18%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8281	90%	5988	6604	6,384	5,746	**8.26%**	0%	0.00%	0	**30%**	2.48%	1,724	0%	0.00%	0
8282	95%	1731	3465	2,846	2,704	**3.89%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8302	100%	810	1435	1,212	1,212	**1.74%**	**100%**	1.74%	1,212	0%	0.00%	0	0%	0.00%	0
8303	100%	3904	4269	4,139	4,139	**5.95%**	**10%**	0.60%	414	**70%**	4.17%	2,897	0%	0.00%	0
8315	60%	1538	4196	3,247	1,948	**2.80%**	**90%**	2.52%	1,753	**10%**	0.28%	195	0%	0.00%	0
8433	50%	534	570	557	279	**0.40%**	**100%**	0.40%	279	0%	0.00%	0	0%	0.00%	0
8442	95%	717	702	707	672	**0.97%**	**55%**	0.53%	370	0%	0.00%	0	**15%**	0.14%	101
8441	5%	0	0	0	0	**0.00%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8444	100%	2311	2425	2,384	2,384	**3.43%**	**50%**	1.71%	1,192	0%	0.00%	0	0%	0.00%	0
				78,770	69,563	100.00%			**5,220**			**5,003**			**2,007**
									7.50%			7.19%			2.89%

Trip Distribution Table

Murphy Express - Eubank Blvd. & Central Ave.

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial**

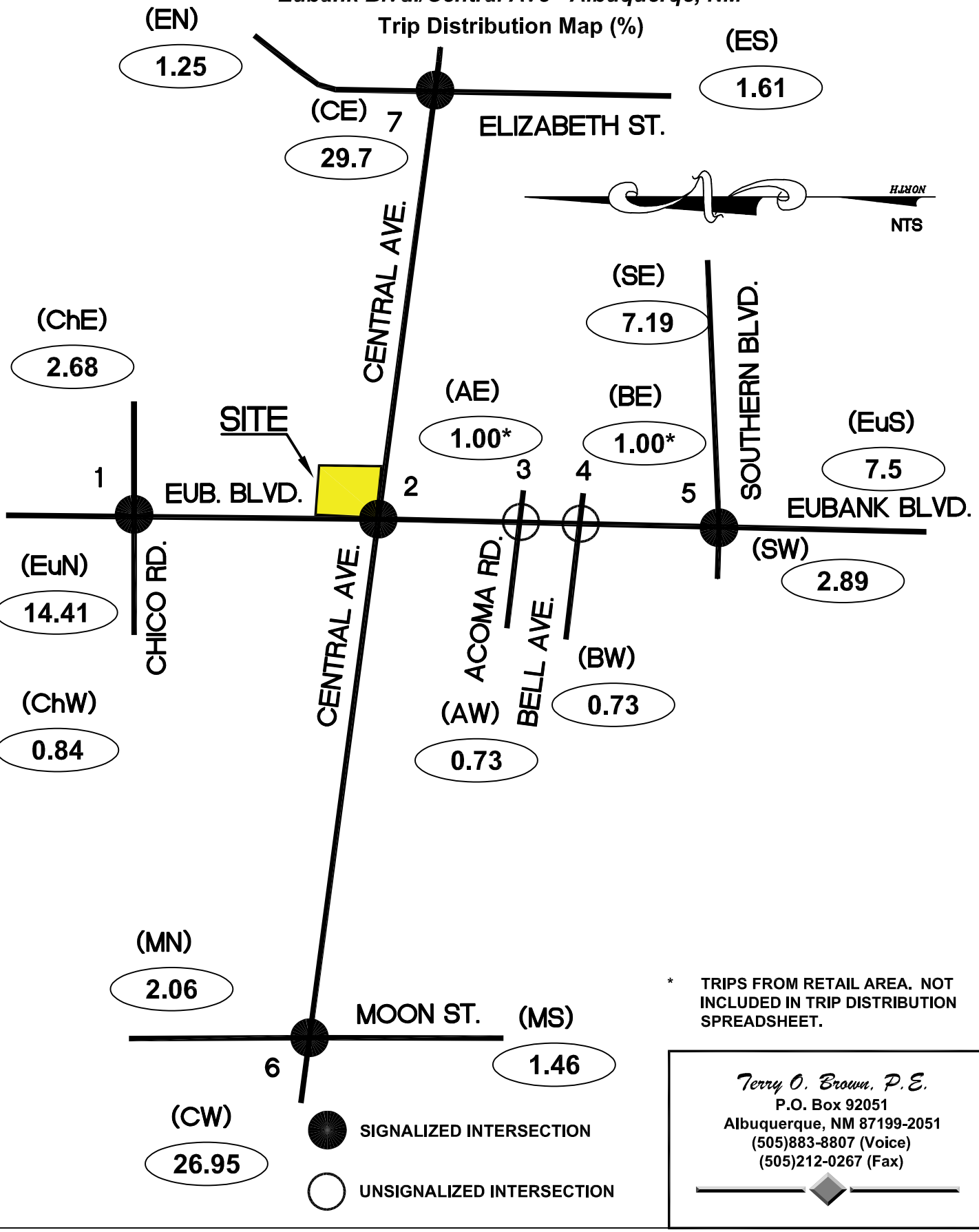
2012 and 2040 Data Taken from Mid-Region Council of Governments'
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(EN) Elizabeth St. North			(ES) Elizabeth St. South		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	**2040**	**2030**								
Boundary Specified on DASZ Map												
7501	100%	1367	1493	1,448	1,448	**2.08%**	0%	0.00%	0	0%	0.00%	0
7502	100%	0	0	0	0	**0.00%**	0%	0.00%	0	0%	0.00%	0
7503	100%	1139	1142	1,141	1,141	**1.64%**	0%	0.00%	0	0%	0.00%	0
7511	70%	1281	1256	1,265	886	**1.27%**	0%	0.00%	0	0%	0.00%	0
7512	90%	1354	1371	1,365	1,229	**1.77%**	0%	0.00%	0	0%	0.00%	0
7521	90%	1207	1350	1,299	1,169	**1.68%**	0%	0.00%	0	0%	0.00%	0
7522	75%	1622	1520	1,556	1,167	**1.68%**	0%	0.00%	0	0%	0.00%	0
7531	95%	1882	2026	1,975	1,876	**2.70%**	0%	0.00%	0	0%	0.00%	0
7532	20%	1531	1554	1,546	309	**0.44%**	0%	0.00%	0	0%	0.00%	0
7534	20%	2854	3207	3,081	616	**0.89%**	0%	0.00%	0	0%	0.00%	0
7551	100%	746	755	752	752	**1.08%**	0%	0.00%	0	0%	0.00%	0
7552	100%	934	1069	1,021	1,021	**1.47%**	0%	0.00%	0	0%	0.00%	0
7553	80%	2228	2153	2,180	1,744	**2.51%**	0%	0.00%	0	0%	0.00%	0
7554	100%	2016	2249	2,166	2,166	**3.11%**	0%	0.00%	0	0%	0.00%	0
7561	100%	152	210	189	189	**0.27%**	0%	0.00%	0	0%	0.00%	0
7562	100%	1919	1767	1,821	1,821	**2.62%**	0%	0.00%	0	0%	0.00%	0
7571	100%	1215	1209	1,211	1,211	**1.74%**	0%	0.00%	0	0%	0.00%	0
7572	100%	2045	2012	2,024	2,024	**2.91%**	0%	0.00%	0	0%	0.00%	0
7661	100%	298	503	430	430	**0.62%**	0%	0.00%	0	0%	0.00%	0
8212	80%	283	407	363	290	**0.42%**	0%	0.00%	0	0%	0.00%	0
8231	80%	1542	1609	1,585	1,268	**1.82%**	0%	0.00%	0	0%	0.00%	0
8232	60%	1496	1814	1,700	1,020	**1.47%**	0%	0.00%	0	0%	0.00%	0
8233	100%	2775	2735	2,749	2,749	**3.95%**	0%	0.00%	0	0%	0.00%	0
8234	100%	2086	3417	2,942	2,942	**4.23%**	0%	0.00%	0	0%	0.00%	0
8242	90%	3662	3958	3,852	3,467	**4.98%**	0%	0.00%	0	0%	0.00%	0
8243	95%	994	2228	1,787	1,698	**2.44%**	0%	0.00%	0	0%	0.00%	0
8244	100%	2748	4405	3,813	3,813	**5.48%**	0%	0.00%	0	0%	0.00%	0
8251	100%	378	499	456	456	**0.66%**	0%	0.00%	0	0%	0.00%	0
8252	100%	0	608	391	391	**0.56%**	0%	0.00%	0	0%	0.00%	0
8261	100%	1907	2103	2,033	2,033	**2.92%**	0%	0.00%	0	0%	0.00%	0
8262	100%	2083	2092	2,089	2,089	**3.00%**	0%	0.00%	0	0%	0.00%	0
8263	100%	1843	1991	1,938	1,938	**2.79%**	0%	0.00%	0	0%	0.00%	0
8271	100%	1631	1998	1,867	1,867	**2.68%**	0%	0.00%	0	**60%**	1.61%	1,120
8272	100%	1717	1758	1,743	1,743	**2.51%**	**50%**	1.25%	872	0%	0.00%	0
8273	100%	1128	1732	1,516	1,516	**2.18%**	0%	0.00%	0	0%	0.00%	0
8281	90%	5988	6604	6,384	5,746	**8.26%**	0%	0.00%	0	0%	0.00%	0
8282	95%	1731	3465	2,846	2,704	**3.89%**	0%	0.00%	0	0%	0.00%	0
8302	100%	810	1435	1,212	1,212	**1.74%**	0%	0.00%	0	0%	0.00%	0
8303	100%	3904	4269	4,139	4,139	**5.95%**	0%	0.00%	0	0%	0.00%	0
8315	60%	1538	4196	3,247	1,948	**2.80%**	0%	0.00%	0	0%	0.00%	0
8433	50%	534	570	557	279	**0.40%**	0%	0.00%	0	0%	0.00%	0
8442	95%	717	702	707	672	**0.97%**	0%	0.00%	0	0%	0.00%	0
8441	5%	0	0	0	0	**0.00%**	0%	0.00%	0	0%	0.00%	0
8444	100%	2311	2425	2,384	2,384	**3.43%**	0%	0.00%	0	0%	0.00%	0
				78,770	69,563	100.00%			**872**			**1,120**
									1.25%			1.61%

Murphy Express

Eubank Blvd./Central Ave - Albuquerqe, NM

Trip Distribution Map (%)



* TRIPS FROM RETAIL AREA. NOT INCLUDED IN TRIP DISTRIBUTION SPREADSHEET.

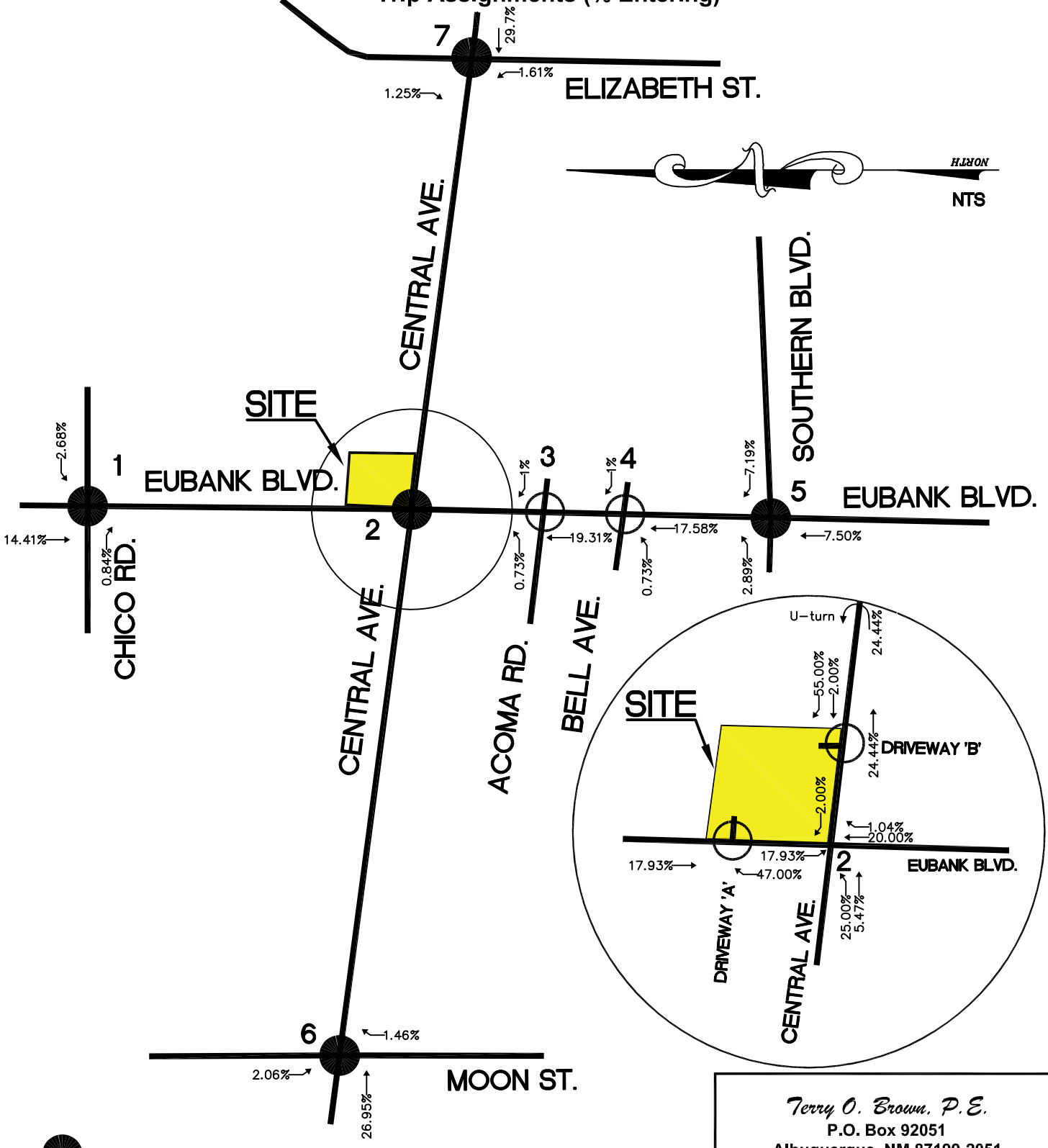
Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

10/5/2020

Murphy Express

Eubank Blvd./Central Ave - Albuquerqe, NM

Trip Assignments (% Entering)



SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

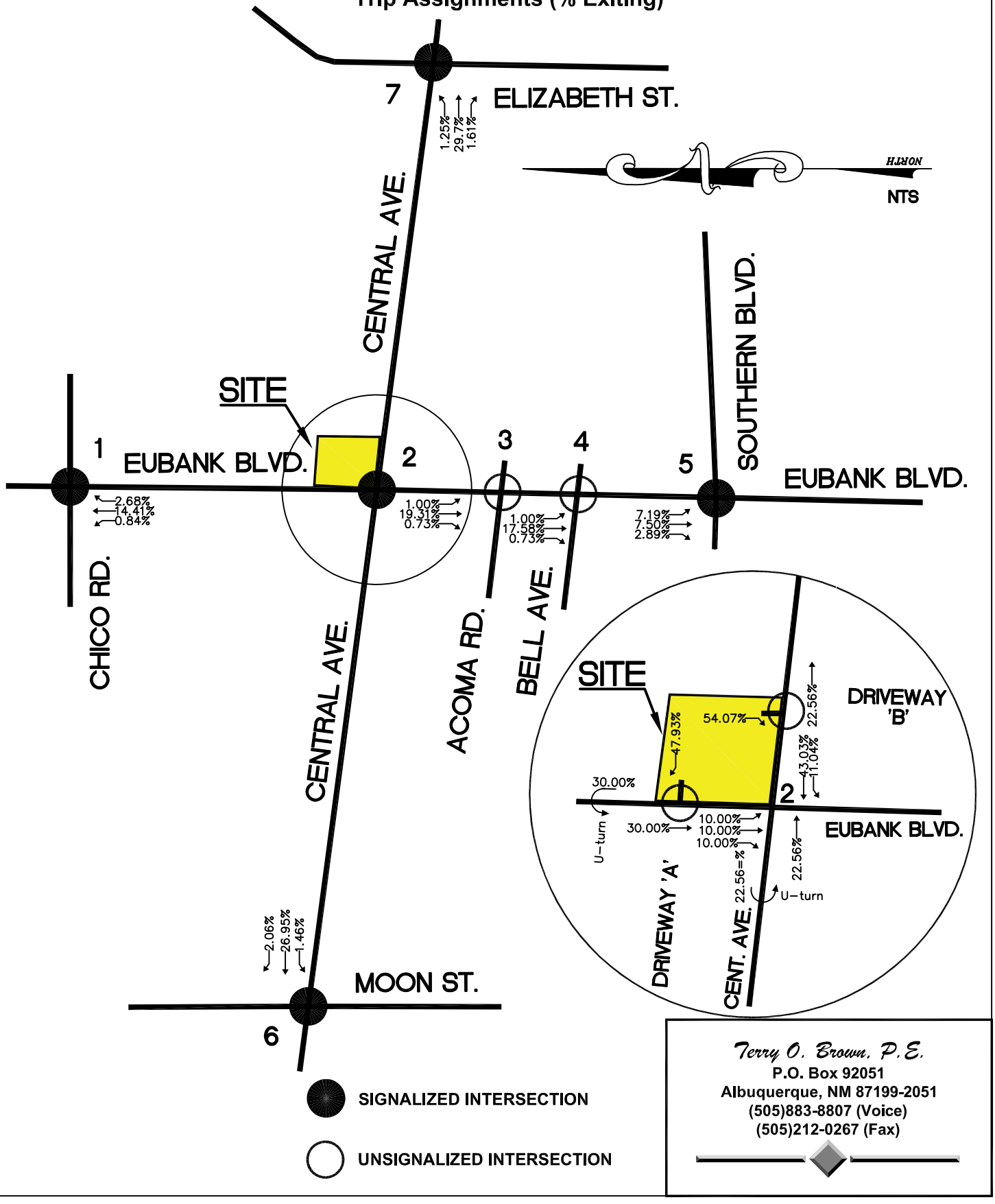
Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

10/5/2020

Murphy Express

Eubank Blvd./Central Ave - Albuquerqe, NM

Trip Assignments (% Exiting)



Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

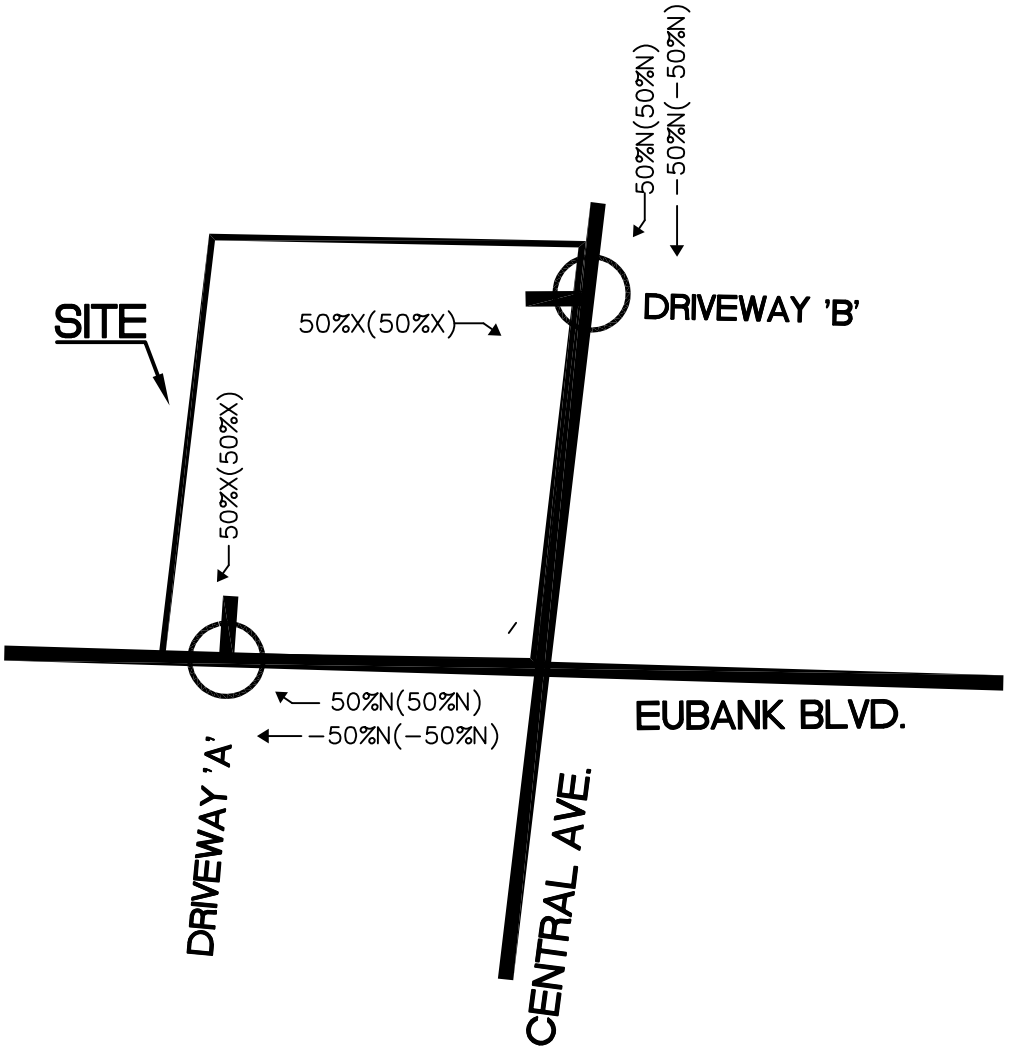
10/5/2020

Westside Pavilions

(Westside Blvd. / Unser Blvd.)

