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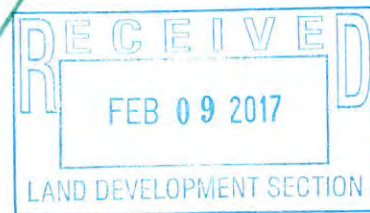
Cibola Loop Development
(Ellison Dr. / Cibola Loop)

Traffic Impact Study

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FINAL

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City of Albuquerque
Transportation Development Section

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Cibola Loop Community Center (Ellison Dr. / Cibola Loop) TRAFFIC IMPACT STUDY

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Cibola Loop Community Center (Ellison Dr. / Cibola Loop) TRAFFIC IMPACT STUDY

STUDY PURPOSE

This study is being conducted in conjunction with a request for approval of a multi-use development plan such as the one shown in the Appendix (Page A-3) of this report. The purpose of this study is to identify the impact of the proposed development on the adjacent transportation system, and to make recommendations to mitigate any significant adverse impact on the adjacent transportation system resulting from the implementation of the proposed plan. This report is being prepared to meet the requirements of the City of Albuquerque Transportation Development Division in association with the development of the Cibola Loop Community Center located on Cibola Loop north of Ellison Dr.

STUDY PROCEDURES

The basic procedure to be followed is to evaluate the NO BUILD and BUILD traffic conditions for the implementation year (2020) for the signalized intersections of Ellison Dr. / N. Seven Bar Loop, Ellison Dr. / W. Cibola Loop, Ellison Dr. / E. Cibola Loop, Ellison Dr. / Coors Bypass and for the unsignalized intersections of Mill Rd. / W. Cibola Loop, and two proposed driveways on Cibola Loop and one on Ellison Dr. The procedure followed in this study is outlined as follows:

- 1) Calculate the generated trips for the proposed development consisting of a 25,000 SF Library, a 60,000 SF Multi-Generational Center, a 27,000 SF Pool, a 153 unit Apartment Complex, 56,410 SF of Shopping Center and 3,000 SF Fast Food Restaurant w/o Drive-Thru Window (See more detailed trip generation rate table in Appendix – Pages A-7 thru A-13).
- 2) Calculate growth rate for the area utilizing Traffic Flow Maps from the Mid-Region Council of Governments to define area traffic growth rate. (See Appendix Pages A-14 thru A-20)
- 2) Calculate trip distribution for the newly generated trips by this development. The trips will be distributed based on year 2020 population within a two-mile radius of the proposed new multi-use development, Appendix Pages A-22 thru A-27.
- 3) Determine Trip Assignments for the newly generated trips based on the results of the Trip Distribution Analysis and logical routing to and from the site (See Appendix Pages A-28 thru A-29 of this report).
- 4) Apply a 35% pass-by trip reduction to only the retail commercial trips, Appendix Page A-30.
- 5) Conduct new AM and PM Peak Hour traffic counts for the intersections of Ellison Dr. / N. Seven Bar Loop, Ellison Dr. / W. Cibola Loop, Ellison Dr. / E. Cibola Loop, Ellison Dr. / Coors Bypass and Mill Rd. / W. Cibola Loop, Appendix Pages A-77 thru A-78.
- 6) Determine 2020 NO BUILD Volumes by growing the existing turning movement counts to the year 2020 utilizing the calculated annual historic growth rate for the area. There are no previously approved projects in the area to include in this study, Appendix Pages A-31 thru A-46.

- 7) Add in data from Trip Assignments Maps and Tables to the 2020 NO BUILD Volumes to obtain 2020 BUILD Volumes for this project, A-31 thru A-46.
- 8) Provide signalized and / or unsignalized intersection analyses for the following intersections:

	INTERSECTION	TYPE CONTROL	NO BUILD	BUILD
1)	Ellison Dr. / N. Seven Bar Loop	Traffic Signal	2020	2020
2)	Ellison Dr. / W. Cibola Loop	Traffic Signal	2020	2020
3)	Ellison Dr. / E. Cibola Loop	Traffic Signal	2020	2020
4)	Ellison Dr. / Coors Bypass	Traffic Signal	2020	2020
5)	Mill Rd. / W. Cibola Loop	Unsignalized	2020	2020
6)	Ellison Dr. / Driveway "A"	Unsignalized	N/A	2020
7)	Driveway "B" / E. Cibola Loop	Unsignalized	N/A	2020

GENERAL AREA CHARACTERISTICS

The proposed development is located on Cibola Loop north of Ellison Dr. as shown on the Vicinity Map on Page A-2 of the Appendix of this report. The property is bounded on the south by Ellison Dr. and Cibola High School and on the other sides by residential and apartment complexes. The total area of land addressed in this Traffic Impact Study is approximately 30 acres.

This project is located in a mostly residential development area. Cibola High School is across the street on the south side of Ellison Dr. Also, there are other public facilities on the east side of this development.

AREA STREET NETWORK

The following information is taken from the Futures 2040 Long Range Roadway System from the Mid-Region Metropolitan Planning Organization and from Google Earth aerial photos.

Ellison Dr. and Coors Bypass are classified as Regional Principal Arterial Streets. Ellison Dr. is a four-lane roadway and Coors Bypass is a six-lane roadway. Both roadways have raised center medians and curb and gutter. Both roadways have sporadic portions of sidewalk, asphalt trail and no sidewalk. Ellison Dr. has a posted speed limit of 40 MPH and Coors Bypass has a posted speed limit of 45 MPH.

N. Seven Bar Loop is classified as a Major Collector Street. It is a two lane paved street with a bike lane, curb and gutter and sidewalk. N. Seven Bar Loop has a posted speed limit of 25 MPH.

Cibola Loop and Mill Rd. are not classified on the Futures 2040 Long Range Roadway System Map. They are considered local streets for the purpose of this report. The posted speed limit along Cibola Loop and Mill Rd. is 25 MPH.

EXISTING TRAFFIC VOLUMES

2014 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-6 in the Appendix.

Existing AM and PM peak hour turning movement counts for the intersections of Ellison Dr. / N. Seven Bar Loop, Ellison Dr. / W. Cibola Loop, Ellison Dr. / E. Cibola Loop, Ellison Dr. / Coors Bypass and Mill Rd. / W. Cibola Loop were obtained by the consultant for this study.

The counts and volume data are included in the Appendix (Pages A-77 thru A- 78).

EXISTING (2016) LEVELS OF SERVICE

The Highway Capacity Manual defines Level of Service (LOS) for signalized intersections in terms of average controlled delay per vehicle as follows:

LOS A	10.0" or less	Most Vehicles do not stop
LOS B	10.1 to 20.0"	Some Vehicles stop
LOS C	20.1 to 35.0"	Significant number of vehicles stop.
LOS D	35.1 to 55.0"	Many vehicles stop.
LOS E	55.1 to 80.0"	Limit of acceptable delay.
LOS F	> 80.0"	Unacceptable delay.

The Highway Capacity Manual defines Level of Service (LOS) for unsignalized intersections in terms of average controlled delay per vehicle also. However, the thresholds for the various levels of service for unsignalized intersections varies from that of signalized intersections. The following table summarizes the thresholds for various levels of service at unsignalized intersections:

LOS A	0 to 10.0"
LOS B	10 to 15"
LOS C	15 to 25"
LOS D	25 to 35"
LOS E	35 to 50"
LOS F	> 50"

Level of Service D is generally considered acceptable in urban areas and is the desirable base condition for analysis in a traffic study. In addition to consideration of the overall level-of-service of the signalized intersection, the levels-of-service of each individual movement should be considered also.

Existing levels-of-service were not determined for this study.

EXISTING TRANSIT SERVICE

This area is serviced by the City of Albuquerque Transit System with Routes 92, 94, 96, 155, 157 and 790, as well as the Northwest Transit Center (NWTC) at Ellison Rd / Coors Bypass, which includes a Park and Ride.

Route 92 (Taylor Ranch Express) is a weekday only route that runs from the NWTC west on Ellison Dr., south on Golf Course Rd., west to Unser Blvd, then east to downtown and University Blvd. on Interstate 40 twice per day at 6:15 and 6:45 AM southbound and 4:30 and 5:00 PM northbound. It connects with the free-of-charge D-Ride bus loop downtown.