Pass-by Trip Assignments - % eNtering, eXiting

AM(PM)



NORTH

NTS

Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Chico Rd. / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Chico Rd.** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	2.00%			2.00%			2.00%			2.00%		
	Eastbound (Chico Rd.)			Westbound (Chico Rd.)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***99***	***18***	***25***	***163***	***57***	***196***	***13***	***592***	***31***	***35***	***1,954***	***29***
Background Traffic Growth	8	0	4	16	4	20	0	60	4	4	196	4
Subtotal	107	18	29	179	61	216	13	652	35	39	2,150	33
Subtotal (NO BUILD - A.M.)	***107***	***18***	***29***	***179***	***61***	***216***	***13***	***652***	***35***	***39***	***2,150***	***33***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	***0.84%***	***2.68%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***14.41%***	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.84%***	***14.41%***	***2.68%***	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	2	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**107**	**18**	**29**	**179**	**61**	**216**	**13**	**654**	**35**	**39**	**2,152**	**33**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**107**	**18**	**29**	**179**	**61**	**216**	**13**	**654**	**35**	**39**	**2,152**	**33**

PM Peak

Growth Rates	2.00%			2.00%			2.00%			2.00%		
	Eastbound (Chico Rd.)			Westbound (Chico Rd.)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***126***	***143***	***46***	***211***	***194***	***211***	***50***	***1,659***	***146***	***198***	***1,091***	***84***
Background Traffic Growth	12	16	4	20	20	20	4	164	16	20	108	8
Subtotal	138	159	50	231	214	231	54	1,823	162	218	1,199	92
Subtotal (NO BUILD - A.M.)	***138***	***159***	***50***	***231***	***214***	***231***	***54***	***1,823***	***162***	***218***	***1,199***	***92***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	***0.84%***	***2.68%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***14.41%***	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.84%***	***14.41%***	***2.68%***	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	2	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**138**	**159**	**50**	**231**	**214**	**231**	**54**	**1,825**	**162**	**218**	**1,201**	**92**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**138**	**159**	**50**	**231**	**214**	**231**	**54**	**1,825**	**162**	**218**	**1,201**	**92**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Central Ave. / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Central Ave.** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	Eastbound (Central Ave.) 1.00%			Westbound (Central Ave.) 1.00%			Northbound (Eubank Blvd.) 1.00%			Southbound (Eubank Blvd.) 1.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***189***	***591***	***16***	***218***	***999***	***116***	***120***	***411***	***26***	***107***	***1,485***	***337***
Background Traffic Growth	8	28	0	12	48	4	8	20	0	4	76	16
Subtotal	197	619	16	230	1,047	120	128	431	26	111	1,561	353
Subtotal (NO BUILD - A.M.)	***197***	***619***	***16***	***230***	***1,047***	***120***	***128***	***431***	***26***	***111***	***1,561***	***353***
Percent Commercial Trips Generated(Entering)	***20.00%***	***10.47%***	*0.00%*	*0.00%*	*0.00%*	***2.00%***	*0.00%*	***20.00%***	***1.04%***	***17.93%***	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	***21.04%***	***30.47%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	3	1	0	3	4	0	0	3	0	2	0	0
Subtotal AM Pk Hr. BUILD Volumes	**200**	**620**	**16**	**233**	**1,051**	**120**	**128**	**434**	**26**	**113**	**1,561**	**353**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**200**	**620**	**16**	**233**	**1,051**	**120**	**128**	**434**	**26**	**113**	**1,561**	**353**

PM Peak

Growth Rates	Eastbound (Central Ave.) 1.00%			Westbound (Central Ave.) 1.00%			Northbound (Eubank Blvd.) 1.00%			Southbound (Eubank Blvd.) 1.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***339***	***1,091***	***18***	***86***	***728***	***247***	***193***	***1,606***	***129***	***275***	***695***	***205***
Background Traffic Growth	16	56	0	4	36	12	8	80	8	12	36	12
Subtotal	355	1,147	18	90	764	259	201	1,686	137	287	731	217
Subtotal (NO BUILD - A.M.)	***355***	***1,147***	***18***	***90***	***764***	***259***	***201***	***1,686***	***137***	***287***	***731***	***217***
Percent Commercial Trips Generated(Entering)	***20.00%***	***10.47%***	*0.00%*	*0.00%*	*0.00%*	***2.00%***	*0.00%*	***20.00%***	***1.04%***	***17.93%***	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	***21.04%***	***30.47%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	3	1	0	3	4	0	0	3	0	2	0	0
Subtotal AM Pk Hr. BUILD Volumes	**358**	**1,148**	**18**	**93**	**768**	**259**	**201**	**1,689**	**137**	**289**	**731**	**217**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**358**	**1,148**	**18**	**93**	**768**	**259**	**201**	**1,689**	**137**	**289**	**731**	**217**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Driveway 'A' / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Driveway 'A'** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

Growth Rates **5.00%** **5.00%** **5.00%** **5.00%**

AM Peak

	Eastbound (Driveway 'A')			Westbound (Driveway 'A')			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***411***	***0***	***0***	***1,485***	***0***
Background Traffic Growth	0	0	0	0	0	0	0	104	0	0	372	0
Subtotal	0	0	0	0	0	0	0	515	0	0	1,857	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***515***	***0***	***0***	***1,857***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***47.00%***	*0.00%*	***17.93%***	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***47.93%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***30.00%***	*0.00%*
Total Trips Generated	0	0	0	0	0	6	0	0	6	0	6	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**515**	**6**	**0**	**1,863**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*-1*	*3*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**514**	**9**	**0**	**1,863**	**0**

Growth Rates **5.00%** **5.00%** **5.00%** **5.00%**

PM Peak

	Eastbound (Driveway 'A')			Westbound (Driveway 'A')			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***1,606***	***0***	***0***	***695***	***0***
Background Traffic Growth	0	0	0	0	0	0	0	400	0	0	172	0
Subtotal	0	0	0	0	0	0	0	2,006	0	0	867	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***2,006***	***0***	***0***	***867***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***47.00%***	*0.00%*	***17.93%***	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***47.93%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***30.00%***	*0.00%*
Total Trips Generated	0	0	0	0	0	6	0	0	6	0	6	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**2,006**	**6**	**0**	**873**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*-2*	*5*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**2,004**	**11**	**0**	**873**	**0**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Central Ave. / Driveway 'B'

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Central Ave.** (1)
N-S Street: **Driveway 'B'**

Year of Existing Counts 2019
Implementation Year **2024**

Growth Rates **5.00%** **5.00%** **5.00%** **5.00%**

AM Peak

	Eastbound (Central Ave.)			Westbound (Central Ave.)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***0***	***591***	***0***	***0***	***999***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Background Traffic Growth	0	148	0	0	248	0	0	0	0	0	0	0
Subtotal	0	739	0	0	1,247	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***739***	***0***	***0***	***1,247***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	***24.44%***	*0.00%*	*0.00%*	***2.00%***	***55.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	***22.56%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***54.07%***
Total Trips Generated	0	6	0	0	0	7	0	0	0	0	0	7
Subtotal AM Pk Hr. BUILD Volumes	**0**	**745**	**0**	**0**	**1,247**	**7**	**0**	**0**	**0**	**0**	**0**	**7**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*-7*	*7*	*0*	*0*	*0*	*0*	*0*	*6*
Total AM Peak Hour BUILD Volumes	**0**	**745**	**0**	**0**	**1,240**	**14**	**0**	**0**	**0**	**0**	**0**	**13**

Growth Rates **5.00%** **5.00%** **5.00%** **5.00%**

PM Peak

	Eastbound (Central Ave.)			Westbound (Central Ave.)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***0***	***1,091***	***0***	***0***	***728***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Background Traffic Growth	0	272	0	0	184	0	0	0	0	0	0	0
Subtotal	0	1,363	0	0	912	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***1,363***	***0***	***0***	***912***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	***24.44%***	*0.00%*	*0.00%*	***2.00%***	***55.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	***22.56%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***54.07%***
Total Trips Generated	0	6	0	0	0	7	0	0	0	0	0	7
Subtotal AM Pk Hr. BUILD Volumes	**0**	**1,369**	**0**	**0**	**912**	**7**	**0**	**0**	**0**	**0**	**0**	**7**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*-7*	*7*	*0*	*0*	*0*	*0*	*0*	*7*
Total PM Peak Hour BUILD Volumes	**0**	**1,369**	**0**	**0**	**905**	**14**	**0**	**0**	**0**	**0**	**0**	**14**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Acoma / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Acoma** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Acoma)			Westbound (Acoma)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***11***	***6***	***6***	***11***	***17***	***134***	***11***	***562***	***11***	***94***	***1,805***	***53***
Background Traffic Growth	0	0	0	0	0	8	0	28	0	4	92	4
Subtotal	11	6	6	11	17	142	11	590	11	98	1,897	57
Subtotal (NO BUILD - A.M.)	***11***	***6***	***6***	***11***	***17***	***142***	***11***	***590***	***11***	***98***	***1,897***	***57***
Percent Commercial Trips Generated(Entering)	***0.73%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	*0.00%*	***19.31%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.73%***	***17.58%***	***1.00%***
Total Trips Generated	0	0	0	0	0	0	0	3	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**11**	**6**	**6**	**11**	**17**	**142**	**11**	**593**	**11**	**98**	**1,899**	**57**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**11**	**6**	**6**	**11**	**17**	**142**	**11**	**593**	**11**	**98**	**1,899**	**57**

PM Peak

Growth Rates	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Acoma)			Westbound (Acoma)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***31***	***10***	***10***	***17***	***33***	***95***	***62***	***1,787***	***52***	***165***	***871***	***80***
Background Traffic Growth	0	0	0	0	0	4	4	88	4	8	44	4
Subtotal	31	10	10	17	33	99	66	1,875	56	173	915	84
Subtotal (NO BUILD - A.M.)	***31***	***10***	***10***	***17***	***33***	***99***	***66***	***1,875***	***56***	***173***	***915***	***84***
Percent Commercial Trips Generated(Entering)	***0.73%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	*0.00%*	***19.31%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.73%***	***17.58%***	***1.00%***
Total Trips Generated	0	0	0	0	0	0	0	3	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**31**	**10**	**10**	**17**	**33**	**99**	**66**	**1,878**	**56**	**173**	**917**	**84**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**31**	**10**	**10**	**17**	**33**	**99**	**66**	**1,878**	**56**	**173**	**917**	**84**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Bell Ave. /Costco / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Bell Ave. /Costco** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Bell Ave. /Costco)			Westbound (Bell Ave. /Costco)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***49***	***0***	***43***	***6***	***6***	***147***	***24***	***533***	***24***	***76***	***1,807***	***63***
Background Traffic Growth	4	0	4	0	0	8	0	28	0	4	92	4
Subtotal	53	0	47	6	6	155	24	561	24	80	1,899	67
Subtotal (NO BUILD - A.M.)	***53***	***0***	***47***	***6***	***6***	***155***	***24***	***561***	***24***	***80***	***1,899***	***67***
Percent Commercial Trips Generated(Entering)	***0.73%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	*0.00%*	***17.58%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	***17.58%***	***0.73%***
Total Trips Generated	0	0	0	0	0	0	0	2	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**53**	**0**	**47**	**6**	**6**	**155**	**24**	**563**	**24**	**80**	**1,901**	**67**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**53**	**0**	**47**	**6**	**6**	**155**	**24**	**563**	**24**	**80**	**1,901**	**67**

PM Peak

Growth Rates	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Bell Ave. /Costco)			Westbound (Bell Ave. /Costco)			Northbound (Eubank Blvd.)			Southbound (Eubank Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***72***	***24***	***36***	***18***	***36***	***155***	***75***	***1,751***	***70***	***393***	***648***	***72***
Background Traffic Growth	4	0	0	0	0	8	4	88	4	20	32	4
Subtotal	76	24	36	18	36	163	79	1,839	74	413	680	76
Subtotal (NO BUILD - A.M.)	***76***	***24***	***36***	***18***	***36***	***163***	***79***	***1,839***	***74***	***413***	***680***	***76***
Percent Commercial Trips Generated(Entering)	***0.73%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	*0.00%*	***17.58%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.00%***	***17.58%***	***0.73%***
Total Trips Generated	0	0	0	0	0	0	0	2	0	0	2	0
Subtotal AM Pk Hr. BUILD Volumes	**76**	**24**	**36**	**18**	**36**	**163**	**79**	**1,841**	**74**	**413**	**682**	**76**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**76**	**24**	**36**	**18**	**36**	**163**	**79**	**1,841**	**74**	**413**	**682**	**76**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Southern Blvd. / Eubank Blvd.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Southern Blvd.** (1)
N-S Street: **Eubank Blvd.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	Eastbound (Southern Blvd.) 2.00%			Westbound (Southern Blvd.) 2.00%			Northbound (Eubank Blvd.) 2.00%			Southbound (Eubank Blvd.) 2.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***64***	***118***	***11***	***560***	***476***	***155***	***88***	***281***	***17***	***128***	***1,699***	***32***
Background Traffic Growth	8	12	0	56	48	16	8	28	0	12	168	4
Subtotal	72	130	11	616	524	171	96	309	17	140	1,867	36
Subtotal (NO BUILD - A.M.)	***72***	***130***	***11***	***616***	***524***	***171***	***96***	***309***	***17***	***140***	***1,867***	***36***
Percent Commercial Trips Generated(Entering)	***2.89%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***7.19%***	*0.00%*	***7.50%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***7.19%***	***7.50%***	***2.89%***
Total Trips Generated	0	0	0	0	0	1	0	1	0	1	1	0
Subtotal AM Pk Hr. BUILD Volumes	**72**	**130**	**11**	**616**	**524**	**172**	**96**	**310**	**17**	**141**	**1,868**	**36**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**72**	**130**	**11**	**616**	**524**	**172**	**96**	**310**	**17**	**141**	**1,868**	**36**

PM Peak

Growth Rates	Eastbound (Southern Blvd.) 2.00%			Westbound (Southern Blvd.) 2.00%			Northbound (Eubank Blvd.) 2.00%			Southbound (Eubank Blvd.) 2.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***97***	***194***	***4***	***88***	***176***	***88***	***86***	***1,610***	***815***	***554***	***481***	***41***
Background Traffic Growth	8	20	0	8	16	8	8	160	80	56	48	4
Subtotal	105	214	4	96	192	96	94	1,770	895	610	529	45
Subtotal (NO BUILD - A.M.)	***105***	***214***	***4***	***96***	***192***	***96***	***94***	***1,770***	***895***	***610***	***529***	***45***
Percent Commercial Trips Generated(Entering)	***2.89%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***7.19%***	*0.00%*	***7.50%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***7.19%***	***7.50%***	***2.89%***
Total Trips Generated	0	0	0	0	0	1	0	1	0	1	1	0
Subtotal AM Pk Hr. BUILD Volumes	**105**	**214**	**4**	**96**	**192**	**97**	**94**	**1,771**	**895**	**611**	**530**	**45**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**105**	**214**	**4**	**96**	**192**	**97**	**94**	**1,771**	**895**	**611**	**530**	**45**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Central Av. / Moon St.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Central Av.** (1)
N-S Street: **Moon St.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	1.50%			1.50%			1.50%			1.50%		
	Eastbound (Central Av.)			Westbound (Central Av.)			Northbound (Moon St.)			Southbound (Moon St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***6***	***733***	***95***	***87***	***1,069***	***95***	***89***	***0***	***25***	***5***	***10***	***10***
Background Traffic Growth	0	56	8	8	80	8	8	0	0	0	0	0
Subtotal	6	789	103	95	1,149	103	97	0	25	5	10	10
Subtotal (NO BUILD - A.M.)	***6***	***789***	***103***	***95***	***1,149***	***103***	***97***	***0***	***25***	***5***	***10***	***10***
Percent Commercial Trips Generated(Entering)	*0.00%*	***26.95%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.46%***	***2.06%***	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	***1.46%***	***26.95%***	***2.06%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	4	0	0	3	0	0	0	0	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**6**	**793**	**103**	**95**	**1,152**	**103**	**97**	**0**	**25**	**5**	**10**	**10**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**6**	**793**	**103**	**95**	**1,152**	**103**	**97**	**0**	**25**	**5**	**10**	**10**

PM Peak

Growth Rates	1.50%			1.50%			1.50%			1.50%		
	Eastbound (Central Av.)			Westbound (Central Av.)			Northbound (Moon St.)			Southbound (Moon St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***18***	***1,370***	***40***	***50***	***1,029***	***9***	***111***	***25***	***62***	***12***	***632***	***16***
Background Traffic Growth	0	104	4	4	76	0	8	0	4	0	48	0
Subtotal	18	1,474	44	54	1,105	9	119	25	66	12	680	16
Subtotal (NO BUILD - A.M.)	***18***	***1,474***	***44***	***54***	***1,105***	***9***	***119***	***25***	***66***	***12***	***680***	***16***
Percent Commercial Trips Generated(Entering)	*0.00%*	***26.95%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.46%***	***2.06%***	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	***1.46%***	***26.95%***	***2.06%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	4	0	0	3	0	0	0	0	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**18**	**1,478**	**44**	**54**	**1,108**	**9**	**119**	**25**	**66**	**12**	**680**	**16**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**18**	**1,478**	**44**	**54**	**1,108**	**9**	**119**	**25**	**66**	**12**	**680**	**16**

Murphy Express - Eubank & Central

Projected Turning Movements Worksheet

Central Ave. / Elizabeth St.

Turning Movemement Worksheet w/o Multi-period Analysis

INTERSECTION: E-W Street: **Central Ave.** (1)
N-S Street: **Elizabeth St.**

Year of Existing Counts 2019
Implementation Year **2024**

AM Peak

Growth Rates	Eastbound (Central Ave.) 1.00%			Westbound (Central Ave.) 1.00%			Northbound (Elizabeth St.) 1.00%			Southbound (Elizabeth St.) 1.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing AM Peak Hour Volumes	***14***	***479***	***56***	***24***	***1,147***	***114***	***233***	***43***	***49***	***36***	***22***	***9***
Background Traffic Growth	0	24	4	0	56	4	12	4	4	0	0	0
Subtotal	14	503	60	24	1,203	118	245	47	53	36	22	9
Subtotal (NO BUILD - A.M.)	***14***	***503***	***60***	***24***	***1,203***	***118***	***245***	***47***	***53***	***36***	***22***	***9***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***29.70%***	*0.00%*	***1.61%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.25%***
Percent Commercial Trips Generated(Exiting)	***1.25%***	***29.70%***	***1.61%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	4	0	0	4	0	0	0	0	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**14**	**507**	**60**	**24**	**1,207**	**118**	**245**	**47**	**53**	**36**	**22**	**9**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**14**	**507**	**60**	**24**	**1,207**	**118**	**245**	**47**	**53**	**36**	**22**	**9**

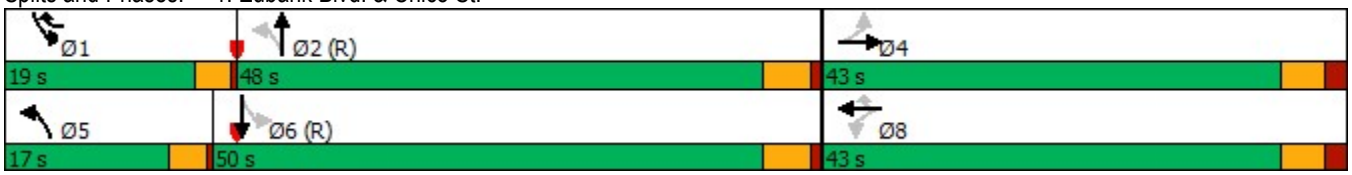
PM Peak

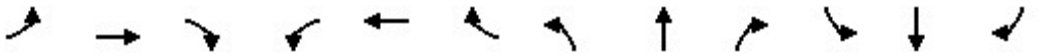
Growth Rates	Eastbound (Central Ave.) 1.00%			Westbound (Central Ave.) 1.00%			Northbound (Elizabeth St.) 1.00%			Southbound (Elizabeth St.) 1.00%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing PM Peak Hour Volumes	***79***	***1,385***	***168***	***27***	***672***	***40***	***97***	***79***	***75***	***28***	***58***	***19***
Background Traffic Growth	4	68	8	0	32	4	4	4	4	0	4	0
Subtotal	83	1,453	176	27	704	44	101	83	79	28	62	19
Subtotal (NO BUILD - A.M.)	***83***	***1,453***	***176***	***27***	***704***	***44***	***101***	***83***	***79***	***28***	***62***	***19***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***29.70%***	*0.00%*	***1.61%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***1.25%***
Percent Commercial Trips Generated(Exiting)	***1.25%***	***29.70%***	***1.61%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	4	0	0	4	0	0	0	0	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**83**	**1,457**	**176**	**27**	**708**	**44**	**101**	**83**	**79**	**28**	**62**	**19**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**83**	**1,457**	**176**	**27**	**708**	**44**	**101**	**83**	**79**	**28**	**62**	**19**

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	18	179	61	216	13	652	39	2150
Future Volume (vph)	107	18	179	61	216	13	652	39	2150
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	19.0	17.0	23.0	19.0	23.0
Total Split (s)	43.0	43.0	43.0	43.0	19.0	17.0	48.0	19.0	50.0
Total Split (%)	39.1%	39.1%	39.1%	39.1%	17.3%	15.5%	43.6%	17.3%	45.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)		20.4	20.4	20.4	30.7	76.6	70.8	79.5	75.8
Actuated g/C Ratio		0.19	0.19	0.19	0.28	0.70	0.64	0.72	0.69
v/c Ratio		0.58	0.77	0.18	0.41	0.09	0.21	0.07	0.62
Control Delay		45.3	62.6	36.1	15.1	6.3	5.0	5.8	12.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.3	62.6	36.1	15.1	6.3	5.0	5.8	12.1
LOS		D	E	D	B	A	A	A	B
Approach Delay		45.3		36.6			5.1		11.9
Approach LOS		D		D			A		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 70.4 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Eubank Blvd. & Chico St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	18	29	179	61	216	13	652	35	39	2150	33
Future Volume (veh/h)	107	18	29	179	61	216	13	652	35	39	2150	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	18	29	179	61	216	13	652	35	39	2150	33
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	31	34	279	304	288	169	3429	183	541	3632	56
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.23	0.23	0.02	0.70	0.70
Sat Flow, veh/h	707	191	208	1359	1870	1585	1781	4962	265	1781	5181	79
Grp Volume(v), veh/h	154	0	0	179	61	216	13	446	241	39	1412	771
Grp Sat Flow(s),veh/h/ln	1107	0	0	1359	1870	1585	1781	1702	1823	1781	1702	1856
Q Serve(g_s), s	12.1	0.0	0.0	0.0	3.1	14.2	0.2	11.6	11.7	0.7	23.3	23.4
Cycle Q Clear(g_c), s	15.2	0.0	0.0	14.6	3.1	14.2	0.2	11.6	11.7	0.7	23.3	23.4
Prop In Lane	0.69		0.19	1.00		1.00	1.00		0.15	1.00		0.04
Lane Grp Cap(c), veh/h	236	0	0	279	304	288	169	2352	1260	541	2387	1301
V/C Ratio(X)	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Avail Cap(c_a), veh/h	455	0	0	522	638	570	372	2352	1260	758	2387	1301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	0.0	44.7	39.9	42.6	7.5	17.6	17.6	5.4	8.4	8.4
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.9	0.1	1.5	0.1	0.2	0.3	0.0	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	4.8	1.5	5.7	0.1	4.9	5.4	0.2	7.1	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0	45.6	40.0	44.1	7.5	17.8	17.9	5.4	9.5	10.4
LnGrp LOS	D	A	A	D	D	D	A	B	B	A	A	B
Approach Vol, veh/h		154			456			700			2222	
Approach Delay, s/veh		46.8			44.1			17.6			9.7	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	81.0		23.4	4.5	82.1		23.4				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	15.5	43.0		37.5	13.5	45.0		37.5				
Max Q Clear Time (g_c+I1), s	2.7	13.7		17.2	2.2	25.4		16.6				
Green Ext Time (p_c), s	0.0	4.3		0.7	0.0	14.2		0.9				

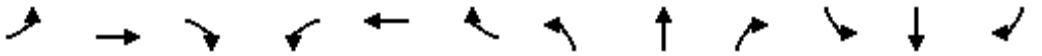
Intersection Summary			
HCM 6th Ctrl Delay		17.4	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	18	179	61	216	13	654	39	2152
Future Volume (vph)	107	18	179	61	216	13	654	39	2152
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	10.0	10.0	23.0	10.0	23.0
Total Split (s)	43.0	43.0	43.0	43.0	19.0	17.0	48.0	19.0	50.0
Total Split (%)	39.1%	39.1%	39.1%	39.1%	17.3%	15.5%	43.6%	17.3%	45.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 70.4 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Eubank Blvd. & Chico St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	18	29	179	61	216	13	654	35	39	2152	33
Future Volume (veh/h)	107	18	29	179	61	216	13	654	35	39	2152	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	18	29	179	61	216	13	654	35	39	2152	33
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	31	34	279	304	288	169	3429	183	540	3632	56
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.23	0.23	0.02	0.70	0.70
Sat Flow, veh/h	707	191	208	1359	1870	1585	1781	4963	264	1781	5181	79
Grp Volume(v), veh/h	154	0	0	179	61	216	13	448	241	39	1413	772
Grp Sat Flow(s),veh/h/ln	1107	0	0	1359	1870	1585	1781	1702	1823	1781	1702	1856
Q Serve(g_s), s	12.1	0.0	0.0	0.0	3.1	14.2	0.2	11.7	11.8	0.7	23.3	23.4
Cycle Q Clear(g_c), s	15.2	0.0	0.0	14.6	3.1	14.2	0.2	11.7	11.8	0.7	23.3	23.4
Prop In Lane	0.69		0.19	1.00		1.00	1.00		0.14	1.00		0.04
Lane Grp Cap(c), veh/h	236	0	0	279	304	288	169	2352	1260	540	2387	1301
V/C Ratio(X)	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Avail Cap(c_a), veh/h	455	0	0	522	638	570	372	2352	1260	757	2387	1301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	0.0	44.7	39.9	42.6	7.5	17.6	17.7	5.4	8.4	8.4
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.9	0.1	1.5	0.1	0.2	0.3	0.0	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	0.0	8.4	2.6	9.6	0.1	8.6	9.2	0.4	11.5	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0	45.6	40.0	44.1	7.5	17.8	18.0	5.4	9.5	10.4
LnGrp LOS	D	A	A	D	D	D	A	B	B	A	A	B
Approach Vol, veh/h		154			456			702			2224	
Approach Delay, s/veh		46.8			44.1			17.7			9.7	
Approach LOS		D			D			B			A	

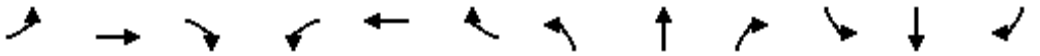
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	81.0		23.4	4.5	82.1		23.4				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	15.5	43.0		37.5	13.5	45.0		37.5				
Max Q Clear Time (g_c+I1), s	2.7	13.8		17.2	2.2	25.4		16.6				
Green Ext Time (p_c), s	0.0	4.3		0.7	0.0	14.2		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		17.4	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	138	159	231	214	231	54	1823	218	1199
Future Volume (vph)	138	159	231	214	231	54	1823	218	1199
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	10.0	10.0	23.0	10.0	23.0
Total Split (s)	36.0	36.0	36.0	36.0	18.0	18.0	66.0	18.0	66.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.0%	15.0%	55.0%	15.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)		30.5	30.5	30.5	48.7	69.5	62.8	80.5	71.8
Actuated g/C Ratio		0.25	0.25	0.25	0.41	0.58	0.52	0.67	0.60
v/c Ratio		1.20	1.05	0.45	0.35	0.20	0.75	0.87	0.43
Control Delay		159.0	119.8	41.4	24.0	4.4	9.5	61.1	13.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		159.0	119.8	41.4	24.0	4.4	9.5	61.1	13.7
LOS		F	F	D	C	A	A	E	B
Approach Delay		159.0		62.3			9.4		20.6
Approach LOS		F		E			A		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 67.2 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 32.2	Intersection LOS: C
Intersection Capacity Utilization 99.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Eubank Blvd. & Chico St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	159	50	231	214	231	54	1823	162	218	1199	92
Future Volume (veh/h)	138	159	50	231	214	231	54	1823	162	218	1199	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	159	50	231	214	231	54	1823	162	218	1199	92
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	112	33	252	475	509	307	2685	238	302	2923	224
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	1.00	1.00	0.07	0.60	0.60
Sat Flow, veh/h	326	439	129	1173	1870	1585	1781	4776	423	1781	4837	371
Grp Volume(v), veh/h	347	0	0	231	214	231	54	1297	688	218	844	447
Grp Sat Flow(s),veh/h/ln	894	0	0	1173	1870	1585	1781	1702	1794	1781	1702	1804
Q Serve(g_s), s	18.9	0.0	0.0	0.0	11.6	13.9	1.6	0.0	0.0	5.9	15.6	15.7
Cycle Q Clear(g_c), s	30.5	0.0	0.0	30.5	11.6	13.9	1.6	0.0	0.0	5.9	15.6	15.7
Prop In Lane	0.40		0.14	1.00		1.00	1.00		0.24	1.00		0.21
Lane Grp Cap(c), veh/h	269	0	0	252	475	509	307	1914	1009	302	2057	1090
V/C Ratio(X)	1.29	0.00	0.00	0.92	0.45	0.45	0.18	0.68	0.68	0.72	0.41	0.41
Avail Cap(c_a), veh/h	269	0	0	252	475	509	478	1914	1009	398	2057	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	47.3	37.7	32.4	10.8	0.0	0.0	9.7	12.5	12.5
Incr Delay (d2), s/veh	155.3	0.0	0.0	34.9	0.2	0.2	0.0	0.2	0.3	2.5	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	30.9	0.0	0.0	14.6	9.2	9.2	0.9	0.1	0.2	4.1	9.4	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	205.9	0.0	0.0	82.2	37.9	32.6	10.8	0.2	0.3	12.2	13.1	13.6
LnGrp LOS	F	A	A	F	D	C	B	A	A	B	B	B
Approach Vol, veh/h		347			676			2039			1509	
Approach Delay, s/veh		205.9			51.3			0.5			13.1	
Approach LOS		F			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	72.5		36.0	6.5	77.5		36.0				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	14.5	61.0		30.5	14.5	61.0		30.5				
Max Q Clear Time (g_c+I1), s	7.9	2.0		32.5	3.6	17.7		32.5				
Green Ext Time (p_c), s	0.1	23.2		0.0	0.0	10.3		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			27.8									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	138	159	231	214	231	54	1823	218	1199
Future Volume (vph)	138	159	231	214	231	54	1823	218	1199
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	10.0	10.0	23.0	10.0	23.0
Total Split (s)	36.0	36.0	36.0	36.0	18.0	18.0	66.0	18.0	66.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.0%	15.0%	55.0%	15.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

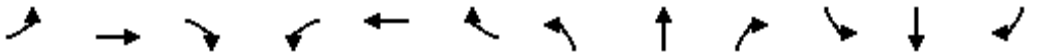
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 67.2 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 1: Eubank Blvd. & Chico St.

HCM 6th Signalized Intersection Summary
1: Eubank Blvd. & Chico St.

09/29/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	159	50	231	214	231	54	1825	162	218	1201	92
Future Volume (veh/h)	138	159	50	231	214	231	54	1825	162	218	1201	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	159	50	231	214	231	54	1825	162	218	1201	92
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	184	53	324	624	670	264	2150	190	248	2473	189
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.03	0.45	0.45	0.09	0.51	0.51
Sat Flow, veh/h	390	550	158	1173	1870	1585	1781	4776	422	1781	4837	370
Grp Volume(v), veh/h	347	0	0	231	214	231	54	1299	688	218	845	448
Grp Sat Flow(s),veh/h/ln	1098	0	0	1173	1870	1585	1781	1702	1794	1781	1702	1804
Q Serve(g_s), s	25.0	0.0	0.0	0.0	9.5	10.8	1.8	37.3	37.6	7.7	17.8	17.8
Cycle Q Clear(g_c), s	34.5	0.0	0.0	32.6	9.5	10.8	1.8	37.3	37.6	7.7	17.8	17.8
Prop In Lane	0.40		0.14	1.00		1.00	1.00		0.24	1.00		0.21
Lane Grp Cap(c), veh/h	412	0	0	324	624	670	264	1532	808	248	1740	922
V/C Ratio(X)	0.84	0.00	0.00	0.71	0.34	0.34	0.20	0.85	0.85	0.88	0.49	0.49
Avail Cap(c_a), veh/h	422	0	0	333	638	681	433	1532	808	340	1740	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	0.0	35.3	27.6	21.5	16.1	26.9	27.0	27.1	17.5	17.5
Incr Delay (d2), s/veh	13.2	0.0	0.0	5.8	0.1	0.1	0.1	6.0	11.0	14.4	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.0	0.0	0.0	10.6	7.7	7.3	1.3	21.6	24.0	7.1	10.9	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	0.0	41.1	27.7	21.6	16.2	32.9	38.0	41.4	18.5	19.3
LnGrp LOS	D	A	A	D	C	C	B	C	D	D	B	B
Approach Vol, veh/h		347			676			2041			1511	
Approach Delay, s/veh		51.4			30.2			34.2			22.0	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	54.5		42.2	6.6	61.2		42.2				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	15.5	43.0		37.5	13.5	45.0		37.5				
Max Q Clear Time (g_c+I1), s	9.7	39.6		36.5	3.8	19.8		34.6				
Green Ext Time (p_c), s	0.1	2.9		0.2	0.0	9.0		0.7				

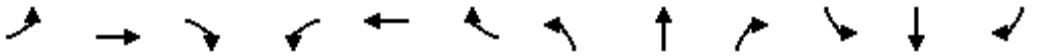
Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	18	179	61	216	13	664	39	2152
Future Volume (vph)	107	18	179	61	216	13	664	39	2152
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	10.0	10.0	23.0	10.0	23.0
Total Split (s)	43.0	43.0	43.0	43.0	19.0	17.0	48.0	19.0	50.0
Total Split (%)	39.1%	39.1%	39.1%	39.1%	17.3%	15.5%	43.6%	17.3%	45.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 70.4 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Eubank Blvd. & Chico St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	18	29	179	61	216	13	664	35	39	2152	33
Future Volume (veh/h)	107	18	29	179	61	216	13	664	35	39	2152	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	18	29	179	61	216	13	664	35	39	2152	33
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	31	34	279	304	288	169	3432	180	580	3632	56
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.01	0.69	0.69	0.02	0.70	0.70
Sat Flow, veh/h	707	191	208	1359	1870	1585	1781	4967	261	1781	5181	79
Grp Volume(v), veh/h	154	0	0	179	61	216	13	454	245	39	1413	772
Grp Sat Flow(s),veh/h/ln	1107	0	0	1359	1870	1585	1781	1702	1823	1781	1702	1856
Q Serve(g_s), s	12.1	0.0	0.0	0.0	3.1	14.2	0.2	5.2	5.3	0.7	23.3	23.4
Cycle Q Clear(g_c), s	15.2	0.0	0.0	14.6	3.1	14.2	0.2	5.2	5.3	0.7	23.3	23.4
Prop In Lane	0.69		0.19	1.00		1.00	1.00		0.14	1.00		0.04
Lane Grp Cap(c), veh/h	236	0	0	279	304	288	169	2352	1260	580	2387	1301
V/C Ratio(X)	0.65	0.00	0.00	0.64	0.20	0.75	0.08	0.19	0.19	0.07	0.59	0.59
Avail Cap(c_a), veh/h	455	0	0	522	638	570	372	2352	1260	797	2387	1301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	0.0	44.7	39.9	42.6	7.4	6.1	6.1	4.9	8.4	8.4
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.9	0.1	1.5	0.1	0.2	0.3	0.0	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	0.0	8.4	2.6	9.6	0.1	2.9	3.2	0.4	11.5	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0	45.6	40.0	44.1	7.5	6.2	6.4	4.9	9.5	10.4
LnGrp LOS	D	A	A	D	D	D	A	A	A	A	A	B
Approach Vol, veh/h		154			456			712			2224	
Approach Delay, s/veh		46.8			44.1			6.3			9.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	81.0		23.4	4.5	82.1		23.4				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	15.5	43.0		37.5	13.5	45.0		37.5				
Max Q Clear Time (g_c+I1), s	2.7	7.3		17.2	2.2	25.4		16.6				
Green Ext Time (p_c), s	0.0	4.5		0.7	0.0	14.2		0.9				

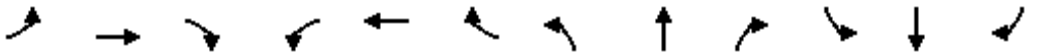
Intersection Summary			
HCM 6th Ctrl Delay		15.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	138	159	231	214	231	54	1825	218	1201
Future Volume (vph)	138	159	231	214	231	54	1825	218	1201
Turn Type	Perm	NA	Perm	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	1	5	2	1	6
Permitted Phases	4	4	8		8	2	2	6	
Detector Phase	4	4	8	8	1	5	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	3.0	3.0	16.0	3.0	16.0
Minimum Split (s)	23.5	23.5	23.5	23.5	10.0	10.0	23.0	10.0	23.0
Total Split (s)	27.0	27.0	27.0	27.0	10.0	10.0	38.0	10.0	38.0
Total Split (%)	36.0%	36.0%	36.0%	36.0%	13.3%	13.3%	50.7%	13.3%	50.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.5	0.5	1.0	0.5	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)		5.5	5.5	5.5	3.5	3.5	5.0	3.5	5.0
Lead/Lag					Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 1: Eubank Blvd. & Chico St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	159	50	231	214	231	54	1825	162	218	1201	92
Future Volume (veh/h)	138	159	50	231	214	231	54	1825	162	218	1201	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	159	50	231	214	231	54	1825	162	218	1201	92
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	160	44	320	536	592	290	2101	186	270	2406	184
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.44	0.44	0.09	0.50	0.50
Sat Flow, veh/h	357	559	154	1173	1870	1585	1781	4776	422	1781	4837	370
Grp Volume(v), veh/h	347	0	0	231	214	231	54	1299	688	218	845	448
Grp Sat Flow(s),veh/h/ln	1070	0	0	1173	1870	1585	1781	1702	1794	1781	1702	1804
Q Serve(g_s), s	14.6	0.0	0.0	0.0	6.9	8.0	1.2	25.9	26.1	4.7	12.4	12.5
Cycle Q Clear(g_c), s	21.5	0.0	0.0	21.5	6.9	8.0	1.2	25.9	26.1	4.7	12.4	12.5
Prop In Lane	0.40		0.14	1.00		1.00	1.00		0.24	1.00		0.21
Lane Grp Cap(c), veh/h	374	0	0	320	536	592	290	1498	790	270	1693	897
V/C Ratio(X)	0.93	0.00	0.00	0.72	0.40	0.39	0.19	0.87	0.87	0.81	0.50	0.50
Avail Cap(c_a), veh/h	374	0	0	320	536	592	392	1498	790	270	1693	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	0.0	27.1	21.5	17.2	11.4	19.0	19.1	16.4	12.6	12.6
Incr Delay (d2), s/veh	28.7	0.0	0.0	6.8	0.2	0.2	0.1	7.0	12.7	15.2	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.3	0.0	0.0	8.1	5.3	5.1	0.8	15.1	17.5	4.6	7.4	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	0.0	33.8	21.7	17.4	11.5	26.0	31.8	31.6	13.7	14.6
LnGrp LOS	E	A	A	C	C	B	B	C	C	C	B	B
Approach Vol, veh/h		347			676			2041			1511	
Approach Delay, s/veh		57.9			24.4			27.6			16.5	
Approach LOS		E			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	38.0		27.0	5.7	42.3		27.0				
Change Period (Y+Rc), s	3.5	5.0		5.5	3.5	5.0		5.5				
Max Green Setting (Gmax), s	6.5	33.0		21.5	6.5	33.0		21.5				
Max Q Clear Time (g_c+I1), s	6.7	28.1		23.5	3.2	14.5		23.5				
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0	7.9		0.0				

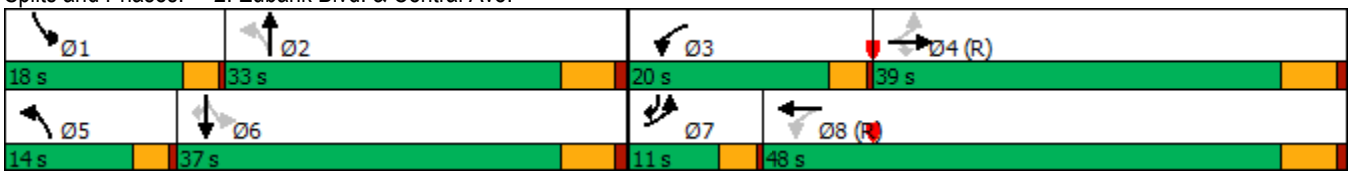
Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