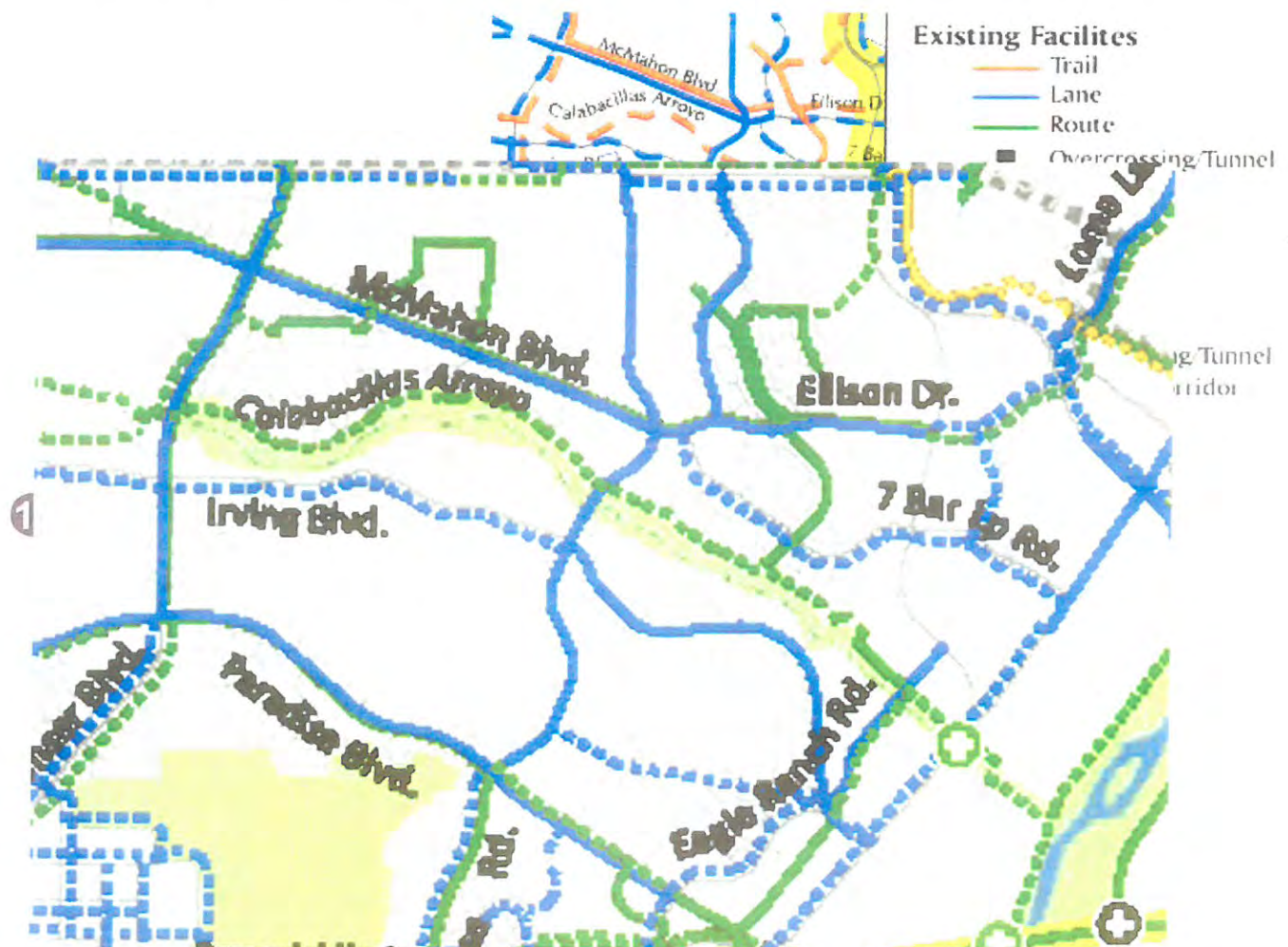
Route 94 (Unser Express) is a weekday only route that runs from the NWTC west on Ellison Dr., south along Coors Bypass, west to Unser Blvd, then east to downtown and University Blvd. on Interstate 40 twice per day at 6:00 and 7:00 AM southbound and 4:45 and 5:15 PM northbound. It connects with the free-of-charge D-Ride bus loop downtown.

Route 96 (Crosstown Commuter) is a weekday only route that runs from north on Unser Blvd. to the NWTC east on Ellison Dr., south on Coors Blvd., then east and south to Gibson Blvd. on Interstates 40 and 25 from 5:15 to 6:45 AM southbound and 3:45 to 5:15 PM northbound every 15 min.

Route 155 (Coors Blvd. Line) runs from the NWTC east on Ellison Dr. and south on Coors Blvd. to Gun Club Rd. round trip beginning at 5:40 AM every 30 minutes. Additionally, during rush hour this route runs round trip west and north on McMahon and Unser Blvd. to Southern Blvd. It also runs on the weekends.

Route 157 (Montano / Uptown / Kirkland) runs from the NWTC west on Ellison Dr., south on Golf Course Rd., east on Montano (Montgomery), and south on Louisiana Blvd. to Gibson round trip beginning at 5:30 AM every 45 minutes. (See Bus Routes on Pages A-79 thru A-86 of the Appendix.)

Following are portions of the ABQRide Route Map and ABQ Bike Route Map, respectively.



PROPOSED DEVELOPMENT

The proposed project consists of a 25,000 SF Library, a 60,000 SF Multi-Generational Center, a 27,000 SF Pool, a 153 unit Apartment Complex, 56,410 SF of Shopping Center and 3,000 SF Fast Food Restaurant w/o Drive-Thru Window. (See Conceptual Site Plan on Page A-3 of the Appendix.)

TRIP GENERATION

Projected trips were calculated from data in the Institute of Transportation Engineers Trip Generation report (9th Edition, 2012). Trips for the development were determined based on land uses defined on the Conceptual Site Development Plan on Page A-3 in the Appendix of this report.

Cibola Loop (Westside Multigenerational Center) Plan

Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

COMMENT	USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.		
	DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet		Units					
Tract No.	Library (590)	25.00	1,438	19	8	83	90
Multi-Gen Cntr.	Health/Fitness Club (492)	60.00	1,976	42	42	116	88
Pool	Health/Fitness Club (492)	27.00	889	19	19	55	41
Tract No.	Apartment (220)	153.00	1,051	16	63	66	36
Tract No.	Shopping Center (820)	56.41	4,681	68	42	196	212
Tract No.	Fast Food Restaurant w/o Drive-Thru Window (933)	3.00	2,148	79	53	40	38
Subtotal			12,183	243	227	556	505

NOTE: Red numbers are subject to pass-by trip rate.

Retail Commercial Trips Subject to Pass-by Trips	6,829	147	95	236	250
Pass-by Trips 35%	(2,390)	(51)	(33)	(83)	(88)
Net New Retail Commercial Trips	4,439	96	62	153	162
New Office Trips	5,354	96	132	320	255
Total Trips Adjusted for Pass-by	9,793	192	194	473	417

The resulting numbers of trips generated for the proposed development are summarized in the following table:

An adjustment was made to the trip generation rates for Pass-by Trips of 35%. See Appendix Pages A-7 thru A-13 for the trip generation worksheets.

TRIP DISTRIBUTION

Primary and Diverted Linked Trips:

Trips were distributed as follows:

Commercial Land Uses

Primary and diverted linked trips for the commercial land use development were distributed proportionally to the 2020 projected population of Data Analysis Subzones within a two-mile radius of the proposed development. Population data for the years 2015 and 2035 were

taken from the 2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico, supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2015 and 2035 was interpolated linearly to obtain 2020 population data to utilize for this analysis. Population Subzones were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones is shown in the Appendix on Pages A-22 thru A-26. The Trip Distribution Map is on Appendix Page A-27.

TRIP ASSIGNMENT

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 are shown on Appendix Pages A-28 thru A-29. Passby trips are shown on Appendix Page A-30.

BACKGROUND TRAFFIC GROWTH

Background traffic growth rates were considered for each individual approach to an intersection that was targeted for analysis based on data from the 2005 thru 2014 Traffic Flow maps prepared by the Mid-Region Council of Governments (MRCOG). Almost all of the Traffic Flow Data for those years taken from the MRCOG Traffic Flow Maps were Standard Data. The data from those years for each approach was plotted on a graph and a linear "regression trend line" calculated using the equation format $y=mx+b$. The growth rate was determined by calculating the average volume increase per year during the time period considered and dividing that volume into the most recent AWDT used in the analysis from which future volumes will be calculated. The rate of growth of that trend line was utilized as the growth rate for each approach if that calculated rate appeared feasible. However, there were some instances where the rate indicated a negative growth trend. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was considered. Due to the potential for growth in the area, it was believed that a zero percent growth rate was inappropriate for this study. Additionally, if the R^2 value of the trend line was low, other means of establishing a probable growth rate from the data accumulated was considered. Historical Growth Rate Graphs with linear regression trendlines are shown in the Appendix on Pages A-14 thru A-20. A Historic Growth Map can be found on Appendix Pages A-21.

The growth rate utilized for each approach to an intersection is printed at the top of the Turning Movement sheets for each intersection (Appendix Pages A-33 thru A-45).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2020 BUILDOUT

The calculated growth rates for the intersections studied in this report were applied to the most recent peak hour traffic counts to establish the 2020 background traffic volumes. To these volumes, the generated trips based on implementation of the proposed Cibola Loop Community Center Plan were added to obtain BUILD volumes for the intersection analyses. See Appendix Pages A-31 thru A-46 for further information regarding turning movement counts.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections in the Highway Capacity Manual, Transportation Research Board, 2010, using Trafficware's Synchro version 9 Highway Capacity Software for signalized and unsignalized intersections. For signalized intersections, the operational method of analysis was used for 2020 conditions (BUILD).

Capacity analyses were performed for the following traffic conditions.

- 2020 without development of the subject property (2020 NO BUILD)
- 2020 with total development as per the Proposed Site Plan (2020 BUILD).

The results of the existing, 2020 NO BUILD and 2020 BUILD capacity analyses are summarized in the following sections - *Results of Intersection Capacity Analyses*.

RESULTS OF INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2020)

Intersection #1: Ellison Dr. / N. Seven Bar Loop – Appendix Pages A- 47 thru A- 72

The results of the 2020 implementation year analysis of the signalized intersection of Ellison Dr. / N. Seven Bar Loop are summarized in the following tables:

Intersection: 1 - ELLISON DR. / N. 7 BAR LOOP

2020 AM Peak Hour BUILD						2020 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	A - 4.7	1	A - 3.7	L	1	A - 2.5	1	A - 3.2	
	T	2	A - 4.0	2	A - 4.8	T	2	A - 2.6	2	A - 3.6	
WB	T	2	B - 17.9	2	A - 0.3	T	2	A - 0.4	2	A - 0.3	
	R	1	B - 13.9	1	A - 0.2	R	1	A - 0.1	1	A - 0.1	
SB	L	1	D - 49.5	1	D - 48.9	L	1	E - 66.6	1	E - 71.7	
	R	1	D - 37.6	1	D - 36.0	R	1	E - 61.5	1	E - 58.1	
Intersection:		B - 13.4		A - 8.2				A - 5.5		A - 6.5	

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the signalized intersection of Ellison Dr. / N. Seven Bar Loop operates at acceptable levels-of-service and delays for the 2020 AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions for the overall intersection. The southbound left and right turn movements will experience marginally excessive delays during the PM Peak Hour NO BUILD and BUILD conditions. The traffic generated by the proposed development does not increase the delay at the intersection during the AM Peak Hour and increases the delay during the PM Peak Hour by only 1 second. Therefore, no recommendations are made for the intersection of Ellison Dr. / N. Seven Bar Loop.

The queuing analysis for this intersection are summarized in the following table:

Queueing Analysis Summary Sheet

Project: Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Intersection: Ellison Dr. / N. Seven Bar Dr.

2020												
Approach		Left Turns			Thru Movements			Right Turns				
Eastbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length		1	50	125	2	611	Cont	0	0	0		
AM NO BUILD Queue		1	52	100	2	919	500	0	0	0		
AM BUILD Queue		1	52	100	2	1,005	550	0	0	0		
Existing Lane Length		1	81	125	2	853	Cont	0	0	0		
PM NO BUILD Queue		1	84	150	2	944	700	0	0	0		
PM BUILD Queue		1	84	150	2	1,155	825	0	0	0		
Westbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length		0	0	0	2	344	Cont	1	24	230		
AM NO BUILD Queue		0	0	0	2	486	300	1	58	100		
AM BUILD Queue		0	0	0	2	572	350	1	80	125		
Existing Lane Length		0	0	0	2	1,159	Cont	1	133	230		
PM NO BUILD Queue		0	0	0	2	1,252	900	1	154	250		
PM BUILD Queue		0	0	0	2	1,438	>1,000 *	1	201	325		
Northbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length		0	0	0	0	0	Cont	0	0	0		
AM NO BUILD Queue		0	0	0	0	0	0	0	0	0		
AM BUILD Queue		0	0	0	0	0	0	0	0	0		
Existing Lane Length		0	0	0	0	0	Cont	0	0	0		
PM NO BUILD Queue		0	0	0	0	0	0	0	0	0		
PM BUILD Queue		0	0	0	0	0	0	0	0	0		
Southbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length		1	66	95	0	0	Cont	1	78	400		
AM NO BUILD Queue		1	139	175	0	0	0	1	80	125		
AM BUILD Queue		1	161	200	0	0	0	1	80	125		
Existing Lane Length		1	65	95	0	96	Cont	1	0	400		
PM NO BUILD Queue		1	81	150	0	98	#DIV/0! ##	1	0	0		
PM BUILD Queue		1	134	225	0	98	#DIV/0! ##	1	0	0		

Cycle Length: AM 100 PM 140

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queuing analysis recommends lengthening the southbound left turn lane from 95 feet to 225 feet plus transition. The southbound left turn lane cannot be lengthened without adversely affecting the intersection of Condesa Ct. / Seven Bar Loop. Therefore, no recommendations are made for the queue lengths at the intersection of Ellison Dr. / Seven Bar Loop.

Intersection #2: Ellison Dr. / W. Cibola Loop – Appendix Pages A- 47 thru A- 72

The results of the 2020 implementation year analysis of the signalized intersection of Ellison Dr. / W. Cibola Loop are summarized in the following tables:

Intersection: 2 - ELLISON DR. / W. CIBOLA LOOP

2020 AM Peak Hour BUILD						2020 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 14.8	1	B - 15.9	L	1	B - 16.0	1	C - 28.9	
	T	2	D - 43.2	2	D - 37.9	T	2	D - 44.1	2	C - 23.8	
	R	1	C - 25.1	1	C - 20.2	R	1	C - 25.5	1	B - 13.8	
WB	L	1	C - 32.2	1	D - 37.9	L	1	B - 19.1	1	B - 18.7	
	T	2	B - 17.8	2	C - 30.4	T	2	A - 0.7	2	B - 11.7	
	R	1	B - 11.9	1	B - 18.7	R	1	A - 0.0	1	A - 1.1	
NB	L	1	C - 27.5	1	C - 28.2	L	1	C - 34.4	1	D - 37.2	
	T	1	C - 32.0	1	C - 32.2	T	1	D - 38.1	1	D - 39.7	
	R	>	C - 32.0	>	C - 32.2	R	>	D - 38.1	>	D - 39.7	
SB	L	1	C - 26.7	1	C - 26.9	L	1	C - 33.9	1	D - 35.4	
	T	1	C - 32.7	1	D - 37.3	T	1	D - 39.7	1	D - 50.6	
	R	>	C - 32.7	>	D - 37.3	R	>	D - 39.7	>	D - 50.6	
Intersection:		C - 32.8		C - 33.4				B - 19.2		C - 20.3	

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the signalized intersection of Ellison Dr. / W. Cibola Loop operates at acceptable levels-of-service and delays for the 2020 AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. The traffic generated by the proposed development increases the delay at the intersection during the AM Peak Hour by 0.6 seconds and during the PM Peak Hour by 1.1 seconds. Therefore, no recommendations are made for the intersection of Ellison Dr. / W. Cibola Loop.

The queuing analysis for this intersection are summarized in the following table:

Queueing Analysis Summary Sheet

Project: Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
 Intersection: Ellison Dr. / W. Cibola Loop

2020

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	19	110	2	0	Cont	1	0	160
AM NO BUILD Queue	1	19	50	2	681	400	1	0	0
AM BUILD Queue	1	73	125	2	735	425	1	0	0
Existing Lane Length	1	75	110	2	0	Cont	1	0	160
PM NO BUILD Queue	1	77	150	2	873	650	1	0	0
PM BUILD Queue	1	209	325	2	1,005	725	1	0	0
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	59	250	2	0	Cont	1	6	145
AM NO BUILD Queue	1	60	100	2	375	250	1	6	25
AM BUILD Queue	1	60	100	2	429	275	1	6	25
Existing Lane Length	1	3	250	2	0	Cont	1	48	145
PM NO BUILD Queue	1	3	25	2	1,318	>1,000 *	1	49	100
PM BUILD Queue	1	3	25	2	1,434	>1,000 *	1	49	100
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	0	100	1	0	Cont	0	0	0
AM NO BUILD Queue	1	0	0	1	0	0	0	0	0
AM BUILD Queue	1	0	0	1	1	0	0	0	0
Existing Lane Length	1	0	100	1	0	Cont	0	0	0
PM NO BUILD Queue	1	0	0	1	0	0	0	0	0
PM BUILD Queue	1	0	0	1	2	0	0	0	0
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	52	75	1	0	Cont	0	55	0
AM NO BUILD Queue	1	53	100	1	0	0	0	56	100
AM BUILD Queue	1	135	175	1	1	0	0	110	150
Existing Lane Length	1	26	75	1	0	Cont	0	69	0
PM NO BUILD Queue	1	27	75	1	0	0	0	70	150
PM BUILD Queue	1	210	325	1	1	0	0	186	300

AM
PM
 Cycle Length: 100 140

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queueing analysis recommends lengthening the eastbound left turn lane from 110 feet to 325 feet plus transition and lengthening the southbound left turn lane from 75 feet to 325

feet plus transition. According to aerial photographs, it appears that the eastbound left turn lane cannot be lengthened without eliminating the pedestrian refuge located in the median in the school crossing zone. There is an existing eastbound left turn lane that is currently striped out that may be restriped as a second left turn lane to provide additional queuing in the future, however, there is not enough eastbound left turn lane volume for optimal operation of a dual left turn lane. At this point, it would create more delays. According to aerial photographs, it appears that the southbound left turn lane may be lengthened and should be left as striped only with no median curb as to not interfere with the intersection of W. Cibola Loop / Mill Rd.

Intersection #3: Ellison Dr. / E. Cibola Loop – Appendix Pages A- 47 thru A- 72

The results of the 2020 implementation year analysis of the signalized intersection of Ellison Dr. / E. Cibola Loop are summarized in the following tables:

Intersection: 3 - ELLISON DR. / E. CIBOLA LOOP

2020 AM Peak Hour BUILD

2020 PM Peak Hour BUILD

		(EXIST. GEOM.)			(MIT. GEOM.)					(EXIST. GEOM.)			(MIT. GEOM.)		
		NO BUILD		BUILD	NO BUILD		BUILD			NO BUILD		BUILD	NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 18.1	1	B - 18.8	1	B - 18.5	L	1	C - 24.9	1	B - 13.1	1	C - 32.2	
	T	2	B - 18.7	2	C - 27.3	2	C - 27.3	T	2	A - 0.6	2	A - 1.7	2	A - 2.3	
	R	>	B - 18.8	>	C - 27.6	>	C - 27.5	R	>	A - 0.6	>	A - 1.7	>	A - 2.3	
WB	L	1	C - 24.9	1	C - 25.7	1	C - 25.7	L	1	A - 7.2	1	B - 13.0	1	B - 13.5	
	T	2	C - 33.9	2	D - 35.2	3	C - 33.5	T	2	A - 9.3	2	F - 109	3	A - 2.9	
	R	1	C - 29.1	1	C - 30.2	>	C - 33.7	R	1	A - 3.6	1	A - 0.0	>	B - 13.7	
NB	L	1	C - 26.4	1	C - 26.1	1	C - 26.1	L	1	E - 75.7	1	D - 52.3	1	D - 49.8	
	T	1	B - 17.3	1	B - 16.7	1	B - 16.7	T	1	D - 49.6	1	C - 34.3	1	C - 33.4	
	R	>	B - 17.3	>	B - 16.7	>	B - 16.7	R	>	D - 49.6	>	C - 34.3	>	C - 33.4	
SB	L	1	C - 21.6	1	C - 23.0	1	C - 23.0	L	1	F - 85.5	1	E - 79.0	1	E - 71.4	
	T	1	C - 20.2	1	B - 19.7	1	B - 19.7	T	1	D - 50.3	1	D - 37.7	1	D - 36.7	
	R	>	C - 20.2	>	B - 19.7	>	B - 19.7	R	>	D - 50.3	>	D - 37.7	>	D - 36.7	
Intersection:		C - 23.2		C - 27.3		C - 27.1				B - 14.3		E - 63.3		B - 13.9	

Note: ">" designates a shared right or left turn lane.

Mitigation includes restriping the westbound right turn lane as a shared thru/right turn lane and constructing a third westbound thru lane to Driveway "A" (approx. 800 feet) where it will become an exclusive right turn lane.