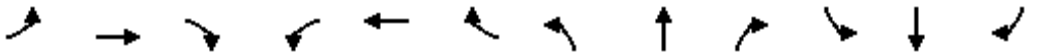
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	197	619	16	230	1047	128	431	111	1561	353
Future Volume (vph)	197	619	16	230	1047	128	431	111	1561	353
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	18.0	23.5	10.0
Total Split (s)	11.0	39.0	39.0	20.0	48.0	14.0	33.0	18.0	37.0	11.0
Total Split (%)	10.0%	35.5%	35.5%	18.2%	43.6%	12.7%	30.0%	16.4%	33.6%	10.0%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	619	16	230	1047	120	128	431	26	111	1561	353
Future Volume (veh/h)	197	619	16	230	1047	120	128	431	26	111	1561	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	197	619	16	230	1047	120	128	431	26	111	1561	353
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1987	617	454	1928	221	185	1446	86	370	1462	562
Arrive On Green	0.02	0.13	0.13	0.09	0.41	0.41	0.02	0.10	0.10	0.02	0.09	0.09
Sat Flow, veh/h	1781	5106	1585	1781	4647	532	1781	4927	294	1781	5106	1585
Grp Volume(v), veh/h	197	619	16	230	767	400	128	297	160	111	1561	353
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1775	1781	1702	1817	1781	1702	1585
Q Serve(g_s), s	7.2	12.1	1.0	8.2	18.7	18.8	5.5	8.9	9.0	4.8	31.5	21.7
Cycle Q Clear(g_c), s	7.2	12.1	1.0	8.2	18.7	18.8	5.5	8.9	9.0	4.8	31.5	21.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	304	1987	617	454	1412	736	185	999	533	370	1462	562
V/C Ratio(X)	0.65	0.31	0.03	0.51	0.54	0.54	0.69	0.30	0.30	0.30	1.07	0.63
Avail Cap(c_a), veh/h	304	1987	617	554	1412	736	235	999	533	498	1462	562
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.98	0.98	0.98	0.90	0.90	0.90	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	21.2	34.6	29.7	17.3	24.3	24.3	30.7	39.1	39.2	26.5	49.8	37.9
Incr Delay (d2), s/veh	3.6	0.4	0.1	0.3	1.4	2.6	3.4	0.2	0.4	0.1	40.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	9.2	0.7	5.7	11.6	12.3	4.5	7.0	7.6	3.7	27.1	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	35.0	29.8	17.5	25.7	26.9	34.1	39.4	39.6	26.6	90.8	39.8
LnGrp LOS	C	C	C	B	C	C	C	D	D	C	F	D
Approach Vol, veh/h		832			1397			585			2025	
Approach Delay, s/veh		32.5			24.7			38.3			78.4	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	37.8	13.8	48.3	10.9	37.0	11.0	51.1
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	14.5	27.5	16.5	33.5	10.5	31.5	7.5	42.5
Max Q Clear Time (g_c+I1), s	6.8	11.0	10.2	14.1	7.5	33.5	9.2	20.8
Green Ext Time (p_c), s	0.0	3.2	0.1	3.8	0.0	0.0	0.0	7.5

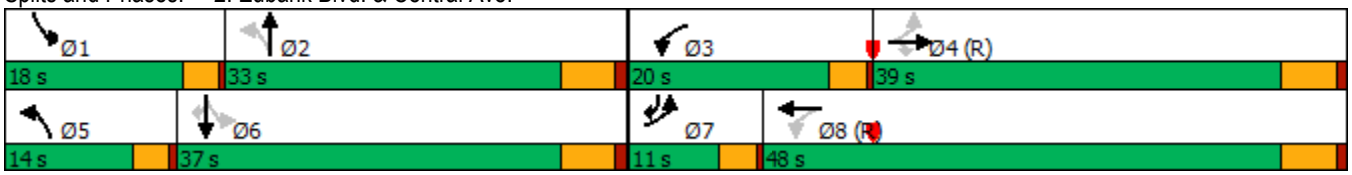
Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

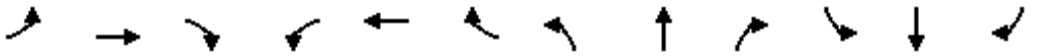
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	200	623	16	231	1052	128	434	114	1562	354
Future Volume (vph)	200	623	16	231	1052	128	434	114	1562	354
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	18.0	23.5	10.0
Total Split (s)	11.0	39.0	39.0	20.0	48.0	14.0	33.0	18.0	37.0	11.0
Total Split (%)	10.0%	35.5%	35.5%	18.2%	43.6%	12.7%	30.0%	16.4%	33.6%	10.0%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	623	16	231	1052	120	128	434	26	114	1562	354
Future Volume (veh/h)	200	623	16	231	1052	120	128	434	26	114	1562	354
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	623	16	231	1052	120	128	434	26	114	1562	354
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	1986	616	453	1929	220	185	1440	85	370	1462	562
Arrive On Green	0.02	0.13	0.13	0.09	0.41	0.41	0.02	0.10	0.10	0.02	0.09	0.09
Sat Flow, veh/h	1781	5106	1585	1781	4649	530	1781	4929	293	1781	5106	1585
Grp Volume(v), veh/h	200	623	16	231	770	402	128	298	162	114	1562	354
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1775	1781	1702	1818	1781	1702	1585
Q Serve(g_s), s	7.3	12.2	1.0	8.3	18.8	18.9	5.5	9.0	9.1	4.9	31.5	21.7
Cycle Q Clear(g_c), s	7.3	12.2	1.0	8.3	18.8	18.9	5.5	9.0	9.1	4.9	31.5	21.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	303	1986	616	453	1412	736	185	994	531	370	1462	562
V/C Ratio(X)	0.66	0.31	0.03	0.51	0.55	0.55	0.69	0.30	0.30	0.31	1.07	0.63
Avail Cap(c_a), veh/h	303	1986	616	552	1412	736	235	994	531	495	1462	562
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	34.6	29.7	17.3	24.3	24.3	30.7	39.2	39.3	26.5	49.8	38.0
Incr Delay (d2), s/veh	4.1	0.4	0.1	0.3	1.5	2.9	3.4	0.2	0.5	0.2	44.1	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	9.3	0.7	5.7	11.9	12.7	4.5	7.0	7.7	3.8	28.7	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	35.0	29.8	17.6	25.8	27.2	34.1	39.5	39.7	26.7	93.9	40.6
LnGrp LOS	C	D	C	B	C	C	C	D	D	C	F	D
Approach Vol, veh/h		839			1403			588			2030	
Approach Delay, s/veh		32.6			24.9			38.4			80.8	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	37.6	13.9	48.3	10.9	37.0	11.0	51.1
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	14.5	27.5	16.5	33.5	10.5	31.5	7.5	42.5
Max Q Clear Time (g_c+I1), s	6.9	11.1	10.3	14.2	7.5	33.5	9.3	20.9
Green Ext Time (p_c), s	0.0	3.2	0.1	3.8	0.0	0.0	0.0	7.5

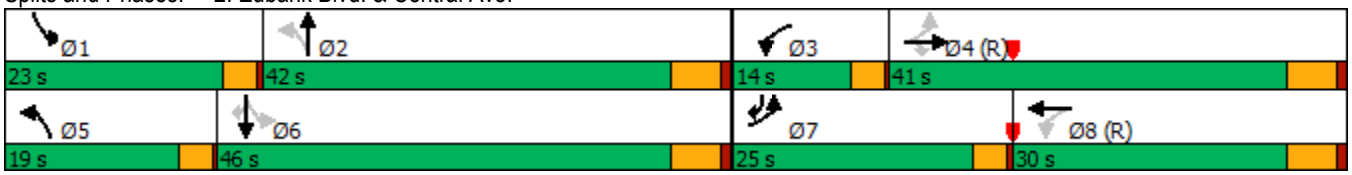
Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

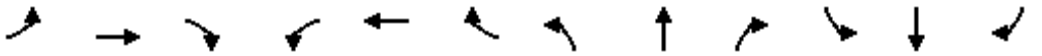
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	355	1147	18	90	764	201	1686	287	731	217
Future Volume (vph)	355	1147	18	90	764	201	1686	287	731	217
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	23.0	23.5	10.0
Total Split (s)	25.0	41.0	41.0	14.0	30.0	19.0	42.0	23.0	46.0	25.0
Total Split (%)	20.8%	34.2%	34.2%	11.7%	25.0%	15.8%	35.0%	19.2%	38.3%	20.8%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	1147	18	90	764	259	201	1686	137	287	731	217
Future Volume (veh/h)	355	1147	18	90	764	259	201	1686	137	287	731	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	355	1147	18	90	764	259	201	1686	137	287	731	217
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	1799	558	218	913	306	370	1464	119	313	1805	818
Arrive On Green	0.05	0.12	0.12	0.10	0.48	0.48	0.03	0.10	0.10	0.14	0.35	0.35
Sat Flow, veh/h	1781	5106	1585	1781	3778	1268	1781	4814	390	1781	5106	1585
Grp Volume(v), veh/h	355	1147	18	90	688	335	201	1191	632	287	731	217
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1642	1781	1702	1800	1781	1702	1585
Q Serve(g_s), s	17.4	25.7	1.2	4.5	21.0	21.4	9.1	36.5	36.5	15.0	13.0	9.2
Cycle Q Clear(g_c), s	17.4	25.7	1.2	4.5	21.0	21.4	9.1	36.5	36.5	15.0	13.0	9.2
Prop In Lane	1.00		1.00	1.00		0.77	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	384	1799	558	218	822	397	370	1035	548	313	1805	818
V/C Ratio(X)	0.92	0.64	0.03	0.41	0.84	0.85	0.54	1.15	1.15	0.92	0.41	0.27
Avail Cap(c_a), veh/h	414	1799	558	282	822	397	435	1035	548	349	1805	818
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.98	0.98	0.98	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	34.5	45.7	34.9	30.6	29.0	29.1	26.6	54.0	54.0	35.6	29.3	16.3
Incr Delay (d2), s/veh	22.6	1.6	0.1	0.5	9.7	19.1	0.5	79.2	88.4	22.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.6	17.3	0.8	3.3	11.3	12.4	7.3	39.9	43.8	10.8	8.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	47.3	35.0	31.0	38.6	48.1	27.1	133.2	142.3	58.0	29.4	16.5
LnGrp LOS	E	D	C	C	D	D	C	F	F	E	C	B
Approach Vol, veh/h		1520			1113			2024			1235	
Approach Delay, s/veh		49.4			40.9			125.5			33.8	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	42.0	9.7	47.8	14.6	47.9	23.0	34.5
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	19.5	36.5	10.5	35.5	15.5	40.5	21.5	24.5
Max Q Clear Time (g_c+I1), s	17.0	38.5	6.5	27.7	11.1	15.0	19.4	23.4
Green Ext Time (p_c), s	0.1	0.0	0.0	4.3	0.1	8.2	0.1	0.7

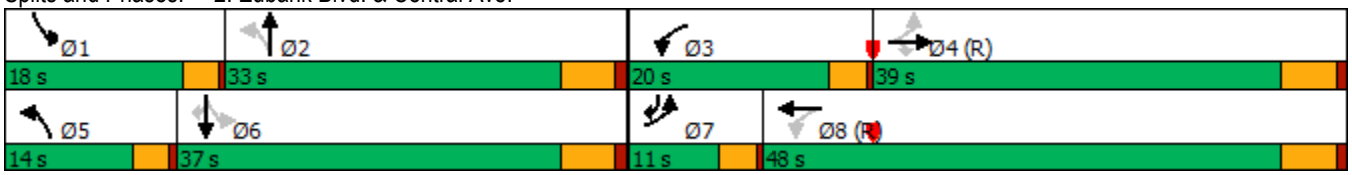
Intersection Summary	
HCM 6th Ctrl Delay	70.7
HCM 6th LOS	E

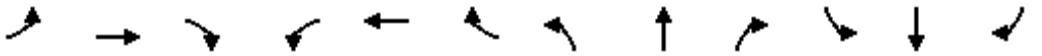
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	358	1151	18	91	769	201	1689	290	732	218
Future Volume (vph)	358	1151	18	91	769	201	1689	290	732	218
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	18.0	23.5	10.0
Total Split (s)	11.0	39.0	39.0	20.0	48.0	14.0	33.0	18.0	37.0	11.0
Total Split (%)	10.0%	35.5%	35.5%	18.2%	43.6%	12.7%	30.0%	16.4%	33.6%	10.0%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	1151	18	91	769	259	201	1689	137	290	732	218
Future Volume (veh/h)	358	1151	18	91	769	259	201	1689	137	290	732	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	1151	18	91	769	259	201	1689	137	290	732	218
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	2086	647	242	1462	488	324	1204	97	300	1462	562
Arrive On Green	0.02	0.13	0.13	0.05	0.39	0.39	0.03	0.08	0.08	0.04	0.09	0.09
Sat Flow, veh/h	1781	5106	1585	1781	3785	1263	1781	4814	390	1781	5106	1585
Grp Volume(v), veh/h	358	1151	18	91	691	337	201	1193	633	290	732	218
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1643	1781	1702	1800	1781	1702	1585
Q Serve(g_s), s	7.5	23.2	1.1	3.4	17.2	17.4	9.0	27.5	27.5	13.8	15.0	13.0
Cycle Q Clear(g_c), s	7.5	23.2	1.1	3.4	17.2	17.4	9.0	27.5	27.5	13.8	15.0	13.0
Prop In Lane	1.00		1.00	1.00		0.77	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	312	2086	647	242	1315	635	324	851	450	300	1462	562
V/C Ratio(X)	1.15	0.55	0.03	0.38	0.53	0.53	0.62	1.40	1.41	0.97	0.50	0.39
Avail Cap(c_a), veh/h	312	2086	647	428	1315	635	324	851	450	300	1462	562
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	38.2	28.6	21.1	26.0	26.1	29.3	50.5	50.5	35.8	42.3	34.4
Incr Delay (d2), s/veh	94.2	0.9	0.1	0.4	1.5	3.2	2.7	188.1	195.5	42.3	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.2	15.7	0.7	2.4	11.1	11.3	7.6	52.6	56.6	15.2	11.1	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.2	39.1	28.7	21.4	27.5	29.2	32.0	238.6	245.9	78.1	42.7	35.0
LnGrp LOS	F	D	C	C	C	C	C	F	F	E	D	D
Approach Vol, veh/h		1527			1119			2027			1240	
Approach Delay, s/veh		59.4			27.5			220.4			49.6	
Approach LOS		E			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	33.0	8.6	50.4	14.0	37.0	11.0	48.0
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	14.5	27.5	16.5	33.5	10.5	31.5	7.5	42.5
Max Q Clear Time (g_c+I1), s	15.8	29.5	5.4	25.2	11.0	17.0	9.5	19.4
Green Ext Time (p_c), s	0.0	0.0	0.0	4.5	0.0	6.2	0.0	6.7

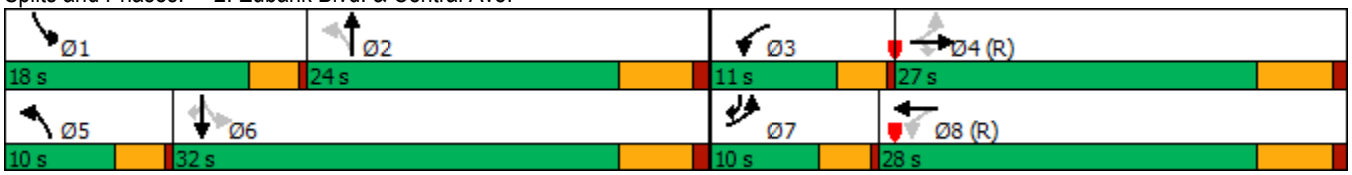
Intersection Summary	
HCM 6th Ctrl Delay	106.5
HCM 6th LOS	F

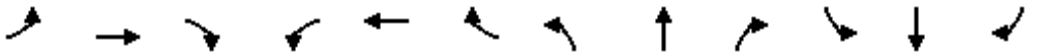
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	200	623	16	231	1052	128	434	114	1562	354
Future Volume (vph)	200	623	16	231	1052	128	434	114	1562	354
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	18.0	23.5	10.0
Total Split (s)	10.0	27.0	27.0	11.0	28.0	10.0	24.0	18.0	32.0	10.0
Total Split (%)	12.5%	33.8%	33.8%	13.8%	35.0%	12.5%	30.0%	22.5%	40.0%	12.5%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	623	16	231	1052	120	128	434	26	114	1562	354
Future Volume (veh/h)	200	623	16	231	1052	120	128	434	26	114	1562	354
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	623	16	231	1052	120	128	434	26	114	1562	354
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	1447	449	402	1375	157	219	1657	98	453	1687	653
Arrive On Green	0.08	0.28	0.28	0.09	0.30	0.30	0.07	0.34	0.34	0.06	0.33	0.33
Sat Flow, veh/h	1781	5106	1585	1781	4649	530	1781	4929	293	1781	5106	1585
Grp Volume(v), veh/h	200	623	16	231	770	402	128	298	162	114	1562	354
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1775	1781	1702	1818	1781	1702	1585
Q Serve(g_s), s	6.4	8.0	0.6	7.4	16.5	16.5	3.7	5.1	5.2	3.3	23.6	13.5
Cycle Q Clear(g_c), s	6.4	8.0	0.6	7.4	16.5	16.5	3.7	5.1	5.2	3.3	23.6	13.5
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	278	1447	449	402	1007	525	219	1144	611	453	1687	653
V/C Ratio(X)	0.72	0.43	0.04	0.57	0.76	0.77	0.59	0.26	0.26	0.25	0.93	0.54
Avail Cap(c_a), veh/h	278	1447	449	402	1007	525	243	1144	611	666	1691	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	23.4	20.8	18.4	25.6	25.6	19.9	19.3	19.3	15.9	25.8	17.8
Incr Delay (d2), s/veh	7.5	0.9	0.1	1.3	5.5	10.2	1.5	0.2	0.3	0.1	9.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	5.5	0.4	5.1	11.1	12.3	2.6	3.3	3.7	2.2	15.1	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	24.3	20.9	19.7	31.1	35.9	21.4	19.5	19.7	16.1	35.1	19.0
LnGrp LOS	C	C	C	B	C	D	C	B	B	B	D	B
Approach Vol, veh/h		839			1403			588			2030	
Approach Delay, s/veh		25.2			30.6			20.0			31.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	32.4	11.0	28.2	8.9	31.9	10.0	29.2
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	14.5	18.5	7.5	21.5	6.5	26.5	6.5	22.5
Max Q Clear Time (g_c+I1), s	5.3	7.2	9.4	10.0	5.7	25.6	8.4	18.5
Green Ext Time (p_c), s	0.0	2.6	0.0	3.0	0.0	0.8	0.0	2.4

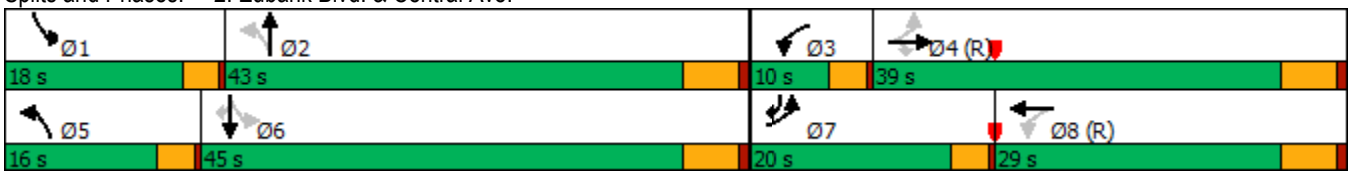
Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

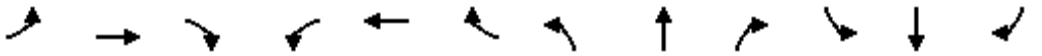
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	358	1151	18	91	769	201	1689	290	732	218
Future Volume (vph)	358	1151	18	91	769	201	1689	290	732	218
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	5	2	1	6	7
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	3.0	18.0	18.0	3.0	18.0	3.0	18.0	3.0	18.0	3.0
Minimum Split (s)	10.0	23.5	23.5	10.0	23.5	10.0	23.5	18.0	23.5	10.0
Total Split (s)	20.0	39.0	39.0	10.0	29.0	16.0	43.0	18.0	45.0	20.0
Total Split (%)	18.2%	35.5%	35.5%	9.1%	26.4%	14.5%	39.1%	16.4%	40.9%	18.2%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5	3.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 2: Eubank Blvd. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	1151	18	91	769	259	201	1689	137	290	732	218
Future Volume (veh/h)	358	1151	18	91	769	259	201	1689	137	290	732	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	1151	18	91	769	259	201	1689	137	290	732	218
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1581	491	214	809	270	392	1641	133	300	1951	843
Arrive On Green	0.15	0.31	0.31	0.05	0.21	0.21	0.09	0.34	0.34	0.13	0.38	0.38
Sat Flow, veh/h	1781	5106	1585	1781	3785	1263	1781	4814	390	1781	5106	1585
Grp Volume(v), veh/h	358	1151	18	91	691	337	201	1193	633	290	732	218
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1643	1781	1702	1800	1781	1702	1585
Q Serve(g_s), s	16.5	22.1	0.9	4.3	22.0	22.3	8.0	37.5	37.5	13.7	11.4	8.2
Cycle Q Clear(g_c), s	16.5	22.1	0.9	4.3	22.0	22.3	8.0	37.5	37.5	13.7	11.4	8.2
Prop In Lane	1.00		1.00	1.00		0.77	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	339	1581	491	214	727	351	392	1160	614	300	1951	843
V/C Ratio(X)	1.06	0.73	0.04	0.43	0.95	0.96	0.51	1.03	1.03	0.97	0.38	0.26
Avail Cap(c_a), veh/h	339	1581	491	223	727	351	432	1160	614	300	1951	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	33.8	26.5	31.8	42.7	42.8	20.4	36.3	36.3	33.2	24.5	14.0
Incr Delay (d2), s/veh	50.5	1.5	0.1	0.5	23.2	39.0	0.4	33.9	44.5	42.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.8	12.3	0.6	3.3	16.7	18.3	5.7	27.9	31.5	12.2	7.8	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	35.3	26.6	32.3	65.9	81.8	20.7	70.2	80.7	75.5	24.7	14.2
LnGrp LOS	F	D	C	C	E	F	C	F	F	E	C	B
Approach Vol, veh/h		1527			1119			2027			1240	
Approach Delay, s/veh		46.0			67.9			68.6			34.7	
Approach LOS		D			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	43.0	9.4	39.6	13.5	47.5	20.0	29.0
Change Period (Y+Rc), s	3.5	5.5	3.5	5.5	3.5	5.5	3.5	5.5
Max Green Setting (Gmax), s	14.5	37.5	6.5	33.5	12.5	39.5	16.5	23.5
Max Q Clear Time (g_c+I1), s	15.7	39.5	6.3	24.1	10.0	13.4	18.5	24.3
Green Ext Time (p_c), s	0.0	0.0	0.0	4.9	0.0	8.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	55.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	32	487	52	0	1865
Future Vol, veh/h	0	32	487	52	0	1865
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	487	52	0	1865

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	270	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	620	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	620	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	620	-
HCM Lane V/C Ratio	-	-	0.052	-
HCM Control Delay (s)	-	-	11.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	1998	44	0	875
Future Vol, veh/h	0	16	1998	44	0	875
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	1998	44	0	875

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1021	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	201	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	201	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	201	-
HCM Lane V/C Ratio	-	-	0.08	-
HCM Control Delay (s)	-	-	24.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	763	1219	56	0	52
Future Vol, veh/h	0	763	1219	56	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	763	1219	56	0	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	638
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	359
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	359
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	359
HCM Lane V/C Ratio	-	-	-	0.145
HCM Control Delay (s)	-	-	-	16.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	1331	896	32	44	44
Future Vol, veh/h	36	1331	896	32	44	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	1331	896	32	44	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	928	0	-	0	1516	464
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	604	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	424	-	-	-	169	466
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	424	-	-	-	155	466
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	29.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	424	-	-	-	233
HCM Lane V/C Ratio	0.085	-	-	-	0.378
HCM Control Delay (s)	14.3	-	-	-	29.5
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	1.7

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	6	6	11	17	142	11	590	11	98	1897	57
Future Vol, veh/h	11	6	6	11	17	142	11	590	11	98	1897	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	260	-	117	-	-	240
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	6	6	11	17	142	11	590	11	98	1897	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2360	2716	949	1760	2762	295	1954	0	0	601	0	0
Stage 1	2093	2093	-	612	612	-	-	-	-	-	-	-
Stage 2	267	623	-	1148	2150	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*122	*111	*279	*122	*111	*794	*417	-	-	*999	-	-
Stage 1	*252	*231	-	*834	*767	-	-	-	-	-	-	-
Stage 2	*849	*757	-	*252	*231	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*84	*97	*279	*105	*97	*794	*417	-	-	*999	-	-
Mov Cap-2 Maneuver	*187	*173	-	*176	*168	-	-	-	-	-	-	-
Stage 1	*246	*208	-	*813	*747	-	-	-	-	-	-	-
Stage 2	*663	*738	-	*216	*208	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.3	14	0.2	0.4
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 417	-	-	200	172	656	* 999	-	-
HCM Lane V/C Ratio	0.026	-	-	0.115	0.113	0.229	0.098	-	-
HCM Control Delay (s)	13.9	-	-	25.3	28.6	12.1	9	-	-
HCM Lane LOS	B	-	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.4	0.9	0.3	-	-

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	6	6	11	17	142	11	602	11	98	1905	57
Future Vol, veh/h	11	6	6	11	17	142	11	602	11	98	1905	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	260	-	117	270	-	240
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	6	6	11	17	142	11	602	11	98	1905	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2372	2736	953	1776	2782	301	1962	0	0	613	0	0
Stage 1	2101	2101	-	624	624	-	-	-	-	-	-	-
Stage 2	271	635	-	1152	2158	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*122	*111	*279	*122	*111	*794	*417	-	-	986	-	-
Stage 1	*252	*231	-	*816	*756	-	-	-	-	-	-	-
Stage 2	*849	*747	-	*252	*231	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*78	*97	*279	*103	*97	*794	*417	-	-	986	-	-
Mov Cap-2 Maneuver	*78	*97	-	*103	*97	-	-	-	-	-	-	-
Stage 1	*246	*208	-	*795	*737	-	-	-	-	-	-	-
Stage 2	*663	*727	-	*216	*208	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.7	17.8	0.2	0.4
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 417	-	-	103	100	565	986	-	-
HCM Lane V/C Ratio	0.026	-	-	0.223	0.195	0.266	0.099	-	-
HCM Control Delay (s)	13.9	-	-	49.7	49.5	13.7	9.1	-	-
HCM Lane LOS	B	-	-	E	E	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.7	1.1	0.3	-	-

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	10	10	17	33	99	66	1875	56	173	915	84
Future Vol, veh/h	31	10	10	17	33	99	66	1875	56	173	915	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	260	-	117	-	-	240
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	10	10	17	33	99	66	1875	56	173	915	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2160	3324	458	2816	3352	938	999	0	0	1931	0	0
Stage 1	1261	1261	-	2007	2007	-	-	-	-	-	-	-
Stage 2	899	2063	-	809	1345	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*335	*76	*711	*335	*68	*480	*1063	-	-	*604	-	-
Stage 1	*643	*587	-	*513	*469	-	-	-	-	-	-	-
Stage 2	*513	*469	-	*643	*587	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*174	*51	*711	*235	*46	*480	*1063	-	-	*604	-	-
Mov Cap-2 Maneuver	*165	*171	-	*296	*199	-	-	-	-	-	-	-
Stage 1	*603	*419	-	*481	*440	-	-	-	-	-	-	-
Stage 2	*354	*440	-	*442	*419	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.7	18.8	0.3	2
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 1063	-	-	196	239	399	* 604	-	-
HCM Lane V/C Ratio	0.062	-	-	0.26	0.14	0.289	0.286	-	-
HCM Control Delay (s)	8.6	-	-	29.7	22.5	17.7	13.3	-	-
HCM Lane LOS	A	-	-	D	C	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	0.5	1.2	1.2	-	-

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

Intersection	
Int Delay, s/veh	12.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	10	10	17	33	99	66	1887	56	173	923	84
Future Vol, veh/h	31	10	10	17	33	99	66	1887	56	173	923	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	260	-	117	-	-	240
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	10	10	17	33	99	66	1887	56	173	923	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2172	3344	462	2832	3372	944	1007	0	0	1943	0	0
Stage 1	1269	1269	-	2019	2019	-	-	-	-	-	-	-
Stage 2	903	2075	-	813	1353	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	36	~ 8	547	~ 12	~ 8	226	684	-	-	~ 134	-	-
Stage 1	174	238	-	38	101	-	-	-	-	-	-	-
Stage 2	277	94	-	329	216	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	547	-	0	226	684	-	-	~ 134	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	157	0	-	34	91	-	-	-	-	-	-	-
Stage 2	90	85	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	35
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	684	-	-	-	-	226	~ 134	-	-
HCM Lane V/C Ratio	0.096	-	-	-	-	0.511	1.291	-	-
HCM Control Delay (s)	10.8	-	-	-	-	36.5	238.4	-	-
HCM Lane LOS	B	-	-	-	-	E	F	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-	2.6	10.9	-	-

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	47	6	6	155	24	561	24	80	1899	67
Future Vol, veh/h	53	0	47	6	6	155	24	561	24	80	1899	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	250	-	163
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	0	47	6	6	155	24	561	24	80	1899	67

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2334	2692	950	1731	2747	293	1966	0	0	585	0	0
Stage 1	2059	2059	-	621	621	-	-	-	-	-	-	-
Stage 2	275	633	-	1110	2126	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*317	*289	*279	*317	*289	*794	*417	-	-	*999	-	-
Stage 1	*252	*231	-	*820	*759	-	-	-	-	-	-	-
Stage 2	*849	*749	-	*252	*231	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*218	*243	*279	*231	*243	*794	*417	-	-	*999	-	-
Mov Cap-2 Maneuver	*210	*191	-	*147	*165	-	-	-	-	-	-	-
Stage 1	*231	*212	-	*750	*694	-	-	-	-	-	-	-
Stage 2	*619	*684	-	*193	*212	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.7	12.4	0.6	0.3
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 417	-	-	238	147	695	* 999	-	-
HCM Lane V/C Ratio	0.058	-	-	0.42	0.041	0.232	0.08	-	-
HCM Control Delay (s)	14.2	-	-	30.7	30.5	11.7	8.9	-	-
HCM Lane LOS	B	-	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2	0.1	0.9	0.3	-	-

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	47	6	6	155	24	563	24	80	1901	67
Future Vol, veh/h	53	0	47	6	6	155	24	563	24	80	1901	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	250	-	163
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	0	47	6	6	155	24	563	24	80	1901	67

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2337	2696	951	1734	2751	294	1968	0	0	587	0	0
Stage 1	2061	2061	-	623	623	-	-	-	-	-	-	-
Stage 2	276	635	-	1111	2128	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*317	*289	*279	*317	*289	*794	*417	-	-	*999	-	-
Stage 1	*252	*231	-	*818	*757	-	-	-	-	-	-	-
Stage 2	*849	*747	-	*252	*231	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*218	*243	*279	*231	*243	*794	*417	-	-	*999	-	-
Mov Cap-2 Maneuver	*210	*191	-	*147	*165	-	-	-	-	-	-	-
Stage 1	*231	*212	-	*748	*692	-	-	-	-	-	-	-
Stage 2	*619	*683	-	*193	*212	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.7	12.4	0.6	0.3
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 417	-	-	238	147	695	* 999	-	-
HCM Lane V/C Ratio	0.058	-	-	0.42	0.041	0.232	0.08	-	-
HCM Control Delay (s)	14.2	-	-	30.7	30.5	11.7	8.9	-	-
HCM Lane LOS	B	-	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2	0.1	0.9	0.3	-	-

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

Intersection	
Int Delay, s/veh	15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	24	36	18	36	163	79	1839	74	413	680	76
Future Vol, veh/h	76	24	36	18	36	163	79	1839	74	413	680	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	250	-	163
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	24	36	18	36	163	79	1839	74	413	680	76

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2418	3577	340	3212	3616	957	756	0	0	1913	0	0
Stage 1	1506	1506	-	2034	2034	-	-	-	-	-	-	-
Stage 2	912	2071	-	1178	1582	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*294	40	*815	*219	*~ 34	*502	*1219	-	-	*631	-	-
Stage 1	*369	399	-	*536	*490	-	-	-	-	-	-	-
Stage 2	*537	461	-	*660	*359	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*~ 21	~ 14	*815	*52	*~ 12	*502	*1219	-	-	*631	-	-
Mov Cap-2 Maneuver	*~ -105	37	-	*88	*39	-	-	-	-	-	-	-
Stage 1	*369	138	-	*536	*490	-	-	-	-	-	-	-
Stage 2	*336	461	-	*180	*124	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	197.8	0.3	7.4
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 1219	-	-	+	88	159	* 631	-	-
HCM Lane V/C Ratio	0.065	-	-	-	0.205	1.252	0.655	-	-
HCM Control Delay (s)	8.2	-	-	4.2	56.1	210.6	20.9	-	-
HCM Lane LOS	A	-	-	A	F	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7	11.5	4.8	-	-

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

Intersection	
Int Delay, s/veh	21.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	24	36	18	36	163	79	1847	74	413	688	76
Future Vol, veh/h	76	24	36	18	36	163	79	1847	74	413	688	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	0	-	-	250	-	163
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	24	36	18	36	163	79	1847	74	413	688	76

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2429	3593	344	3224	3632	961	764	0	0	1921	0	0
Stage 1	1514	1514	-	2042	2042	-	-	-	-	-	-	-
Stage 2	915	2079	-	1182	1590	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	6.94	6.99	6.54	7.14	4.14	-	-	5.34	-	-
Critical Hdwy Stg 1	6.54	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.32	3.67	4.02	3.92	2.22	-	-	3.12	-	-
Pot Cap-1 Maneuver	*293	*38	*819	*209	*~ 31	*488	*1225	-	-	*613	-	-
Stage 1	*356	*388	-	*521	*476	-	-	-	-	-	-	-
Stage 2	*521	*476	-	*640	*349	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	-	*~ 12	*819	*24	*~ 10	*488	*1225	-	-	*613	-	-
Mov Cap-2 Maneuver	*~ -157	*27	-	*70	*~ 31	-	-	-	-	-	-	-
Stage 1	*333	*126	-	*488	*446	-	-	-	-	-	-	-
Stage 2	*299	*446	-	*162	*114	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		298.5	0.3	7.8
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 1225	-	-	-	70	133	* 613	-	-
HCM Lane V/C Ratio	0.064	-	-	-	0.257	1.496	0.674	-	-
HCM Control Delay (s)	8.1	-	-	-	73.4	$ 318.9	22.1	-	-
HCM Lane LOS	A	-	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9	13.7	5.1	-	-

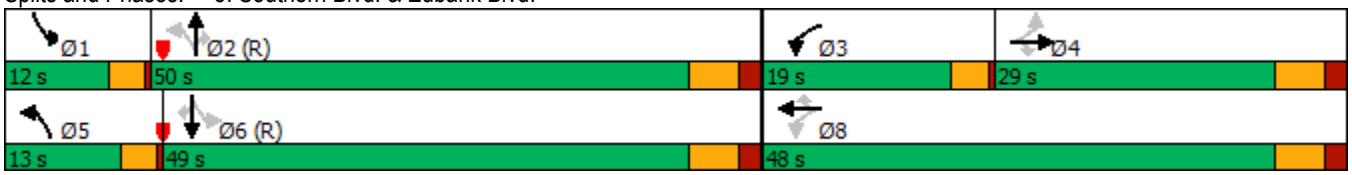
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	130	11	616	524	171	96	309	17	140	1867	36
Future Volume (vph)	72	130	11	616	524	171	96	309	17	140	1867	36
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	10.0	24.0	24.0	10.0	26.0	26.0	10.0	26.0	26.0
Total Split (s)	29.0	29.0	29.0	19.0	48.0	48.0	13.0	50.0	50.0	12.0	49.0	49.0
Total Split (%)	26.4%	26.4%	26.4%	17.3%	43.6%	43.6%	11.8%	45.5%	45.5%	10.9%	44.5%	44.5%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

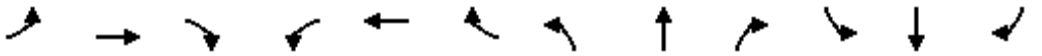
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 48.4 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 5: Southern Blvd. & Eubank Blvd.



HCM 6th Signalized Intersection Summary
5: Southern Blvd. & Eubank Blvd.

09/29/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	130	11	616	524	171	96	309	17	140	1867	36
Future Volume (veh/h)	72	130	11	616	524	171	96	309	17	140	1867	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	130	0	616	524	0	96	309	0	140	1867	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	336		907	659		182	2283		612	2358	
Arrive On Green	0.18	0.18	0.00	0.14	0.35	0.00	0.04	0.45	0.00	0.06	0.46	0.00
Sat Flow, veh/h	878	1870	1585	3456	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	72	130	0	616	524	0	96	309	0	140	1867	0
Grp Sat Flow(s),veh/h/ln	878	1870	1585	1728	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.8	6.7	0.0	15.5	27.7	0.0	3.2	3.9	0.0	4.6	34.1	0.0
Cycle Q Clear(g_c), s	17.6	6.7	0.0	15.5	27.7	0.0	3.2	3.9	0.0	4.6	34.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	336		907	659		182	2283		612	2358	
V/C Ratio(X)	0.47	0.39		0.68	0.79		0.53	0.14		0.23	0.79	
Avail Cap(c_a), veh/h	179	391		907	714		256	2283		644	2358	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.5	39.8	0.0	29.9	32.0	0.0	22.8	17.9	0.0	14.6	25.1	0.0
Incr Delay (d2), s/veh	0.8	0.3	0.0	1.7	5.1	0.0	0.9	0.1	0.0	0.1	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	5.6	0.0	10.8	19.0	0.0	2.3	2.7	0.0	3.2	19.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	40.0	0.0	31.6	37.2	0.0	23.6	18.0	0.0	14.6	27.9	0.0
LnGrp LOS	D	D		C	D		C	B		B	C	
Approach Vol, veh/h		202	A		1140	A		405	A		2007	A
Approach Delay, s/veh		43.3			34.1			19.4			27.0	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	55.2	19.0	25.8	8.4	56.8		44.8				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	8.5	44.0	15.5	23.0	9.5	43.0		42.0				
Max Q Clear Time (g_c+I1), s	6.6	5.9	17.5	19.6	5.2	36.1		29.7				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.2	0.0	6.1		1.7				

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

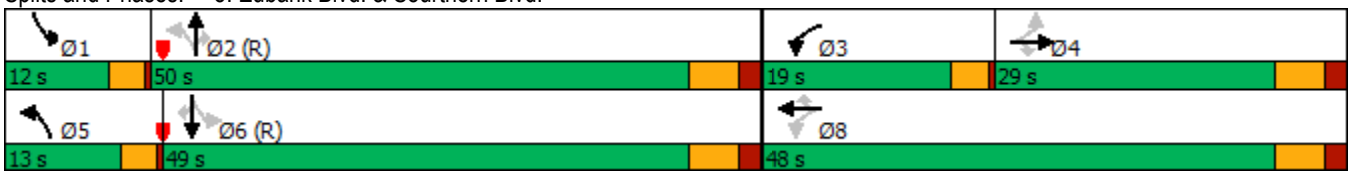
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	130	11	616	524	175	96	310	17	141	1868	36
Future Volume (vph)	72	130	11	616	524	175	96	310	17	141	1868	36
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	10.0	24.0	24.0	10.0	26.0	26.0	10.0	26.0	26.0
Total Split (s)	29.0	29.0	29.0	19.0	48.0	48.0	13.0	50.0	50.0	12.0	49.0	49.0
Total Split (%)	26.4%	26.4%	26.4%	17.3%	43.6%	43.6%	11.8%	45.5%	45.5%	10.9%	44.5%	44.5%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

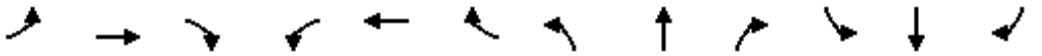
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 48.4 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 5: Eubank Blvd. & Sourthern Blvd.



HCM 6th Signalized Intersection Summary
5: Eubank Blvd. & Sourthern Blvd.

09/29/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	130	11	616	524	175	96	310	17	141	1868	36
Future Volume (veh/h)	72	130	11	616	524	175	96	310	17	141	1868	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	130	0	616	524	0	96	310	0	141	1868	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	336		907	659		182	2281		612	2358	
Arrive On Green	0.18	0.18	0.00	0.14	0.35	0.00	0.04	0.45	0.00	0.06	0.46	0.00
Sat Flow, veh/h	878	1870	1585	3456	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	72	130	0	616	524	0	96	310	0	141	1868	0
Grp Sat Flow(s),veh/h/ln	878	1870	1585	1728	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.8	6.7	0.0	15.5	27.7	0.0	3.2	3.9	0.0	4.7	34.2	0.0
Cycle Q Clear(g_c), s	17.6	6.7	0.0	15.5	27.7	0.0	3.2	3.9	0.0	4.7	34.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	336		907	659		182	2281		612	2358	
V/C Ratio(X)	0.47	0.39		0.68	0.79		0.53	0.14		0.23	0.79	
Avail Cap(c_a), veh/h	179	391		907	714		256	2281		643	2358	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.5	39.8	0.0	29.9	32.0	0.0	22.8	17.9	0.0	14.5	25.1	0.0
Incr Delay (d2), s/veh	0.8	0.3	0.0	1.7	5.1	0.0	0.9	0.1	0.0	0.1	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	5.6	0.0	10.8	19.0	0.0	2.3	2.7	0.0	3.2	19.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	40.0	0.0	31.6	37.2	0.0	23.7	18.0	0.0	14.6	27.9	0.0
LnGrp LOS	D	D		C	D		C	B		B	C	
Approach Vol, veh/h		202	A		1140	A		406	A		2009	A
Approach Delay, s/veh		43.3			34.1			19.4			27.0	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	55.1	19.0	25.8	8.4	56.8		44.8				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	8.5	44.0	15.5	23.0	9.5	43.0		42.0				
Max Q Clear Time (g_c+I1), s	6.7	5.9	17.5	19.6	5.2	36.2		29.7				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.2	0.0	6.1		1.7				

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

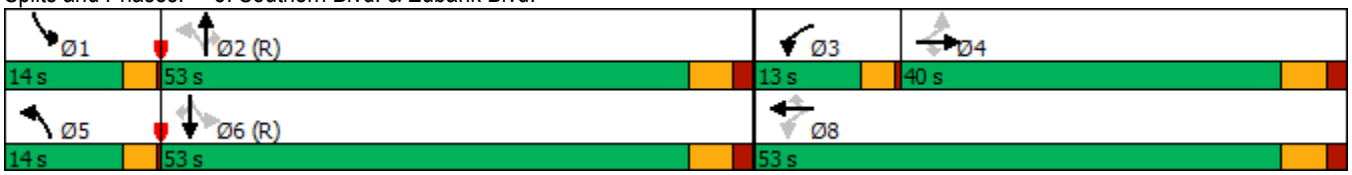
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