The analysis indicates that the signalized intersection of Ellison Dr. / E. Cibola Loop operates at acceptable levels-of-service for the 2020 AM Peak Hour NO BUILD and BUILD conditions and will experience marginally excessive delays for the PM Peak Hour BUILD conditions. The intersection may be mitigated by restriping the existing westbound right turn lane to become a shared thru/right turn lane and constructing a third westbound thru lane to the proposed Driveway "A" (approximately 800 feet), where the new lane will turn into an exclusive right turn lane for Driveway "A". This recommendation is based on the availability of sufficient right-of-way or the possibility of acquiring the needed right-of-way to construct the improvements.

The queuing analysis for this intersection are summarized in the following table:

Queueing Analysis Summary Sheet

Project: Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
 Intersection: Ellison Dr. / E.Cibola Loop

2020

Approach				Left Turns			Thru Movements			Right Turns		
Eastbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	19	175	2	0	Cont	0	34	0
AM NO BUILD Queue				1	19	50	2	728	425	0	35	75
AM BUILD Queue				1	19	50	2	796	450	0	36	75
Existing Lane Length				1	23	175	2	0	Cont	0	51	0
PM NO BUILD Queue				1	23	75	2	885	650	0	52	125
PM BUILD Queue				1	23	75	2	1,031	750	0	53	125
Westbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	15	250	2	0	Cont	1	45	320
AM NO BUILD Queue				1	15	50	2	367	250	1	46	75
AM BUILD Queue				1	15	50	2	434	275	1	46	75
Existing Lane Length				1	45	250	2	0	Cont	1	195	320
PM NO BUILD Queue				1	46	100	2	1,611	>1,000 *	1	199	325
PM BUILD Queue				1	46	100	2	1,777	>1,000 *	1	199	325
Northbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	22	40	1	0	Cont	0	16	0
AM NO BUILD Queue				1	22	50	1	0	0	0	16	50
AM BUILD Queue				1	22	50	1	1	0	0	16	50
Existing Lane Length				1	76	40	1	4	Cont	0	40	0
PM NO BUILD Queue				1	78	150	1	4	25	0	41	100
PM BUILD Queue				1	78	150	1	6	25	0	41	100
Southbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	153	105	1	3	Cont	0	11	0
AM NO BUILD Queue				1	156	200	1	3	0	0	11	25
AM BUILD Queue				1	156	200	1	4	25	0	11	25
Existing Lane Length				1	147	105	1	4	Cont	0	37	0
PM NO BUILD Queue				1	150	250	1	4	25	0	38	100
PM BUILD Queue				1	150	250	1	5	25	0	38	100

AM
PM
 Cycle Length: 100 140

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queueing analysis recommends lengthening the northbound left turn lane from 40 feet to 150 feet plus transition and lengthening the southbound left turn lane from 105 feet to 250 feet plus transition for both the NO BUILD and BUILD conditions.

Intersection #4: Ellison Dr. / Coors Bypass – Appendix Pages A- 47 thru A- 72

The results of the 2020 implementation year analysis of the signalized intersection of Ellison Dr. / Coors Bypass are summarized in the following tables:

Intersection: 4 - ELLISON DR. / COORS BYPASS

2020 AM Peak Hour BUILD						2020 PM Peak Hour BUILD					
(EXIST. GEOM.)						(EXIST. GEOM.)					
NO BUILD			BUILD			NO BUILD			BUILD		
Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay	
EB	L	2 D - 48.2	2	D - 48.5	L	2	F - 102	2	F - 136		
	T	2 D - 46.2	2	B - 16.7	T	2	F - 117	2	F - 102		
	R	1 A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0		
WB	L	2 D - 51.9	2	D - 51.9	L	2	F - 245	2	F - 289		
	T	2 C - 34.9	2	C - 34.9	T	2	F - 221	2	F - 249		
	R	1 A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0		
NB	L	2 E - 56.4	2	E - 56.5	L	2	F - 280	2	F - 300		
	T	3 B - 16.3	3	B - 16.5	T	3	F - 220	3	F - 220		
	R	1 A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0		
SB	L	2 D - 47.8	2	D - 47.8	L	2	F - 278	2	F - 278		
	T	3 C - 24.6	3	C - 25.9	T	3	E - 56.3	3	E - 64.7		
	R	1 A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0		
Intersection:		C - 30.2		C - 31.2			F - 190		F - 200		

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the signalized intersection of Ellison Dr. / Coors Bypass operates at acceptable levels-of-service for the 2020 AM Peak Hour NO BUILD and BUILD conditions and will experience excessive delays for the PM Peak Hour NO BUILD and BUILD conditions. Traffic generated by the proposed development will only increase the delays at the intersection by 1 second during the AM Peak Hour and by 10 seconds during the PM Peak Hour. The delays are a NO BUILD condition and will not be caused by the proposed development. The intersection is already built-out and no physical improvements could be made. Therefore, no recommendations are made for the intersection of Ellison Dr. / Coors Bypass.

The queuing analysis for this intersection are summarized in the following table:

Queueing Analysis Summary Sheet

Project: Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
 Intersection: Ellison Dr. / Coors Bypass

2020

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	2	84	200	2	470	Cont	1	328	345
AM NO BUILD Queue	2	86	75	2	479	300	1	335	375
AM BUILD Queue	2	101	100	2	499	300	1	368	400
Existing Lane Length	2	141	200	2	579	Cont	1	334	345
PM NO BUILD Queue	2	144	150	2	591	475	1	341	500
PM BUILD Queue	2	177	175	2	634	500	1	412	575
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	2	85	210	2	168	Cont	1	16	250
AM NO BUILD Queue	2	96	100	2	190	150	1	18	50
AM BUILD Queue	2	96	100	2	210	150	1	18	50
Existing Lane Length	2	331	210	2	893	Cont	1	106	250
PM NO BUILD Queue	2	375	325	2	1,011	750	1	120	200
PM BUILD Queue	2	375	325	2	1,060	775	1	120	200
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	2	191	210	3	969	Cont	1	53	320
AM NO BUILD Queue	2	195	150	3	988	400	1	54	100
AM BUILD Queue	2	228	175	3	988	400	1	54	100
Existing Lane Length	2	720	210	3	2,603	Cont	1	194	320
PM NO BUILD Queue	2	734	550	3	2,655	>1,000 *	1	198	325
PM BUILD Queue	2	814	625	3	2,655	>1,000 *	1	198	325
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	2	67	230	3	1,417	Cont	1	42	350
AM NO BUILD Queue	2	68	75	3	1,445	550	1	43	75
AM BUILD Queue	2	68	75	3	1,445	550	1	58	100
Existing Lane Length	2	123	230	3	1,164	Cont	1	109	350
PM NO BUILD Queue	2	125	150	3	1,187	625	1	111	200
PM BUILD Queue	2	125	150	3	1,187	625	1	148	250

Cycle Length: AM 100 PM 140

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queuing analysis recommends lengthening the westbound left turn lane from 210 feet to 325 feet plus transition for both the NO BUILD and BUILD conditions. This dual left is physically constrained by the close proximity to the Ellison Dr. / Cottonwood Dr. intersection and the width of the existing median. It appears from aerial photography that the lanes may be lengthened to the recommended length or as close to the recommended length as possible. However, this development does not contribute traffic volumes to the westbound

left turn movement. The queuing analysis also recommends lengthening the northbound left turn lane from 210 feet to 550 feet plus transition for the NO BUILD condition and to 625 feet plus transition for the BUILD condition. 9.6 percent of the northbound left turns are generated by the proposed Cibola Loop Development and a cost sharing between the City of Albuquerque and the developer should be used for this improvement.

Intersection #5: Mill Rd. / W. Cibola Loop – Appendix Pages A- 47 thru A- 72

One driveway for this project will be the fourth leg of this intersection. The results of the 2020 implementation year analysis of the signalized intersection of Mill Rd. / W. Cibola Loop are summarized in the following tables:

Intersection: 5 - MILL RD. / W. CIBOLA LOOP

2020 AM Peak Hour BUILD						2020 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	A - 9.3	>	A - 9.4	L	1	A - 9.0	>	B - 10.1	
	T		A - 0.0	1	A - 9.4	T		A - 0.0	1	B - 10.1	
	R	>	A - 9.3	>	A - 9.4	R	>	A - 9.0	>	B - 10.1	
WB	L		A - 0.0	>	B - 11.2	L		A - 0.0	>	B - 13.4	
	T		A - 0.0	1	B - 11.2	T		A - 0.0	1	B - 13.4	
	R		A - 0.0	>	B - 11.2	R		A - 0.0	>	B - 13.4	
NB	L	>	A - 7.6	>	A - 7.6	L	>	A - 7.5	>	A - 7.5	
	T	1	A - 0.0	1	A - 7.6	T	1	A - 0.0	1	A - 7.5	
	R		A - 0.0	>	A - 0.0	R		A - 0.0	>	A - 0.0	
SB	L		A - 0.0	>	A - 0.0	L		A - 0.0	>	A - 0.0	
	T	1	A - 0.0	1	A - 7.4	T	1	A - 0.0	1	A - 7.8	
	R	>	A - 0.0	>	A - 7.4	R	>	A - 0.0	>	A - 7.8	
Intersection:		u - 1.6		u - 3.7				u - 1.0		u - 4.8	

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the unsignalized intersection of Mill Rd. / W. Cibola Loop operates at acceptable levels-of-service and delays for the 2020 AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. Therefore, no recommendations are made for the intersection of Mill Rd. / W. Cibola Loop besides constructing the fourth leg.