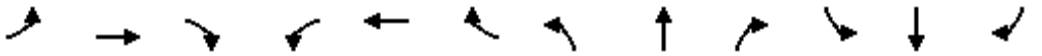
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	214	4	96	192	96	94	1770	895	610	529	45
Future Volume (vph)	105	214	4	96	192	96	94	1770	895	610	529	45
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	10.0	24.0	24.0	10.0	26.0	26.0	10.0	26.0	26.0
Total Split (s)	40.0	40.0	40.0	13.0	53.0	53.0	14.0	53.0	53.0	14.0	53.0	53.0
Total Split (%)	33.3%	33.3%	33.3%	10.8%	44.2%	44.2%	11.7%	44.2%	44.2%	11.7%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81.6 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 5: Southern Blvd. & Eubank Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	214	4	96	192	96	94	1770	895	610	529	45
Future Volume (veh/h)	105	214	4	96	192	96	94	1770	895	610	529	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	214	0	96	192	0	94	1770	0	610	529	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	254		308	381		632	2960		312	3220	
Arrive On Green	0.14	0.14	0.00	0.04	0.20	0.00	0.04	0.58	0.00	0.09	0.63	0.00
Sat Flow, veh/h	1191	1870	1585	3456	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	105	214	0	96	192	0	94	1770	0	610	529	0
Grp Sat Flow(s),veh/h/ln	1191	1870	1585	1728	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	10.3	13.4	0.0	2.8	10.9	0.0	2.6	26.8	0.0	10.5	5.1	0.0
Cycle Q Clear(g_c), s	13.1	13.4	0.0	2.8	10.9	0.0	2.6	26.8	0.0	10.5	5.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	254		308	381		632	2960		312	3220	
V/C Ratio(X)	0.54	0.84		0.31	0.50		0.15	0.60		1.95	0.16	
Avail Cap(c_a), veh/h	369	530		449	733		723	2960		312	3220	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.8	50.6	0.0	41.4	42.4	0.0	9.3	16.2	0.0	26.5	9.1	0.0
Incr Delay (d2), s/veh	0.9	2.9	0.0	0.2	0.4	0.0	0.0	0.9	0.0	441.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.6	10.6	0.0	2.1	8.7	0.0	1.7	15.0	0.0	65.4	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	53.5	0.0	41.6	42.8	0.0	9.4	17.1	0.0	467.8	9.2	0.0
LnGrp LOS	D	D		D	D		A	B		F	A	
Approach Vol, veh/h		319	A		288	A		1864	A		1139	A
Approach Delay, s/veh		53.2			42.4			16.7			254.8	
Approach LOS		D			D			B			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	75.6	8.1	22.3	7.9	81.7		30.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	10.5	47.0	9.5	34.0	10.5	47.0		47.0				
Max Q Clear Time (g_c+I1), s	12.5	28.8	4.8	15.4	4.6	7.1		12.9				
Green Ext Time (p_c), s	0.0	14.1	0.0	0.9	0.0	5.4		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		97.1	
HCM 6th LOS		F	

Notes

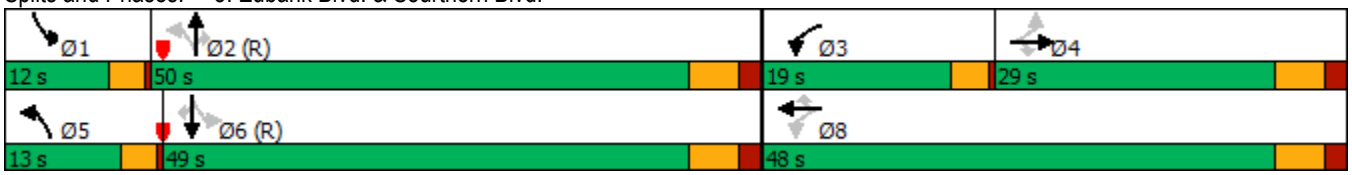
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

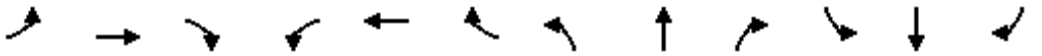
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	214	4	96	192	97	94	1771	895	611	530	45
Future Volume (vph)	105	214	4	96	192	97	94	1771	895	611	530	45
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	10.0	24.0	24.0	10.0	26.0	26.0	10.0	26.0	26.0
Total Split (s)	29.0	29.0	29.0	19.0	48.0	48.0	13.0	50.0	50.0	12.0	49.0	49.0
Total Split (%)	26.4%	26.4%	26.4%	17.3%	43.6%	43.6%	11.8%	45.5%	45.5%	10.9%	44.5%	44.5%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 48.4 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 5: Eubank Blvd. & Sourthern Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	214	4	96	192	97	94	1771	895	611	530	45
Future Volume (veh/h)	105	214	4	96	192	97	94	1771	895	611	530	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	214	0	96	192	0	94	1771	0	611	530	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	254		323	388		630	2934		297	3136	
Arrive On Green	0.14	0.14	0.00	0.04	0.21	0.00	0.04	0.57	0.00	0.08	0.61	0.00
Sat Flow, veh/h	1191	1870	1585	3456	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	105	214	0	96	192	0	94	1771	0	611	530	0
Grp Sat Flow(s),veh/h/ln	1191	1870	1585	1728	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	9.4	12.3	0.0	2.5	10.0	0.0	2.4	24.9	0.0	8.5	4.9	0.0
Cycle Q Clear(g_c), s	11.5	12.3	0.0	2.5	10.0	0.0	2.4	24.9	0.0	8.5	4.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	254		323	388		630	2934		297	3136	
V/C Ratio(X)	0.51	0.84		0.30	0.50		0.15	0.60		2.06	0.17	
Avail Cap(c_a), veh/h	292	391		673	714		717	2934		297	3136	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.1	46.4	0.0	37.8	38.5	0.0	8.7	15.2	0.0	22.9	9.1	0.0
Incr Delay (d2), s/veh	0.7	5.8	0.0	0.2	0.4	0.0	0.0	0.9	0.0	487.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	10.1	0.0	1.9	8.1	0.0	1.5	13.9	0.0	66.9	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	52.2	0.0	37.9	38.9	0.0	8.8	16.2	0.0	510.3	9.3	0.0
LnGrp LOS	D	D		D	D		A	B		F	A	
Approach Vol, veh/h		319	A		288	A		1865	A		1141	A
Approach Delay, s/veh		50.8			38.6			15.8			277.6	
Approach LOS		D			D			B			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	69.2	7.9	20.9	7.7	73.5		28.8				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	8.5	44.0	15.5	23.0	9.5	43.0		42.0				
Max Q Clear Time (g_c+I1), s	10.5	26.9	4.5	14.3	4.4	6.9		12.0				
Green Ext Time (p_c), s	0.0	13.4	0.1	0.7	0.0	5.3		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	103.4
HCM 6th LOS	F

Notes

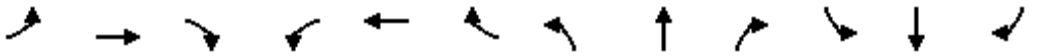
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	130	11	616	524	172	96	310	17	141	1868	36
Future Volume (vph)	72	130	11	616	524	172	96	310	17	141	1868	36
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	6.5	24.0	24.0	7.0	26.0	26.0	7.0	26.0	26.0
Total Split (s)	31.0	31.0	31.0	12.2	43.2	43.2	7.0	63.8	63.8	13.0	69.8	69.8
Total Split (%)	25.8%	25.8%	25.8%	10.2%	36.0%	36.0%	5.8%	53.2%	53.2%	10.8%	58.2%	58.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: Eubank Blvd. & Sourthern Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	130	11	616	524	172	96	310	17	141	1868	36
Future Volume (veh/h)	72	130	11	616	524	172	96	310	17	141	1868	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	130	0	616	524	0	96	310	0	141	1868	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	740		806	580		115	2575		196	1889	
Arrive On Green	0.21	0.21	0.00	0.07	0.31	0.00	0.03	0.50	0.00	0.06	0.53	0.00
Sat Flow, veh/h	878	3554	1585	3456	1870	1585	1781	5106	1585	3456	3554	1585
Grp Volume(v), veh/h	72	130	0	616	524	0	96	310	0	141	1868	0
Grp Sat Flow(s),veh/h/ln	878	1777	1585	1728	1870	1585	1781	1702	1585	1728	1777	1585
Q Serve(g_s), s	5.0	3.6	0.0	8.7	32.2	0.0	3.2	3.8	0.0	4.8	62.3	0.0
Cycle Q Clear(g_c), s	25.0	3.6	0.0	8.7	32.2	0.0	3.2	3.8	0.0	4.8	62.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	740		806	580		115	2575		196	1889	
V/C Ratio(X)	0.75	0.18		0.76	0.90		0.83	0.12		0.72	0.99	
Avail Cap(c_a), veh/h	96	740		806	580		115	2575		274	1889	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.7	39.0	0.0	39.9	39.7	0.0	29.0	15.7	0.0	55.7	27.7	0.0
Incr Delay (d2), s/veh	24.3	0.0	0.0	3.9	17.2	0.0	36.7	0.1	0.0	2.5	18.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	2.9	0.0	8.5	24.0	0.0	4.4	2.6	0.0	3.8	37.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	39.1	0.0	43.9	56.9	0.0	65.7	15.8	0.0	58.2	45.9	0.0
LnGrp LOS	F	D		D	E		E	B		E	D	
Approach Vol, veh/h		202	A		1140	A		406	A		2009	A
Approach Delay, s/veh		54.7			49.8			27.6			46.8	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	66.5	12.2	31.0	7.0	69.8		43.2				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	9.5	57.8	8.7	25.0	3.5	63.8		37.2				
Max Q Clear Time (g_c+I1), s	6.8	5.8	10.7	27.0	5.2	64.3		34.2				
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.0		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

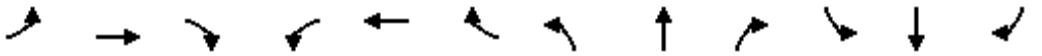
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	214	4	96	192	97	94	1771	895	611	530	45
Future Volume (vph)	105	214	4	96	192	97	94	1771	895	611	530	45
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	3.0	20.0	20.0	3.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	10.0	24.0	24.0	10.0	26.0	26.0	10.0	26.0	26.0
Total Split (s)	24.0	24.0	24.0	10.0	34.0	34.0	10.0	70.0	70.0	26.0	86.0	86.0
Total Split (%)	18.5%	18.5%	18.5%	7.7%	26.2%	26.2%	7.7%	53.8%	53.8%	20.0%	66.2%	66.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 5: Eubank Blvd. & Sourthern Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	214	4	96	192	97	94	1771	895	611	530	45
Future Volume (veh/h)	105	214	4	96	192	97	94	1771	895	611	530	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	214	0	96	192	0	94	1771	0	611	530	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	465		411	365		573	2617		598	2297	
Arrive On Green	0.13	0.13	0.00	0.04	0.20	0.00	0.04	0.51	0.00	0.17	0.65	0.00
Sat Flow, veh/h	1191	3554	1585	3456	1870	1585	1781	5106	1585	3456	3554	1585
Grp Volume(v), veh/h	105	214	0	96	192	0	94	1771	0	611	530	0
Grp Sat Flow(s),veh/h/ln	1191	1777	1585	1728	1870	1585	1781	1702	1585	1728	1777	1585
Q Serve(g_s), s	11.3	7.2	0.0	3.0	12.0	0.0	3.2	33.7	0.0	22.5	8.1	0.0
Cycle Q Clear(g_c), s	14.9	7.2	0.0	3.0	12.0	0.0	3.2	33.7	0.0	22.5	8.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	465		411	365		573	2617		598	2297	
V/C Ratio(X)	0.59	0.46		0.23	0.53		0.16	0.68		1.02	0.23	
Avail Cap(c_a), veh/h	187	492		453	403		592	2617		598	2297	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.3	52.3	0.0	44.9	46.9	0.0	13.8	23.7	0.0	53.8	9.5	0.0
Incr Delay (d2), s/veh	2.7	0.3	0.0	0.1	0.4	0.0	0.0	1.4	0.0	42.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	5.9	0.0	2.4	9.5	0.0	2.3	19.2	0.0	19.3	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	52.5	0.0	45.0	47.3	0.0	13.9	25.1	0.0	96.1	9.8	0.0
LnGrp LOS	E	D		D	D		B	C		F	A	
Approach Vol, veh/h		319	A		288	A		1865	A		1141	A
Approach Delay, s/veh		55.0			46.6			24.5			56.0	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	72.6	8.4	23.0	8.6	90.0		31.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0		6.0				
Max Green Setting (Gmax), s	22.5	64.0	6.5	18.0	6.5	80.0		28.0				
Max Q Clear Time (g_c+I1), s	24.5	35.7	5.0	16.9	5.2	10.1		14.0				
Green Ext Time (p_c), s	0.0	19.8	0.0	0.1	0.0	5.6		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		38.9	
HCM 6th LOS		D	

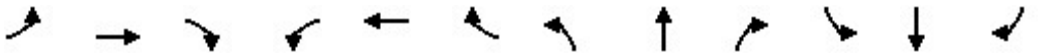
Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	789	95	1149	97	0	5	10
Future Volume (vph)	6	789	95	1149	97	0	5	10
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	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)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	85.2	85.2	85.2	85.2		14.8		14.8
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.13		0.13
v/c Ratio	0.02	0.23	0.22	0.32		0.61		0.11
Control Delay	4.0	3.6	3.0	1.8		49.9		28.8
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	4.0	3.6	3.0	1.8		49.9		28.8
LOS	A	A	A	A		D		C
Approach Delay		3.6		1.9		49.9		28.8
Approach LOS		A		A		D		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 4.4 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Moon St. & Central Ave.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	789	103	95	1149	103	97	0	25	5	10	10
Future Volume (veh/h)	6	789	103	95	1149	103	97	0	25	5	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	789	103	95	1149	103	97	0	25	5	10	10
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	3659	475	538	3816	342	184	2	33	59	95	76
Arrive On Green	0.80	0.80	0.80	1.00	1.00	1.00	0.11	0.00	0.11	0.11	0.11	0.11
Sat Flow, veh/h	444	4574	593	624	4770	427	1148	22	302	177	868	696
Grp Volume(v), veh/h	6	586	306	95	820	432	122	0	0	25	0	0
Grp Sat Flow(s),veh/h/ln	444	1702	1764	624	1702	1793	1472	0	0	1741	0	0
Q Serve(g_s), s	0.3	4.6	4.6	1.1	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.6	4.6	5.7	0.0	0.0	8.8	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.24	0.80		0.20	0.20		0.40
Lane Grp Cap(c), veh/h	420	2723	1411	538	2723	1435	219	0	0	229	0	0
V/C Ratio(X)	0.01	0.22	0.22	0.18	0.30	0.30	0.56	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	420	2723	1411	538	2723	1435	453	0	0	497	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.2	2.7	2.7	0.1	0.0	0.0	47.4	0.0	0.0	44.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.6	0.2	0.4	2.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	0.1	0.1	0.2	3.4	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.3	2.8	3.0	0.7	0.2	0.4	49.6	0.0	0.0	44.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		898			1347			122			25	
Approach Delay, s/veh		2.9			0.3			49.6			44.5	
Approach LOS		A			A			D			D	

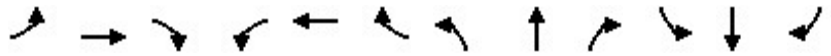
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.0		93.0		17.0		93.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		70.0		30.0		70.0				
Max Q Clear Time (g_c+I1), s		10.8		6.6		3.4		7.7				
Green Ext Time (p_c), s		0.6		10.0		0.1		19.0				

Intersection Summary												
HCM 6th Ctrl Delay			4.3									
HCM 6th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	805	95	1161	97	0	5	10
Future Volume (vph)	6	805	95	1161	97	0	5	10
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	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)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	85.2	85.2	85.2	85.2		14.8		14.8
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.13		0.13
v/c Ratio	0.02	0.23	0.22	0.32		0.61		0.11
Control Delay	4.0	3.6	3.0	1.8		49.9		28.8
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	4.0	3.6	3.0	1.8		49.9		28.8
LOS	A	A	A	A		D		C
Approach Delay		3.6		1.9		49.9		28.8
Approach LOS		A		A		D		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 4.4 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Moon St. & Central Ave.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	805	103	95	1161	103	97	0	25	5	10	10
Future Volume (veh/h)	6	805	103	95	1161	103	97	0	25	5	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	805	103	95	1161	103	97	0	25	5	10	10
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	416	3669	467	531	3820	339	184	2	33	59	95	76
Arrive On Green	0.80	0.80	0.80	1.00	1.00	1.00	0.11	0.00	0.11	0.11	0.11	0.11
Sat Flow, veh/h	439	4586	583	614	4775	423	1148	22	302	177	868	696
Grp Volume(v), veh/h	6	596	312	95	828	436	122	0	0	25	0	0
Grp Sat Flow(s),veh/h/ln	439	1702	1765	614	1702	1794	1472	0	0	1741	0	0
Q Serve(g_s), s	0.3	4.7	4.7	1.1	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.7	4.7	5.8	0.0	0.0	8.8	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.24	0.80		0.20	0.20		0.40
Lane Grp Cap(c), veh/h	416	2723	1412	531	2723	1435	219	0	0	229	0	0
V/C Ratio(X)	0.01	0.22	0.22	0.18	0.30	0.30	0.56	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	416	2723	1412	531	2723	1435	453	0	0	497	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.2	2.7	2.7	0.2	0.0	0.0	47.4	0.0	0.0	44.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.6	0.2	0.4	2.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	0.1	0.1	0.2	3.4	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.3	2.9	3.0	0.7	0.2	0.4	49.6	0.0	0.0	44.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		914			1359			122			25	
Approach Delay, s/veh		2.9			0.3			49.6			44.5	
Approach LOS		A			A			D			D	

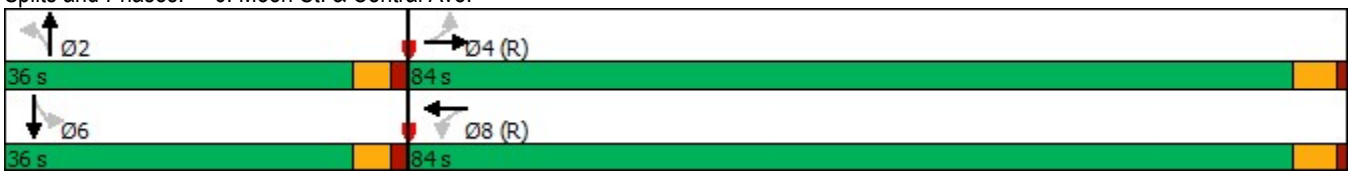
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	17.0	93.0	17.0	93.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0
Max Q Clear Time (g_c+I1), s	10.8	6.7	3.4	7.8
Green Ext Time (p_c), s	0.6	10.3	0.1	19.3

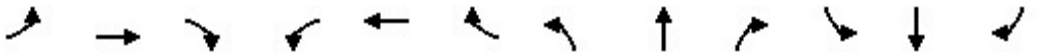
Intersection Summary	
HCM 6th Ctrl Delay	4.2
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	1474	54	1105	119	25	12	680
Future Volume (vph)	18	1474	54	1105	119	25	12	680
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	84.0	84.0	84.0	84.0	36.0	36.0	36.0	36.0
Total Split (%)	70.0%	70.0%	70.0%	70.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	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)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	79.0	79.0	79.0	79.0		31.0		31.0
Actuated g/C Ratio	0.66	0.66	0.66	0.66		0.26		0.26
v/c Ratio	0.07	0.45	0.34	0.33		3.00		1.48
Control Delay	8.1	10.5	7.6	2.7		954.0		262.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.1	10.5	7.6	2.7		954.0		262.3
LOS	A	B	A	A		F		F
Approach Delay		10.4		2.9		954.0		262.3
Approach LOS		B		A		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4.8 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 3.00	
Intersection Signal Delay: 111.9	Intersection LOS: F
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Moon St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1474	44	54	1105	9	119	25	66	12	680	16
Future Volume (veh/h)	18	1474	44	54	1105	9	119	25	66	12	680	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1474	44	54	1105	9	119	25	66	12	680	16
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	3354	100	239	3439	28	101	27	37	34	465	11
Arrive On Green	0.66	0.66	0.66	1.00	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	506	5095	152	344	5224	43	210	104	144	14	1800	42
Grp Volume(v), veh/h	18	985	533	54	720	394	210	0	0	708	0	0
Grp Sat Flow(s),veh/h/ln	506	1702	1843	344	1702	1863	458	0	0	1856	0	0
Q Serve(g_s), s	1.5	16.7	16.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	16.7	16.7	21.9	0.0	0.0	31.0	0.0	0.0	31.0	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.57		0.31	0.02		0.02
Lane Grp Cap(c), veh/h	393	2241	1213	239	2241	1226	165	0	0	510	0	0
V/C Ratio(X)	0.05	0.44	0.44	0.23	0.32	0.32	1.27	0.00	0.00	1.39	0.00	0.00
Avail Cap(c_a), veh/h	393	2241	1213	239	2241	1226	165	0	0	510	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.53	0.53	0.53	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	9.9	9.9	2.3	0.0	0.0	47.3	0.0	0.0	45.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.6	1.2	1.2	0.2	0.4	160.6	0.0	0.0	186.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.6	6.2	0.2	0.1	0.1	12.4	0.0	0.0	41.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	10.5	11.0	3.5	0.2	0.4	207.9	0.0	0.0	231.8	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	F	A	A	F	A	A
Approach Vol, veh/h		1536			1168			210			708	
Approach Delay, s/veh		10.6			0.4			207.9			231.8	
Approach LOS		B			A			F			F	

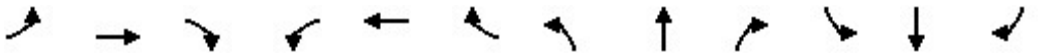
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		84.0		36.0		84.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		79.0		31.0		79.0				
Max Q Clear Time (g_c+I1), s		33.0		18.7		33.0		23.9				
Green Ext Time (p_c), s		0.0		23.0		0.0		15.7				

Intersection Summary												
HCM 6th Ctrl Delay			62.0									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	1490	54	1117	119	25	12	680
Future Volume (vph)	18	1490	54	1117	119	25	12	680
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	84.0	84.0	84.0	84.0	36.0	36.0	36.0	36.0
Total Split (%)	70.0%	70.0%	70.0%	70.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	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)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	79.0	79.0	79.0	79.0		31.0		31.0
Actuated g/C Ratio	0.66	0.66	0.66	0.66		0.26		0.26
v/c Ratio	0.07	0.46	0.34	0.34		3.00		1.48
Control Delay	8.2	10.5	8.1	2.9		954.0		262.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.2	10.5	8.1	2.9		954.0		262.3
LOS	A	B	A	A		F		F
Approach Delay		10.5		3.1		954.0		262.3
Approach LOS		B		A		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4.8 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 3.00	
Intersection Signal Delay: 111.2	Intersection LOS: F
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Moon St. & Central Ave.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1490	44	54	1117	9	119	25	66	12	680	16
Future Volume (veh/h)	18	1490	44	54	1117	9	119	25	66	12	680	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1490	44	54	1117	9	119	25	66	12	680	16
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	389	3355	99	235	3440	28	101	27	37	34	465	11
Arrive On Green	0.66	0.66	0.66	1.00	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	500	5097	151	339	5225	42	210	104	144	14	1800	42
Grp Volume(v), veh/h	18	995	539	54	728	398	210	0	0	708	0	0
Grp Sat Flow(s),veh/h/ln	500	1702	1843	339	1702	1863	458	0	0	1856	0	0
Q Serve(g_s), s	1.5	16.9	16.9	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	16.9	16.9	22.4	0.0	0.0	31.0	0.0	0.0	31.0	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.57		0.31	0.02		0.02
Lane Grp Cap(c), veh/h	389	2241	1213	235	2241	1226	165	0	0	510	0	0
V/C Ratio(X)	0.05	0.44	0.44	0.23	0.32	0.32	1.27	0.00	0.00	1.39	0.00	0.00
Avail Cap(c_a), veh/h	389	2241	1213	235	2241	1226	165	0	0	510	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	9.9	9.9	2.4	0.0	0.0	47.3	0.0	0.0	45.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.6	1.2	1.1	0.2	0.3	160.6	0.0	0.0	186.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.7	6.4	0.2	0.1	0.1	12.4	0.0	0.0	41.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	10.5	11.1	3.5	0.2	0.3	207.9	0.0	0.0	231.8	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	F	A	A	F	A	A
Approach Vol, veh/h		1552			1180			210			708	
Approach Delay, s/veh		10.7			0.4			207.9			231.8	
Approach LOS		B			A			F			F	

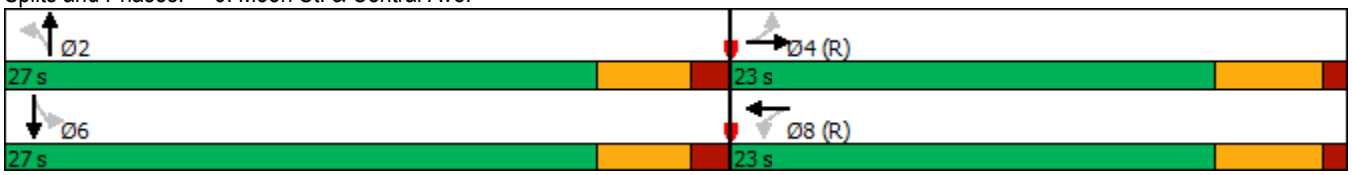
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		84.0		36.0		84.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		79.0		31.0		79.0				
Max Q Clear Time (g_c+I1), s		33.0		18.9		33.0		24.4				
Green Ext Time (p_c), s		0.0		23.4		0.0		15.9				

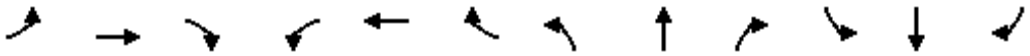
Intersection Summary												
HCM 6th Ctrl Delay			61.6									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	1490	54	1117	119	25	12	680
Future Volume (vph)	18	1490	54	1117	119	25	12	680
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	23.0	23.0	23.0	23.0	27.0	27.0	27.0	27.0
Total Split (%)	46.0%	46.0%	46.0%	46.0%	54.0%	54.0%	54.0%	54.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	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)	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 6: Moon St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1490	44	54	1117	9	119	25	66	12	680	16
Future Volume (veh/h)	18	1490	44	54	1117	9	119	25	66	12	680	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1490	44	54	1117	9	119	25	66	12	680	16
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	1947	57	187	1996	16	265	69	101	78	755	18
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	500	5097	151	339	5225	42	363	165	242	11	1806	42
Grp Volume(v), veh/h	18	995	539	54	728	398	210	0	0	708	0	0
Grp Sat Flow(s),veh/h/ln	500	1702	1843	339	1702	1863	770	0	0	1858	0	0
Q Serve(g_s), s	1.5	12.8	12.8	6.3	8.4	8.4	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	9.9	12.8	12.8	19.1	8.4	8.4	10.2	0.0	0.0	17.9	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.57		0.31	0.02		0.02
Lane Grp Cap(c), veh/h	251	1300	704	187	1300	712	435	0	0	850	0	0
V/C Ratio(X)	0.07	0.77	0.77	0.29	0.56	0.56	0.48	0.00	0.00	0.83	0.00	0.00
Avail Cap(c_a), veh/h	251	1300	704	187	1300	712	456	0	0	891	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.0	13.5	13.5	22.5	12.1	12.1	10.7	0.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	4.3	7.8	2.1	1.0	1.8	0.8	0.0	0.0	6.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	7.7	9.1	1.2	4.4	5.0	2.7	0.0	0.0	12.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	17.8	21.3	24.6	13.1	13.9	11.6	0.0	0.0	20.3	0.0	0.0
LnGrp LOS	B	B	C	C	B	B	B	A	A	C	A	A
Approach Vol, veh/h		1552			1180			210			708	
Approach Delay, s/veh		19.0			13.9			11.6			20.3	
Approach LOS		B			B			B			C	

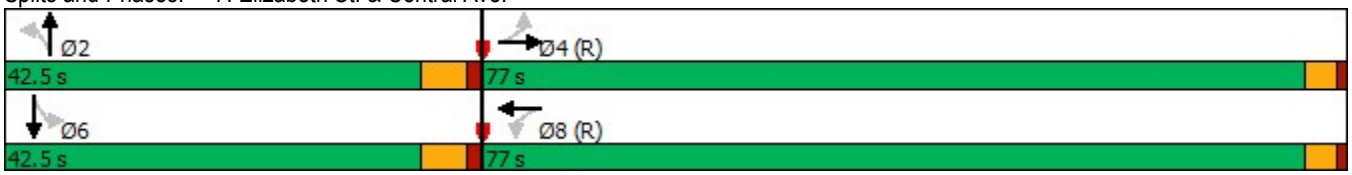
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.9		24.1		25.9		24.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		18.0		22.0		18.0				
Max Q Clear Time (g_c+I1), s		12.2		14.8		19.9		21.1				
Green Ext Time (p_c), s		1.1		2.7		1.0		0.0				

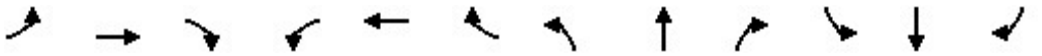
Intersection Summary												
HCM 6th Ctrl Delay			17.2									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	503	24	1203	245	47	36	22
Future Volume (vph)	14	503	24	1203	245	47	36	22
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	42.5	42.5	42.5	42.5
Total Split (s)	77.0	77.0	77.0	77.0	42.5	42.5	42.5	42.5
Total Split (%)	64.4%	64.4%	64.4%	64.4%	35.6%	35.6%	35.6%	35.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	82.4	82.4	82.4	82.4	27.6	27.6	27.6	27.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.23	0.23	0.23	0.23
v/c Ratio	0.06	0.16	0.04	0.38	0.77	0.23	0.12	0.07
Control Delay	9.1	6.9	8.2	8.8	58.6	19.5	34.1	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	6.9	8.2	8.8	58.6	19.5	34.1	25.3
LOS	A	A	A	A	E	B	C	C
Approach Delay		7.0		8.7		47.2		30.0
Approach LOS		A		A		D		C

Intersection Summary	
Cycle Length: 119.5	
Actuated Cycle Length: 119.5	
Offset: 84.7 (71%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 54.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Elizabeth St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	503	60	24	1203	118	245	47	53	36	22	9
Future Volume (veh/h)	14	503	60	24	1203	118	245	47	53	36	22	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	503	60	24	1203	118	245	47	53	36	22	9
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	3264	384	626	3331	327	339	174	196	277	273	112
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	415	4632	544	847	4727	464	1378	803	905	1295	1261	516
Grp Volume(v), veh/h	14	368	195	24	866	455	245	0	100	36	0	31
Grp Sat Flow(s),veh/h/ln	415	1702	1772	847	1702	1787	1378	0	1707	1295	0	1777
Q Serve(g_s), s	1.7	4.3	4.4	1.2	12.1	12.1	20.7	0.0	5.9	2.9	0.0	1.7
Cycle Q Clear(g_c), s	13.8	4.3	4.4	5.6	12.1	12.1	22.4	0.0	5.9	8.7	0.0	1.7
Prop In Lane	1.00		0.31	1.00		0.26	1.00		0.53	1.00		0.29
Lane Grp Cap(c), veh/h	311	2398	1249	626	2398	1259	339	0	369	277	0	384
V/C Ratio(X)	0.05	0.15	0.16	0.04	0.36	0.36	0.72	0.00	0.27	0.13	0.00	0.08
Avail Cap(c_a), veh/h	311	2398	1249	626	2398	1259	466	0	526	396	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	5.9	5.9	6.8	7.0	7.0	46.4	0.0	39.1	42.8	0.0	37.5
Incr Delay (d2), s/veh	0.3	0.1	0.3	0.1	0.4	0.8	4.6	0.0	0.6	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.6	0.2	4.2	4.5	7.5	0.0	2.5	0.9	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	6.0	6.1	6.9	7.4	7.8	51.0	0.0	39.7	43.1	0.0	37.6
LnGrp LOS	B	A	A	A	A	A	D	A	D	D	A	D
Approach Vol, veh/h		577			1345			345			67	
Approach Delay, s/veh		6.1			7.6			47.7			40.6	
Approach LOS		A			A			D			D	

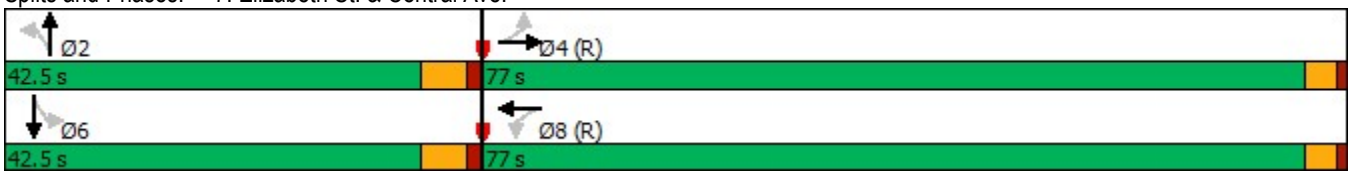
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.5		88.5		31.5		88.5				
Change Period (Y+Rc), s		5.5		4.0		5.5		4.0				
Max Green Setting (Gmax), s		37.0		73.0		37.0		73.0				
Max Q Clear Time (g_c+I1), s		24.4		15.8		10.7		14.1				
Green Ext Time (p_c), s		1.6		6.5		0.3		20.7				

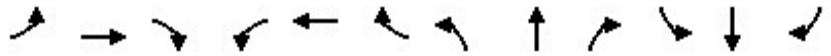
Intersection Summary												
HCM 6th Ctrl Delay			14.1									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	519	24	1219	245	47	36	22
Future Volume (vph)	14	519	24	1219	245	47	36	22
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	42.5	42.5	42.5	42.5
Total Split (s)	77.0	77.0	77.0	77.0	42.5	42.5	42.5	42.5
Total Split (%)	64.4%	64.4%	64.4%	64.4%	35.6%	35.6%	35.6%	35.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	82.4	82.4	82.4	82.4	27.6	27.6	27.6	27.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.23	0.23	0.23	0.23
v/c Ratio	0.06	0.17	0.04	0.39	0.77	0.23	0.12	0.07
Control Delay	9.2	7.0	8.2	8.8	58.6	19.5	34.1	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	7.0	8.2	8.8	58.6	19.5	34.1	25.3
LOS	A	A	A	A	E	B	C	C
Approach Delay		7.0		8.8		47.2		30.0
Approach LOS		A		A		D		C

Intersection Summary	
Cycle Length: 119.5	
Actuated Cycle Length: 119.5	
Offset: 84.7 (71%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 54.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Elizabeth St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	519	60	24	1219	118	245	47	53	36	22	9
Future Volume (veh/h)	14	519	60	24	1219	118	245	47	53	36	22	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	519	60	24	1219	118	245	47	53	36	22	9
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	3275	374	617	3335	323	339	174	196	277	273	112
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	409	4649	530	835	4734	458	1378	803	905	1295	1261	516
Grp Volume(v), veh/h	14	378	201	24	876	461	245	0	100	36	0	31
Grp Sat Flow(s),veh/h/ln	409	1702	1775	835	1702	1788	1378	0	1707	1295	0	1777
Q Serve(g_s), s	1.7	4.4	4.5	1.2	12.3	12.3	20.7	0.0	5.9	2.9	0.0	1.7
Cycle Q Clear(g_c), s	14.0	4.4	4.5	5.7	12.3	12.3	22.4	0.0	5.9	8.7	0.0	1.7
Prop In Lane	1.00		0.30	1.00		0.26	1.00		0.53	1.00		0.29
Lane Grp Cap(c), veh/h	306	2398	1251	617	2398	1260	339	0	369	277	0	384
V/C Ratio(X)	0.05	0.16	0.16	0.04	0.37	0.37	0.72	0.00	0.27	0.13	0.00	0.08
Avail Cap(c_a), veh/h	306	2398	1251	617	2398	1260	466	0	526	396	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	5.9	5.9	6.9	7.1	7.1	46.4	0.0	39.1	42.8	0.0	37.5
Incr Delay (d2), s/veh	0.3	0.1	0.3	0.1	0.4	0.8	4.6	0.0	0.6	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.7	0.2	4.3	4.6	7.5	0.0	2.5	0.9	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	6.0	6.2	7.0	7.5	7.9	51.0	0.0	39.7	43.1	0.0	37.6
LnGrp LOS	B	A	A	A	A	A	D	A	D	D	A	D
Approach Vol, veh/h		593			1361			345			67	
Approach Delay, s/veh		6.2			7.6			47.7			40.6	
Approach LOS		A			A			D			D	

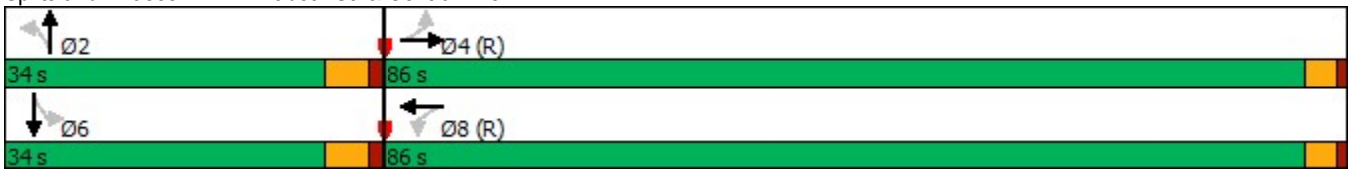
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	31.5	88.5	31.5	88.5
Change Period (Y+Rc), s	5.5	4.0	5.5	4.0
Max Green Setting (Gmax), s	37.0	73.0	37.0	73.0
Max Q Clear Time (g_c+I1), s	24.4	16.0	10.7	14.3
Green Ext Time (p_c), s	1.6	6.7	0.3	21.1

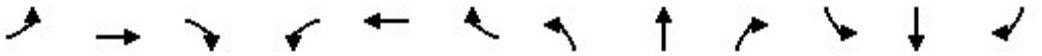
Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	1453	27	704	101	83	28	62
Future Volume (vph)	83	1453	27	704	101	83	28	62
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	42.5	42.5	42.5	42.5
Total Split (s)	86.0	86.0	86.0	86.0	34.0	34.0	34.0	34.0
Total Split (%)	71.7%	71.7%	71.7%	71.7%	28.3%	28.3%	28.3%	28.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	94.8	94.8	94.8	94.8	15.7	15.7	15.7	15.7
Actuated g/C Ratio	0.79	0.79	0.79	0.79	0.13	0.13	0.13	0.13
v/c Ratio	0.16	0.41	0.14	0.19	0.59	0.63	0.25	0.33
Control Delay	9.4	9.5	6.0	3.5	62.3	48.1	50.4	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	9.5	6.0	3.5	62.3	48.1	50.4	42.2
LOS	A	A	A	A	E	D	D	D
Approach Delay		9.5		3.6		53.5		44.3
Approach LOS		A		A		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 91.2 (76%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 77.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Elizabeth St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1453	176	27	704	44	101	83	79	28	62	19
Future Volume (veh/h)	83	1453	176	27	704	44	101	83	79	28	62	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	1453	176	27	704	44	101	83	79	28	62	19
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	588	3589	435	241	3821	238	195	126	120	126	197	60
Arrive On Green	0.52	0.52	0.52	0.78	0.78	0.78	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	713	4615	559	309	4914	306	1317	881	838	1224	1374	421
Grp Volume(v), veh/h	83	1072	557	27	487	261	101	0	162	28	0	81
Grp Sat Flow(s),veh/h/ln	713	1702	1770	309	1702	1815	1317	0	1719	1224	0	1795
Q Serve(g_s), s	7.6	22.9	22.9	4.8	4.5	4.5	8.9	0.0	10.7	2.7	0.0	4.9
Cycle Q Clear(g_c), s	12.1	22.9	22.9	27.7	4.5	4.5	13.8	0.0	10.7	13.4	0.0	4.9
Prop In Lane	1.00		0.32	1.00		0.17	1.00		0.49	1.00		0.23
Lane Grp Cap(c), veh/h	588	2647	1376	241	2647	1412	195	0	246	126	0	257
V/C Ratio(X)	0.14	0.40	0.41	0.11	0.18	0.19	0.52	0.00	0.66	0.22	0.00	0.32
Avail Cap(c_a), veh/h	588	2647	1376	241	2647	1412	320	0	408	242	0	426
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.5	11.9	11.9	11.2	3.5	3.5	52.3	0.0	48.6	54.9	0.0	46.1
Incr Delay (d2), s/veh	0.3	0.3	0.5	0.9	0.2	0.3	3.0	0.0	4.2	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.6	10.1	0.4	1.3	1.5	3.1	0.0	4.9	0.9	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	12.1	12.4	12.2	3.6	3.8	55.3	0.0	52.9	56.2	0.0	47.1
LnGrp LOS	B	B	B	B	A	A	E	A	D	E	A	D
Approach Vol, veh/h		1712			775			263			109	
Approach Delay, s/veh		12.2			4.0			53.8			49.5	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.7		97.3		22.7		97.3				
Change Period (Y+Rc), s		5.5		4.0		5.5		4.0				
Max Green Setting (Gmax), s		28.5		82.0		28.5		82.0				
Max Q Clear Time (g_c+I1), s		15.8		24.9		15.4		29.7				
Green Ext Time (p_c), s		1.4		30.1		0.5		9.8				