Intersection #6: Ellison Dr. / Driveway "A" – Appendix Pages A- 47 thru A- 72

This is a proposed right-in, left-in, right-out, only unsignalized driveway. The results of the 2020 implementation year analysis of the signalized intersection of Ellison Dr. / Driveway "A" are summarized in the following tables:

Intersection: 6 - ELLISON DR. / DRIVEWAY "A"

2020 AM Peak Hour BUILD					2020 PM Peak Hour BUILD				
(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes LOS-Delay			Lanes	LOS-Delay	Lanes LOS-Delay
EB	L	1	A - 0.0	1 A - 8.5	L	1	A - 0.0	1 B - 11.5	
	T	2	A - 0.0	2 A - 0.0		2	A - 0.0	2 A - 0.0	
WB	T	2	A - 0.0	2 A - 0.0	T	2	A - 0.0	2 A - 0.0	
	R	1	A - 0.0	1 A - 0.0		1	A - 0.0	1 A - 0.0	
SB	R	1	A - 0.0	1 A - 10.0	R	1	A - 0.0	1 C - 15.7	
Intersection:		u - 0.0		u - 0.6			u - 0.0		u - 1.4

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the unsignalized intersection of Ellison Dr. / Driveway "A" operates at acceptable levels-of-service and delays for the 2020 AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. Therefore, no recommendations are made for the intersection of Ellison Dr. / Driveway "A".

A Determination of Warrants for Deceleration Lanes was conducted for Driveway "A" and recommends constructing a westbound right turn deceleration lane of 325 feet with a 10.5:1 taper ratio and an eastbound left turn deceleration lane of 500 feet with a 10.5:1 taper ratio. From aerial photographs, it appears that the eastbound left turn lane cannot be constructed to the desired length by probably more close to 200 feet. In this case, the subject westbound right turn deceleration lane should be a continuation of the third westbound thru lane on Ellison Dr. through the intersection of Cibola Loop (East) if there is sufficient right-of-way available to construct that third westbound thru lane.

Intersection #7: Driveway "B" / E. Cibola Loop – Appendix Pages A- 47 thru A- 72

This is a proposed unsignalized full access driveway. The results of the 2020 implementation year analysis of the signalized intersection of Driveway "B" / E. Cibola Loop are summarized in the following tables:

Intersection: 7 - DRIVEWAY "B" / E. CIBOLA LOOP

2020 AM Peak Hour BUILD					2020 PM Peak Hour BUILD				
(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes LOS-Delay			Lanes	LOS-Delay	Lanes LOS-Delay
EB	L	1	A - 0.0	1 B - 12.3	L	1	A - 0.0	1 B - 14.5	
	R	>	A - 0.0	> B - 12.3		>	A - 0.0	> B - 14.5	
NB	L	>	A - 0.0	> A - 8.3	L	>	A - 0.0	> A - 8.2	
	T	1	A - 0.0	1 A - 8.3		1	A - 0.0	1 A - 0.0	
SB	T	1	A - 0.0	1 A - 0.0	T	1	A - 0.0	1 A - 0.0	
	R	>	A - 0.0	> A - 0.0		>	A - 0.0	> A - 0.0	
Intersection:		u - 0.0		u - 2.1			u - 0.0		u - 4.4

Note: ">" designates a shared right or left turn lane.

The analysis indicates that the unsignalized intersection of Driveway "B" / E. Cibola Loop operates at acceptable levels-of-service and delays for the 2020 AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. Therefore, no recommendations are made for the intersection of Driveway "B" / E. Cibola Loop.

CONCLUSIONS

This analysis was conducted using the following methodology: Trip Generation was established using the Institute of Transportation Engineers' (ITE's) Trip Generation Manual (9th Edition). Generated Trips were distributed proportionately based on the population data within a two-mile radius of the project; Growth rate of background traffic volumes was established from Traffic Flow Map data from 2005 through 2014; and the intersection analyses were performed in accordance with the 2000 Highway Capacity Manual. The Traffic Impact Study showed a moderate increase in traffic congestion for the adjacent transportation network based on 100% buildout of the proposed project.

In summary, the proposed development plan for mixed use development presents minimal adverse impact to the adjacent transportation system provided that the following recommendations are followed:

RECOMMENDATIONS

- All design and construction for this project shall insure that adequate site distances at the proposed access points and any offsite intersection for which improvements are constructed.
- Driveways shall be constructed using a minimum of 25-foot radius curb returns or larger is required to accommodate delivery trucks.
- The proposed development should be accessed via three driveways – Mill Rd. / Cibola Loop (full access, unsignalized, one entering lane, one exiting lane), Driveway "A" via Ellison Dr. (right-in, right-out, left-in only unsignalized, one lane entering, one lane exiting) and Driveway "B" via Cibola Loop (full access, unsignalized, one lane entering, one lane exiting).
- **Ellison Dr. / E. Cibola Loop** – If sufficient right-of-way on Ellison Dr. is available or can be acquired, restripe the existing westbound right turn lane to become a shared thru/right turn lane and construct a third westbound thru lane to the proposed Driveway "A" (approximately 800 feet), where the new lane will turn into an exclusive right turn lane for Driveway "A".
- **Ellison Dr. / W. Cibola Loop** - Extend the southbound left turn lane from 75 feet to 325 feet plus transition.
- **Ellison Dr. / Coors Bypass** - Extend the northbound left turn lane from 210 feet to 625 feet plus transition using a cost sharing of 9.6% to the developer.
- **Ellison Dr. / Driveway "A"** - construct a westbound right turn deceleration lane of 325 feet with a 10.5:1 taper ratio and an eastbound left turn deceleration lane of 200 feet (or as long as possible) with a 10.5:1 taper ratio. If it is possible to construct the third westbound thru lane on Ellison Dr. at E. Cibola Loop, then the westbound right turn deceleration lane should be a continuation of that third westbound (outside) thru lane which terminates at the proposed Driveway "A".

Appendix

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Appendix



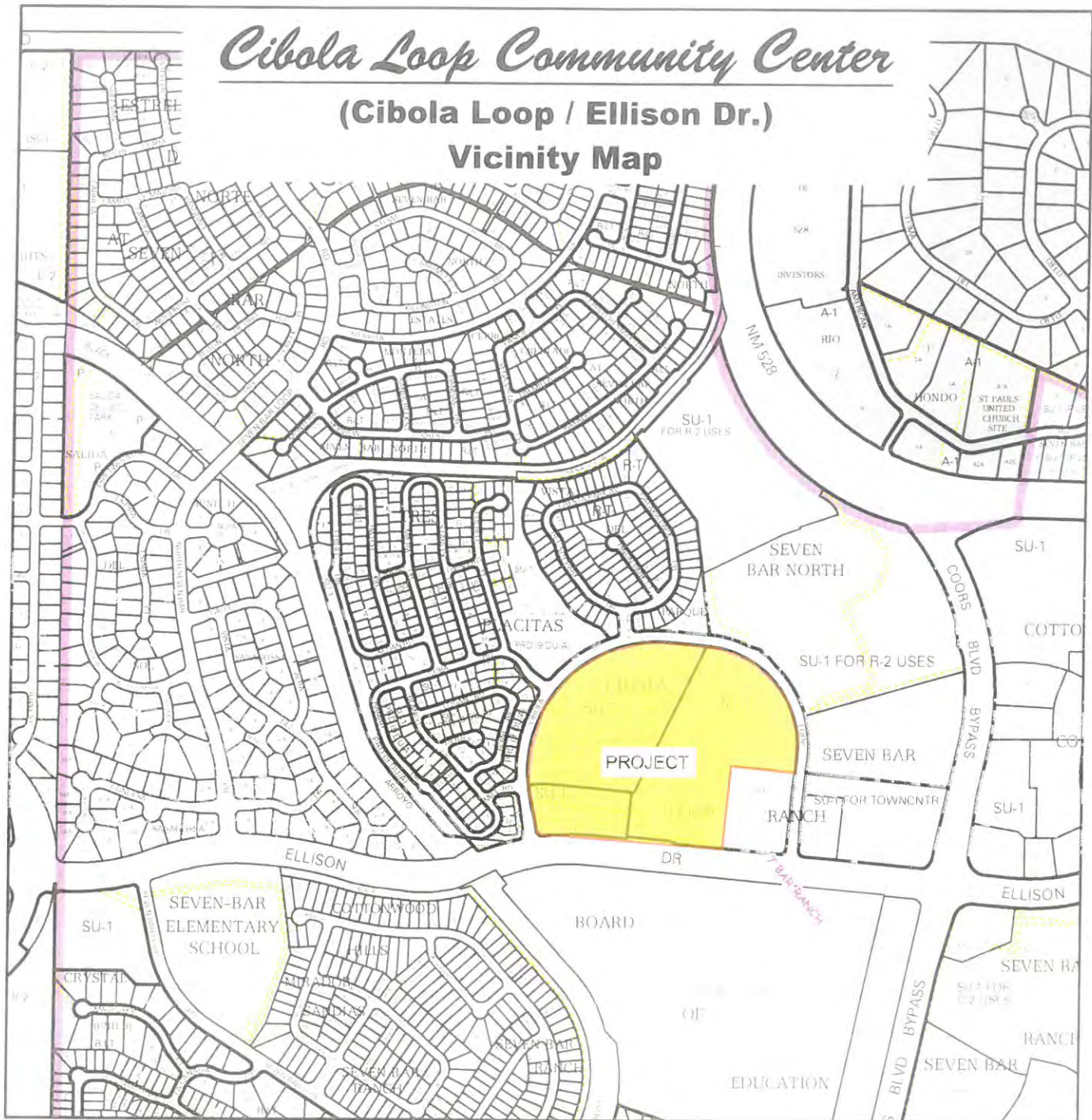
Cibola Loop Community Center

(Cibola Loop / Ellison Dr.)
Aerial Map

Cibola Loop Community Center

(Cibola Loop / Ellison Dr.)