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

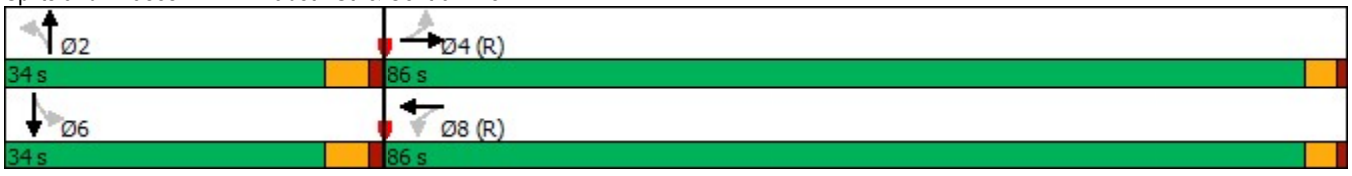
Notes

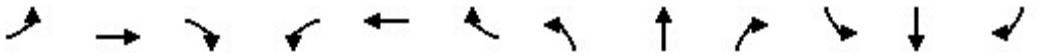
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	1469	27	720	101	83	28	62
Future Volume (vph)	83	1469	27	720	101	83	28	62
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	34.0	34.0	34.0	34.0
Total Split (s)	86.0	86.0	86.0	86.0	34.0	34.0	34.0	34.0
Total Split (%)	71.7%	71.7%	71.7%	71.7%	28.3%	28.3%	28.3%	28.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effct Green (s)	94.8	94.8	94.8	94.8	15.7	15.7	15.7	15.7
Actuated g/C Ratio	0.79	0.79	0.79	0.79	0.13	0.13	0.13	0.13
v/c Ratio	0.16	0.42	0.15	0.19	0.59	0.63	0.25	0.33
Control Delay	9.4	10.1	6.1	3.5	62.3	48.1	50.4	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	10.1	6.1	3.5	62.3	48.1	50.4	42.2
LOS	A	B	A	A	E	D	D	D
Approach Delay		10.1		3.6		53.5		44.3
Approach LOS		B		A		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 91.2 (76%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Elizabeth St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1469	176	27	720	44	101	83	79	28	62	19
Future Volume (veh/h)	83	1469	176	27	720	44	101	83	79	28	62	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	1469	176	27	720	44	101	83	79	28	62	19
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	580	3594	430	238	3827	233	195	126	120	126	197	60
Arrive On Green	0.52	0.52	0.52	0.78	0.78	0.78	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	703	4621	553	304	4921	299	1317	881	838	1224	1374	421
Grp Volume(v), veh/h	83	1082	563	27	497	267	101	0	162	28	0	81
Grp Sat Flow(s),veh/h/ln	703	1702	1771	304	1702	1816	1317	0	1719	1224	0	1795
Q Serve(g_s), s	7.8	23.2	23.2	4.9	4.6	4.6	8.9	0.0	10.7	2.7	0.0	4.9
Cycle Q Clear(g_c), s	12.4	23.2	23.2	28.1	4.6	4.6	13.8	0.0	10.7	13.4	0.0	4.9
Prop In Lane	1.00		0.31	1.00		0.16	1.00		0.49	1.00		0.23
Lane Grp Cap(c), veh/h	580	2647	1377	238	2647	1413	195	0	246	126	0	257
V/C Ratio(X)	0.14	0.41	0.41	0.11	0.19	0.19	0.52	0.00	0.66	0.22	0.00	0.32
Avail Cap(c_a), veh/h	580	2647	1377	238	2647	1413	320	0	408	242	0	426
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	11.9	12.0	11.4	3.5	3.5	52.3	0.0	48.6	54.9	0.0	46.1
Incr Delay (d2), s/veh	0.5	0.5	0.9	1.0	0.2	0.3	3.0	0.0	4.2	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.8	10.4	0.4	1.4	1.5	3.1	0.0	4.9	0.9	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	12.4	12.9	12.4	3.6	3.8	55.3	0.0	52.9	56.2	0.0	47.1
LnGrp LOS	B	B	B	B	A	A	E	A	D	E	A	D
Approach Vol, veh/h		1728			791			263			109	
Approach Delay, s/veh		12.5			4.0			53.8			49.5	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.7		97.3		22.7		97.3				
Change Period (Y+Rc), s		5.5		4.0		5.5		4.0				
Max Green Setting (Gmax), s		28.5		82.0		28.5		82.0				
Max Q Clear Time (g_c+I1), s		15.8		25.2		15.4		30.1				
Green Ext Time (p_c), s		1.4		30.5		0.5		10.1				

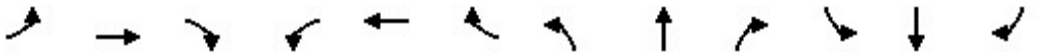
Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	519	24	1219	245	47	36	22
Future Volume (vph)	14	519	24	1219	245	47	36	22
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	42.5	42.5	42.5	42.5
Total Split (s)	32.0	32.0	32.0	32.0	43.0	43.0	43.0	43.0
Total Split (%)	42.7%	42.7%	42.7%	42.7%	57.3%	57.3%	57.3%	57.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 7: Elizabeth St. & Central Ave.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	519	60	24	1219	118	245	47	53	36	22	9
Future Volume (veh/h)	14	519	60	24	1219	118	245	47	53	36	22	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	519	60	24	1219	118	245	47	53	36	22	9
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	2967	338	590	3022	292	401	189	213	339	296	121
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	409	4649	530	835	4734	458	1378	803	905	1295	1261	516
Grp Volume(v), veh/h	14	378	201	24	876	461	245	0	100	36	0	31
Grp Sat Flow(s),veh/h/ln	409	1702	1775	835	1702	1788	1378	0	1707	1295	0	1777
Q Serve(g_s), s	1.3	3.4	3.5	0.9	9.4	9.4	12.6	0.0	3.6	1.7	0.0	1.0
Cycle Q Clear(g_c), s	10.7	3.4	3.5	4.4	9.4	9.4	13.6	0.0	3.6	5.3	0.0	1.0
Prop In Lane	1.00		0.30	1.00		0.26	1.00		0.53	1.00		0.29
Lane Grp Cap(c), veh/h	306	2173	1133	590	2173	1141	401	0	401	339	0	418
V/C Ratio(X)	0.05	0.17	0.18	0.04	0.40	0.40	0.61	0.00	0.25	0.11	0.00	0.07
Avail Cap(c_a), veh/h	306	2173	1133	590	2173	1141	766	0	854	682	0	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.2	5.5	5.5	6.4	6.6	6.6	27.6	0.0	23.3	25.5	0.0	22.3
Incr Delay (d2), s/veh	0.3	0.2	0.3	0.1	0.6	1.1	2.1	0.0	0.5	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	1.9	2.1	0.3	5.3	5.8	7.6	0.0	2.6	1.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	5.7	5.9	6.6	7.2	7.7	29.8	0.0	23.8	25.7	0.0	22.4
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		593			1361			345			67	
Approach Delay, s/veh		5.8			7.3			28.0			24.2	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.1		51.9		23.1		51.9				
Change Period (Y+Rc), s		5.5		4.0		5.5		4.0				
Max Green Setting (Gmax), s		37.5		28.0		37.5		28.0				
Max Q Clear Time (g_c+I1), s		15.6		12.7		7.3		11.4				
Green Ext Time (p_c), s		2.0		4.6		0.4		10.8				

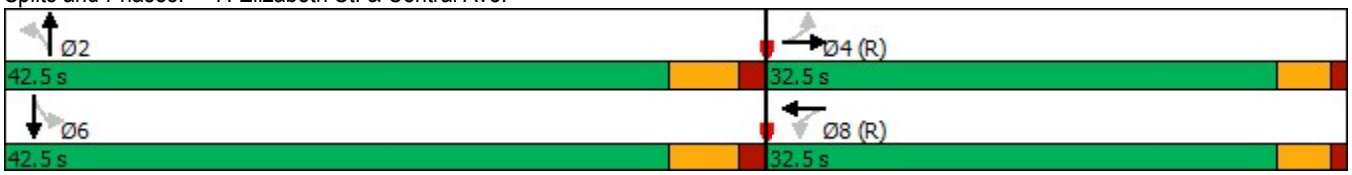
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									

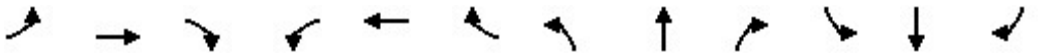
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	1469	27	720	101	83	28	62
Future Volume (vph)	83	1469	27	720	101	83	28	62
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	27.0	27.0	29.0	29.0	42.5	42.5	42.5	42.5
Total Split (s)	32.5	32.5	32.5	32.5	42.5	42.5	42.5	42.5
Total Split (%)	43.3%	43.3%	43.3%	43.3%	56.7%	56.7%	56.7%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 7: Elizabeth St. & Central Ave.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1469	176	27	720	44	101	83	79	28	62	19
Future Volume (veh/h)	83	1469	176	27	720	44	101	83	79	28	62	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	1469	176	27	720	44	101	83	79	28	62	19
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	559	3278	392	271	3491	212	260	145	138	190	225	69
Arrive On Green	0.71	0.71	0.71	0.71	0.71	0.71	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	703	4621	553	304	4921	299	1317	881	838	1224	1374	421
Grp Volume(v), veh/h	83	1082	563	27	497	267	101	0	162	28	0	81
Grp Sat Flow(s),veh/h/ln	703	1702	1771	304	1702	1816	1317	0	1719	1224	0	1795
Q Serve(g_s), s	3.4	10.2	10.2	3.1	3.7	3.8	5.5	0.0	6.5	1.6	0.0	3.0
Cycle Q Clear(g_c), s	7.2	10.2	10.2	13.3	3.7	3.8	8.4	0.0	6.5	8.1	0.0	3.0
Prop In Lane	1.00		0.31	1.00		0.16	1.00		0.49	1.00		0.23
Lane Grp Cap(c), veh/h	559	2414	1256	271	2414	1288	260	0	282	190	0	294
V/C Ratio(X)	0.15	0.45	0.45	0.10	0.21	0.21	0.39	0.00	0.57	0.15	0.00	0.28
Avail Cap(c_a), veh/h	559	2414	1256	271	2414	1288	694	0	848	593	0	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	4.6	4.6	7.5	3.7	3.7	31.1	0.0	28.9	32.7	0.0	27.4
Incr Delay (d2), s/veh	0.6	0.6	1.2	0.7	0.2	0.4	1.3	0.0	2.6	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	4.9	5.5	0.4	1.8	2.0	3.2	0.0	5.0	0.9	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	5.2	5.8	8.2	3.9	4.1	32.5	0.0	31.5	33.2	0.0	28.2
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1728			791			263			109	
Approach Delay, s/veh		5.4			4.1			31.9			29.5	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.8		57.2		17.8		57.2				
Change Period (Y+Rc), s		5.5		4.0		5.5		4.0				
Max Green Setting (Gmax), s		37.0		28.5		37.0		28.5				
Max Q Clear Time (g_c+I1), s		10.4		12.2		10.1		15.3				
Green Ext Time (p_c), s		1.9		12.8		0.7		5.9				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

ASC3 COORDINATION PLAN DATA

INT # - Intersection Name Southern & Eubank

COORDINATOR OPTIONS (MM 3-1)

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	OFF
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 1 (MM 3-2)

USE SPLIT PATTERN	1	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	110s	STD (COS)	111
OFFSET VAL	44%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB		WB
SPLITS	11	45	18	26	12	44		44

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 3

USE SPLIT PATTERN	3	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	110s	STD (COS)	131
OFFSET VAL	40%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB		WB
SPLITS	13	32	17	38	13	32		55

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

ASC3 COORDINATION PLAN DATA

COORDINATION PATTERN 5

USE SPLIT PATTERN	5	SPLIT SUM	100%
TS2 (PAT-OFF)	0-5		
CYCLE	120s	STD (COS)	151
OFFSET VAL	68%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	NB	N-W	SB		WB
SPLITS	12	44	11	33	12	44		44

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)

CURRENT DATE	CURRENT DOW		CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	3:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 1 (MM 5-2)

PATTERN	1	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 3

PATTERN	3	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 5

PATTERN	5	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ASC3 COORDINATION PLAN DATA

ACTION PLAN 100

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

DAY PLAN/EVENT 1 (MM 5-3)

EVENT	ACTION PLAN	START TIME
1	3	7:00
2	100	22:00
3	0	00:00

DAY PLAN/EVENT 2

EVENT	ACTION PLAN	START TIME
1	1	6:30
2	3	9:00
3	5	15:00
4	3	18:30
5	100	22:00
6	0	00:00
7	0	00:00

DAY PLAN/EVENT 3

EVENT	ACTION PLAN	START TIME
1	3	7:00
2	100	22:00
3	0	00:00

SCHEDULE NUMBER 1 (MM 5-4)

SCHEDULE NUMBER	1	
DAY PLAN NO	1	CLEAR ALL FIELDS

SELECT ALL MONTHS DOW DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X	.	.	.	.	.	.

DAY(DOM)										
1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X
12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X	X	X	X	X	X
23	24	25	26	27	28	29	30	31		
X	X	X	X	X	X	X	X	X		

ASC3 COORDINATION PLAN DATA

9/1/2020 4:22 PM

SCHEDULE NUMBER 2

SCHEDULE NUMBER	2	
DAY PLAN NO	2	CLEAR ALL FIELDS

SELECT ALL MONTHS — DOW — DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	.	X	X	X	X	X	.

DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

SCHEDULE NUMBER 3

SCHEDULE NUMBER	3	
DAY PLAN NO	3	CLEAR ALL FIELDS

SELECT ALL MONTHS — DOW — DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	.	.	.	.	.	.	X

DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

NOTES:

1. Coord sheet created 10/11/12.
2. ASC 3 installed in cabinet and new timing sheet created., 6/13/14

Intersection No.: 170

CENTRAC
1

Intersection Name: CENTRAL - MOON

Revision Date 9/27/2016

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:		E/W		N/S				
Min Grn		16		12				
Walk:		7		7				
Ped Clr:		14		23				
Veh Ext:		4.0		3.0				
Veh Ext2:		4.0		3.0				
Max 1:		30		20				
Max 2:		30		20				
Max 3:								
Yellow:		4.0		3.5				
Red Clr		1.0		1.5				

Recall Data

Locking Memory:								
Vehicle Recall:								
Ped Recall:		X						
Recall To Max:		X						

Flash Mode: ALL RED

Start Up Mode: ALL RED
Time: 8 SEC.
First Phases: 2
Start In: GREEN

Overlap Phases: NONE

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:

1. Ped buttons activate ped timing sequence.Bike buttons ground N/S detection for11sec after of N/S green (gives 11+3 ext.=14 sec. green.
2. Intersection No. changed from 84 to 170, diabled from telephone circuit 7664. Now on hard wire, 12/16/88.
3. Temp raised phase 4 min. to 10" for ped xing til logic for bike xing fixed also set detection for N/S to locking-- Temporary, 6/22/90.
4. Raised min green for N/S to 12" and revised yellow and red clearance for E/W and N/S as reflected on new timing sheet. Bike button will call phase 4 to min green 11/14/00.
5. Added EB and WB ped heads, 4/28/98.
6. Updated file, 11/14/00.
7. Timing sheet updated, 6/5/03.
8. Timing sheet updated to reflect I2 system and address changes, 12/9/08.
9. Clearance intervals updated to NMDOT standard by BB, 9/25/13.
10. Timing sheet updated to current timing sheet, 9/27/16 RS.

Intersection No.: 9/1/2016

Intersection Name: CENTRAL - ELIZABETH

Revision Date 9/1/2016

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:		EB		NB		WB		SB
Min Grn		16		8		16		8
Walk:		7		7		7		7
Ped Clr:		12		26		14		26
Veh Ext:		4.0		4.0		4.0		4.0
Veh Ext2:		4.0		4.0		4.0		4.0
Max 1:		36		34		36		34
Max 2:		36		34		36		34
Max 3:								
Yellow:		4.0		3.0		4.0		3.0
Red Clr		1.0		1.5		1.0		1.5

Recall Data

Locking Memory:								
Vehicle Recall:								
Ped Recall:								
Recall To Max:		X				X		

Flash Mode: ALL RED

Start Up Mode:	ALL RED
Time:	8 SEC.
First Phases:	2 & 6
Start In:	GREEN

Overlap Phases:

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:

Intersection No.: 79

System: Centracs
Address: 1

Intersection Name: CHICO & EUBANK

Revision Date 12/18/2013

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	S-E	NB		EB	N-W	SB		WB
Min Grn	3	16		8	3	16		8
Walk:	0	7		7	0	7		7
Ped Clr:	0	18		28	0	10		29
Veh Ext:	1.5	3.0		2.0	1.5	3.0		2.0
Veh Ext2:								
Max 1:	16	36		20	16	36		20
Max 2:								
Max 3:								
Yellow:	3.0	4.0		3.5	3.0	4.0		3.5
Red Clr	0.5	1.0		2.0	0.5	1.0		2.0

Recall Data

Locking Memory:								
Vehicle Recall:								
Ped Recall:								
Recall To Max:		X				X		

Flash Mode: ALL RED

Start Up Mode: ALL RED
Time: 8 SEC.
First Phases: 2 & 6
Start In: GREEN

Overlap Phases: NONE

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:
1. Ped heads and buttons installed, 1/29/88.
2. Controller changeout - from 911 to 820, Intersection rephased -- all thru movements split for future N-W arrow. Timings adjusted as needed, 4/7/92.
3. N-W arrow installed and in operation, 4/13/92.
4. Revised red clearance times, 5/25/95.
5. Updated file. Changed dual entry from No to Yes, 8/2/00.
6. Timing sheet updated, 6/5/03.
7. Timing sheet updated to reflect I2 addresss and controller type, 1/13/09.
8. Clearance intervals updated to NMDOT standard by BB, 12/18/13.

Intersection No.: 162

CENTRAC
1

Intersection Name: CENTRAL - EUBANK

Revision Date: 9/27/2016

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	E-N	WB	N-W	SB	W-S	EB	S-E	NB
Min Grn	3	18	3	18	3	18	3	18
Walk:	0	7	0	7	0	7	0	7
Ped Clr:	0	26	0	23	0	22	0	22
Veh Ext:	1.5	3.0	1.5	4.0	1.5	3.0	1.5	4.0
Veh Ext2:	1.5	3.0	1.5	4.0	1.5	3.0	1.5	4.0
Max 1:	20	36	16	38	16	36	16	38
Max 2:	20	36	16	38	16	36	16	38
Max 3:								
Yellow:	3.0	4.5	3.0	4.5	3.0	4.5	3.0	4.5
Red Clr	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0

Recall Data

Locking Memory:								
Vehicle Recall:				X				X
Ped Recall:								
Recall To Max:		X				X		

Flash Mode: ALL RED

Start Up Mode: ALL RED
Time: 8 SEC.
First Phases: 2 & 6
Start In: GREEN

Overlap Phases: NONE

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:

1. Dual W-S left-turn lanes: 7-8 AM, changeable message sign with flahsers.
2. Intersection number changed from 80 to 162 and disabled from tele. Circuit, hooked to city hardware.
3. Timings revised for smoother operation when in standby mode, 6/15/87.
4. N/S loops working. Revised max from 24 to 38 sec, 5/29/90.
5. N/S to min recall due to installation of driveways on SE corner.
6. Controller changeout from 911 to 820, 3/12/91.
7. Ped heads installed for all approaches, timings adjusted.
8. Red clearance time change in data base, 7/5/95.
9. Updated file, 8/23/00.
10. Timing sheet updated, 6/5/03.
11. All left turn movements placed on locking detection, 4/30/07.
12. Split time for morning peak changed for N-W from 9% to 12% and SB changed from 37% to 34%, 6/5/07.
13. Timing sheet updated to reflect I2 addresss and controller type, 1/13/09.
14. Clearance times adjusted as per proposed by admin, 12/8/10.
15. Pedestrian time updated by BB, 9-25-2013.
16. Timing sheet updated to current timing sheet, 9/27/16 RS.

Crash Analysis

Murphy Express

Eubank Blvd./Central Ave. - Albuquerque, NM

Intersection: 1. Eubank Blvd.& Chico Rd.
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		0	0	1	2	2	3	0	1	0	9
2018		0	2	6	0	2	2	0	3	0	15
2019		0	4	3	1	4	2	0	4	0	18
Total		0	6	10	3	8	7	0	8	0	42
		0%	14%	24%	7%	19%	17%	0%	19%	0%	100%

Average Crashes per Million Vechicles = 0.9
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 15,180,350 veh/year

Intersection: 2. Eubank Blvd.& Central Ave.
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		3	7	10	6	11	5	11	6	3	62
2018		2	9	11	2	12	4	2	5	4	51
2019		4	3	13	0	8	5	1	10	3	47
Total		9	19	34	8	31	14	14	21	10	160
		6%	12%	21%	5%	19%	9%	9%	13%	6%	100%

Average Crashes per Million Vechicles = 2.6
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 20,483,800 veh/year

Intersection: 3. Eubank Blvd.& Acoma
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		0	0	0	0	3	0	0	1	0	4
2018		0	0	1	0	0	0	1	0	1	3
2019		0	0	1	0	3	0	0	0	0	4
Total		0	0	2	0	6	0	1	1	1	11
		0%	0%	18%	0%	55%	0%	9%	9%	9%	100%

Average Crashes per Million Vechicles = 0.3
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 11,727,450 veh/year

Intersection: 4. Eubank Blvd.& Bell Rd.
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		0	0	0	0	3	0	0	1	0	4
2018		0	0	2	0	0	0	0	1	0	3
2019		0	0	0	0	1	0	0	0	0	1
Total		0	0	2	0	4	0	0	2	0	8
		0%	0%	25%	0%	50%	0%	0%	25%	0%	100%

Average Crashes per Million Vechicles = 0.2
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 12,227,500 veh/year

Intersection: 5. Eubank Blvd.& Southern Blvd.
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		0	1	5	0	1	0	1	3	1	12
2018		0	0	3	0	0	1	0	1	1	6
2019		0	2	1	1	5	1	0	2	0	12
Total		0	3	9	1	6	2	1	6	2	30
		0%	10%	30%	3%	20%	7%	3%	20%	7%	100%

Average Crashes per Million Vechicles = 0.6
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 15,454,100 veh/year

Intersection: 6. Central Ave. & Moon
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		0	0	0	0	0	0	1	0	0	1
2018		0	2	0	0	0	0	0	0	0	2
2019		0	1	1	0	1	0	0	0	0	3
Total		0	3	1	0	1	0	1	0	0	6
		0%	50%	17%	0%	17%	0%	17%	0%	0%	100%

Average Crashes per Million Vechicles = 0.2
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 12,315,100 veh/year

Intersection: 7. Central Ave. & Elizabeth
Date: 8/25/2020

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2017		2	2	1	0	2	0	0	2	0	9
2018		1	1	0	0	0	0	0	1	0	3
2019		0	0	1	1	0	0	0	1	0	3
Total		3	3	2	1	2	0	0	4	0	15
		20%	20%	13%	7%	13%	0%	0%	27%	0%	100%

Average Crashes per Million Vechicles = 0.5
based on existing (2019) PM Peak Hour Volume x 10 hours x 365 days per year = 9,953,550 veh/year