Vicinity Map



For more current information and details visit: <http://www.cabq.gov/gis>





WESTSIDE MULTIGENERATIONAL CENTER
CIBOLA LOOP PROPOSED SITE DEVELOPMENT PLAN



"B"

"A"

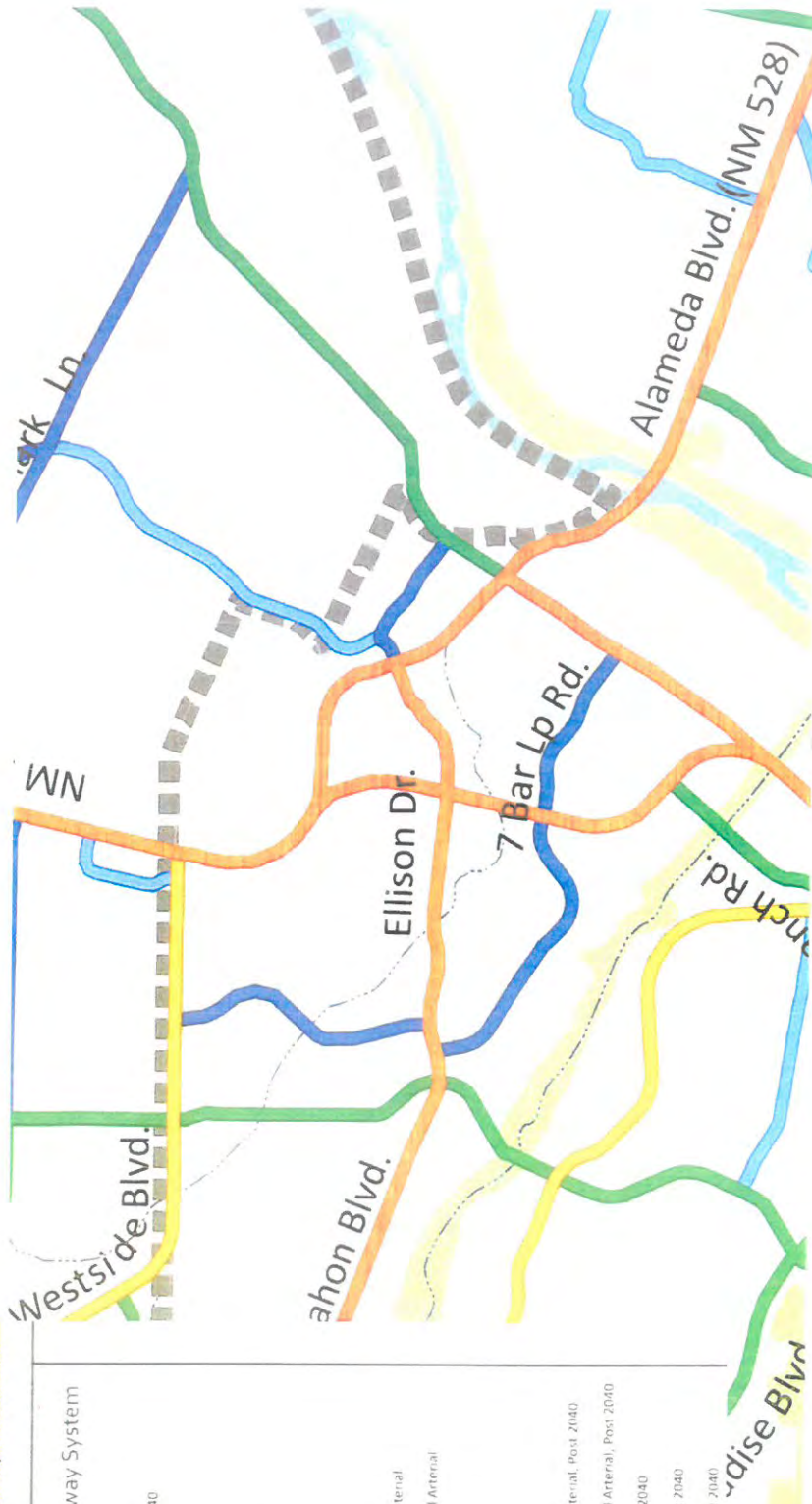
2040 Long Range Roadway System

-  Major Arterial Roadway
-  Minor Arterial Roadway
-  Collector Roadway
-  Local Roadway
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)
-  Major Arterial Roadway (Proposed)
-  Minor Arterial Roadway (Proposed)
-  Collector Roadway (Proposed)
-  Local Roadway (Proposed)



2040 Long Range Roadway System

- Interchange/Crossing
- Interchange/Crossing, Post 2040
- Freeways
- Regional Principal Arterial
- Community Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Proposed Regional Principal Arterial
- Proposed Community Principal Arterial
- Proposed Minor Arterial
- Proposed Major Collector
- Proposed Minor Collector
- Proposed Regional Principal Arterial, Post 2040
- Proposed Community Principal Arterial, Post 2040
- Proposed Minor Arterial, Post 2040
- Proposed Major Collector, Post 2040
- Proposed Minor Collector, Post 2040



Excerpt from Futures 2040 Long Range Roadway System Map

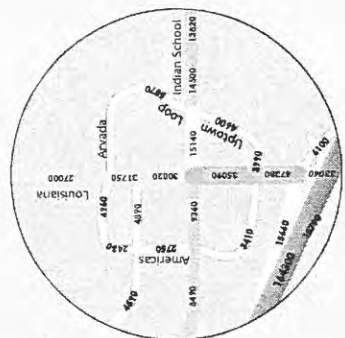
2014 Traffic Flows for the Greater Albuquerque Area

Map prepared by the Mid-Region Council of Governments (MRCOG) in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration. Map prepared July 2015.

An online version of this map with complete and historic traffic count information and additional maps can be found at: www.mrcog-nm.gov



Note:
Caution should be used when evaluating trends in annual peak weekday traffic due to the location of the Pasaje del Norte and I-25 interchange. This interchange project began in October 2013 and ended in December 2014. Average weekday traffic is derived by applying seasonal factors and growth factors to observed counts. However, no correction factors were applied to offset the variations in traffic due to this large construction project.



Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

COMMENT	USE (ITE CODE)	DESCRIPTION	24 HR VOL		A. M. PEAK HR.		P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER	EXIT	
	Summary Sheet							
		Units						
Tract No.		Library (590)	25.00	1,438	19	8	83	90
Multi-Gen Cntr.		Health/Fitness Club (492)	60.00	1,976	42	42	116	88
Pool		Health/Fitness Club (492)	27.00	889	19	19	55	41
Tract No.		Apartment (220)	153.00	1,051	16	63	66	36
Tract No.		Shopping Center (820)	56.41	4,681	68	42	196	212
Tract No.		Fast Food Restaurant w/o Drive-Thru Window (933)	3.00	2,148	79	53	40	38
		Subtotal		12,183	243	227	556	505

NOTE: Red numbers are subject to pass-by trip rate.

Retail Commercial Trips Subject to Pass-by Trips	6,829	147	95	236	250
Pass-by Trips	35%	(51)	(33)	(83)	(88)
Net New Retail Commercial Trips	4,439	96	62	153	162
New Office Trips	5,354	96	132	320	255
Total Trips Adjusted for Pass-by	9,793	192	194	473	417

Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	EXIT
	1,438	19	8	83	90	

Units
 25.00
 1,000 S.F.

ITE Trip Generation Equations:

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

$$\ln(T) = 0.69 \ln(X) + 5.05$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 1.32 (X) + -5.84$$

71% Enter, 29% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\ln(T) = 0.91 \ln(X) + 2.22$$

48% Enter, 52% Exit

Comments:
 Tract No.

Based on ITE Trip Generation Manual - 9th Edition

Cibola Loop (Westside Multigenerational Center) Plan Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Units					
		60.00		116	88
		1,976	42		
			42		
1,000 S.F.					

Health/Fitness Club (492)

ITE Trip Generation Equations:

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

$$T = \frac{32.93 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = \frac{1.41 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$Ln(T) = \frac{0.95 Ln(X) + 1.43}{57\% \text{ Enter, } 43\% \text{ Exit}}$$

Comments:
Multi-Gen Cntr.

Based on ITE Trip Generation Manual - 9th Edition

*Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	ENTER
Health/Fitness Club (492)	889	19	19	55	55	41
Units						
27.00						
1,000 S.F.						

ITE Trip Generation Equations:

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

$$T = 32.93 (X) + 0$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 1.41 (X) + 0$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$Ln(T) = 0.95 Ln(X) + 1.43$$

57% Enter, 43% Exit

Comments:
Pool

Based on ITE Trip Generation Manual - 9th Edition

*Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT
Apartment (220)	1,051	16	63	66	36
Units					
153.00					
Dwelling Units					

ITE Trip Generation Equations:

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

$$T = 6.06 (X) + 123.56$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 0.49 (X) + 3.73$$

20% Enter, 80% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = 0.55 (X) + 17.65$$

65% Enter, 35% Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 9th Edition

*Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Shopping Center (820)					
		68	42	196	212
		Units			
		56.41			
		1,000 S.F.			

ITE Trip Generation Equations:

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

$$\ln(T) = 0.65 \ln(X) + 5.83$$

50% Enter, 50% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$\ln(T) = 0.61 \ln(X) + 2.24$$

62% Enter, 38% Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\ln(T) = 0.67 \ln(X) + 3.31$$

48% Enter, 52% Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 9th Edition

*Cibola Loop (Westside Multigenerational Center) Plan
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	ENTER
Fast Food Restaurant w/o Drive-Thru Window (933)						
	2,148	79	53	40	38	
Units						
	3.00					
1,000 S.F.						

ITE Trip Generation Equations:

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

$$T = 50\% \text{ Enter, } 716 (X) + 0 \text{ Exit}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = 60\% \text{ Enter, } 43.87 (X) + 0 \text{ Exit}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = 51\% \text{ Enter, } 26.15 (X) + 0 \text{ Exit}$$

Comments:
Tract No.

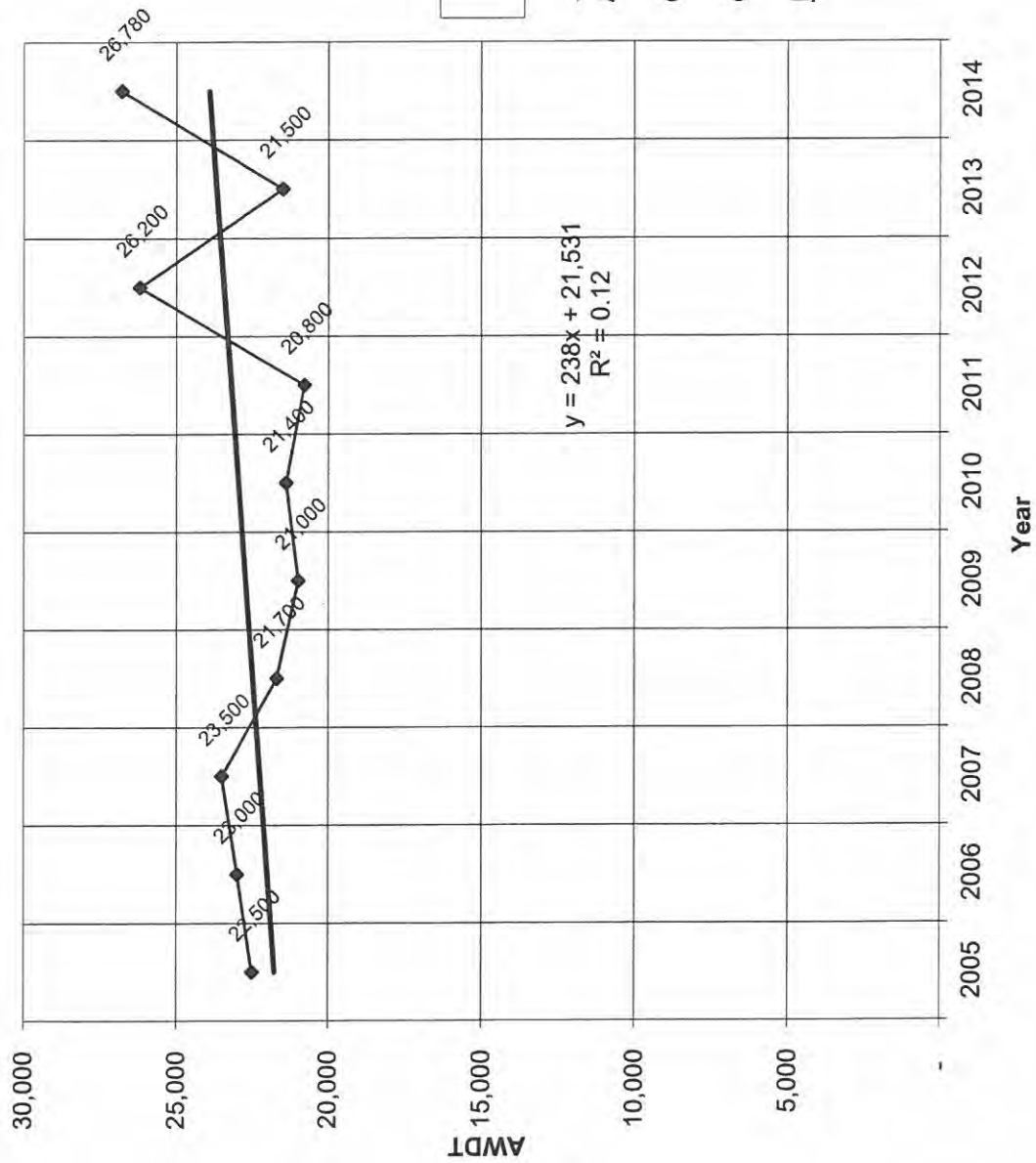
Based on ITE Trip Generation Manual - 9th Edition

Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Historic Growth Rate Table

Traffic Flows from MRCOG Map

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Ellison Dr. West of N. Seven Bar Dr.	22,500	23,000	23,500	21,700	21,000	21,400	20,800	26,200	21,500	26,780
N. Seven Bar Dr. North of Ellison Dr.	1,600	1,700	1,700	1,600	1,600	1,600	1,500	1,400	1,400	1,400
Ellison Dr. btwn N. 7 Bar & Coors Bypass	26,200	29,000	29,700	30,000	27,300	27,200	26,800	24,500	24,300	23,040
Coors Bypass North of Ellison Dr.	40,000	40,900	43,400	43,800	43,900	43,900	47,000	36,900	39,300	44,010
Ellison Dr. East of Coors Bypass	21,600	22,100	22,700	21,300	21,400	21,400	30,500	30,200	30,000	21,040
Coors Bypass South of Ellison Dr.	49,200	50,300	51,600	44,400	44,600	47,800	47,000	47,000	48,400	55,590

Historic Growth Chart Ellison Dr. West of N. Seven Bar Dr. (2005-2014)



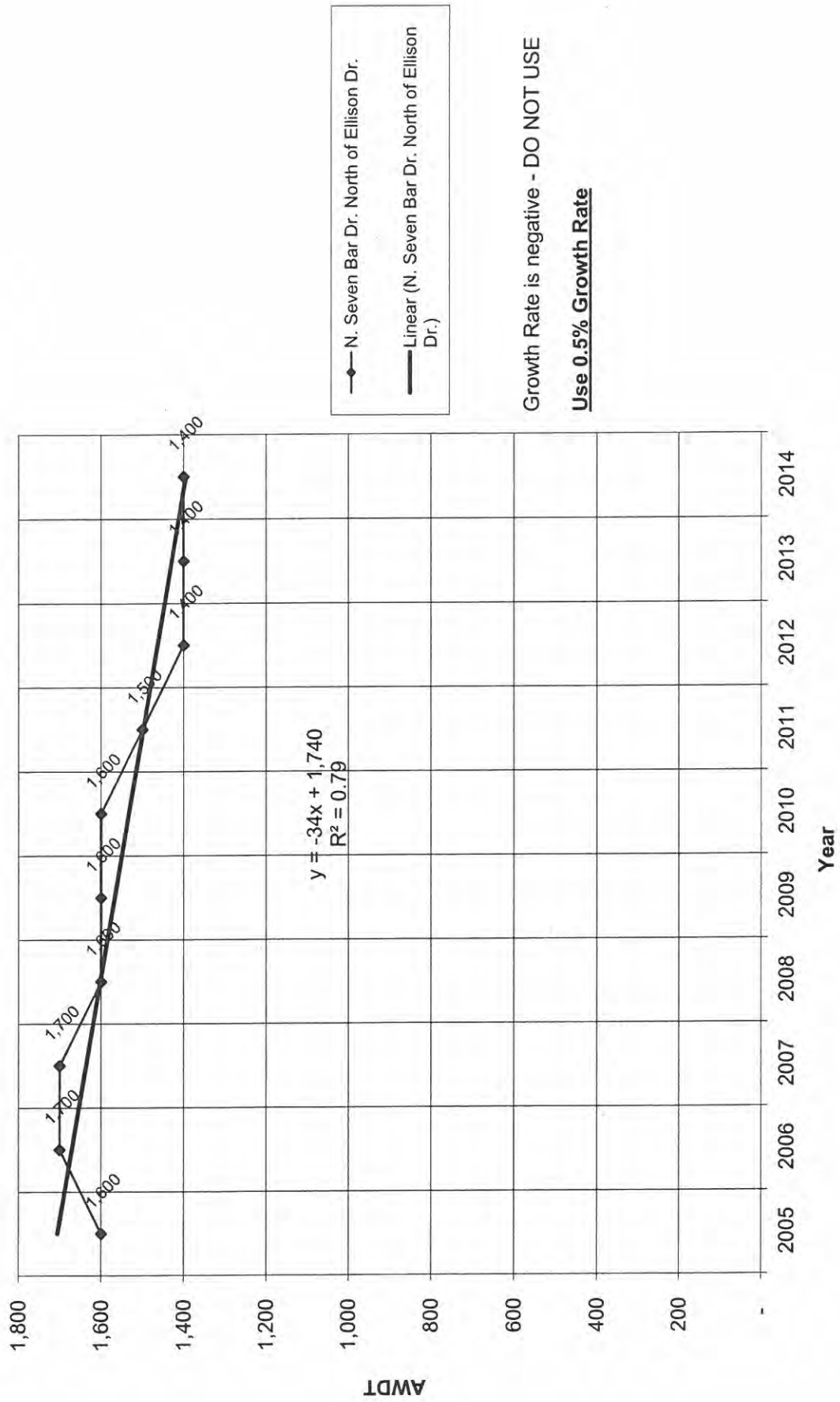
Annual Increase (Trendline) = 238 veh./day

Growth Rate = 238 / 26780

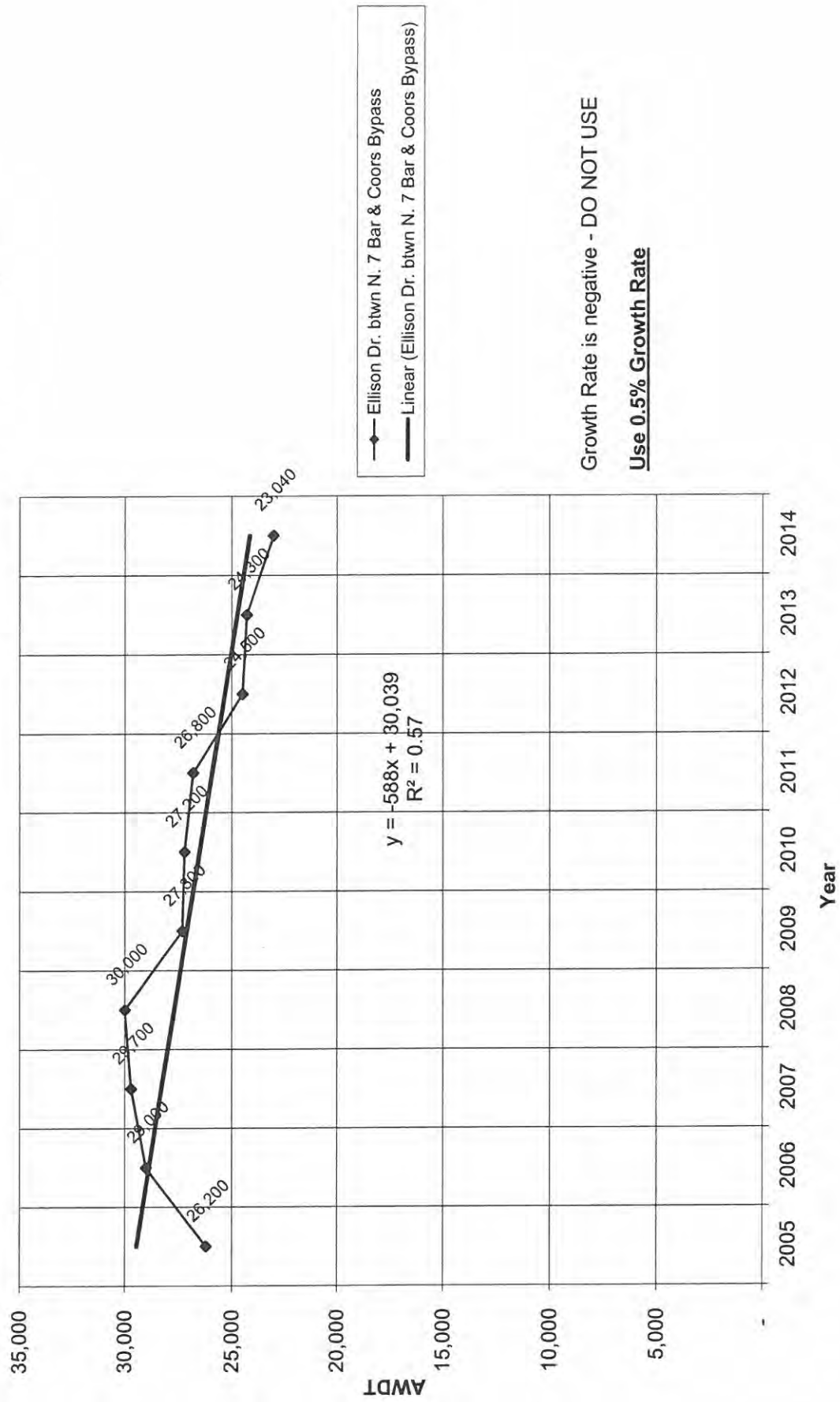
Growth Rate = .0089

Use 0.9% Growth Rate

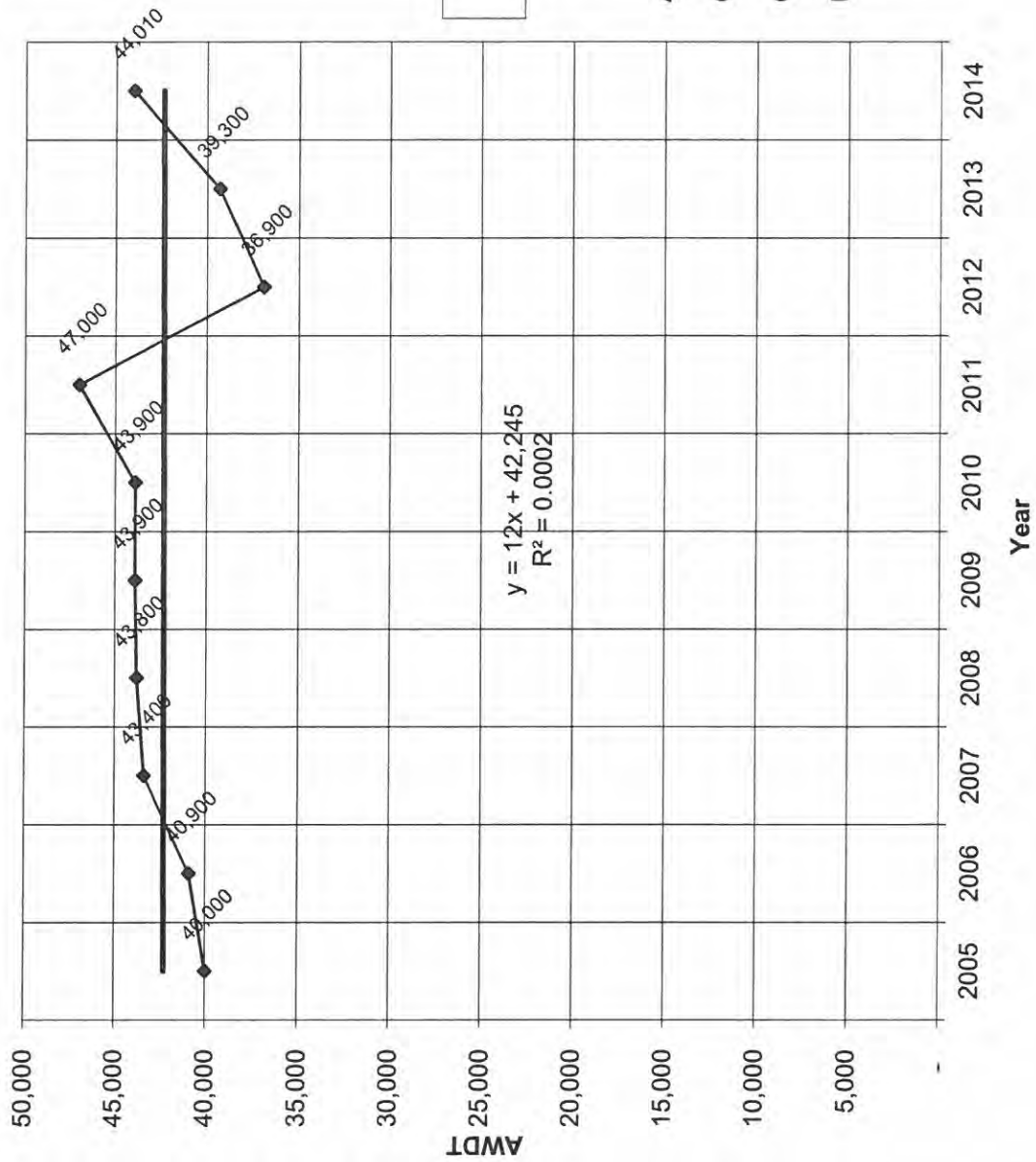
Historic Growth Chart N. Seven Bar Dr. North of Ellison Dr. (2005-2014)



Historic Growth Chart Ellison Dr. btwn N. 7 Bar & Coors Bypass (2005-2014)



Historic Growth Chart Coors Bypass North of Ellison Dr. (2005-2014)



Coors Bypass North of Ellison Dr.
 Linear (Coors Bypass North of Ellison Dr.)

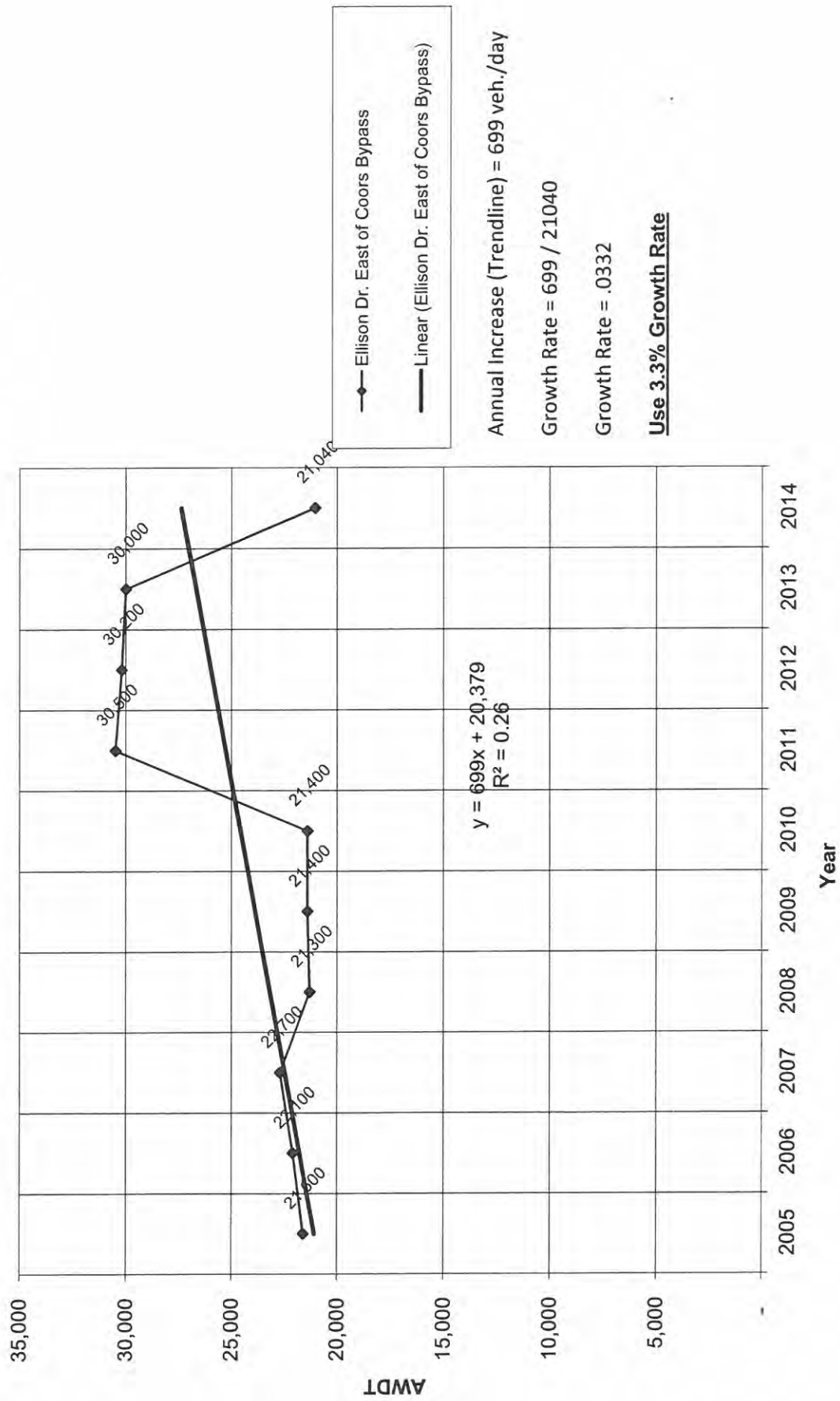
Annual Increase (Trendline) = 12 veh./day

Growth Rate = 12 / 44010

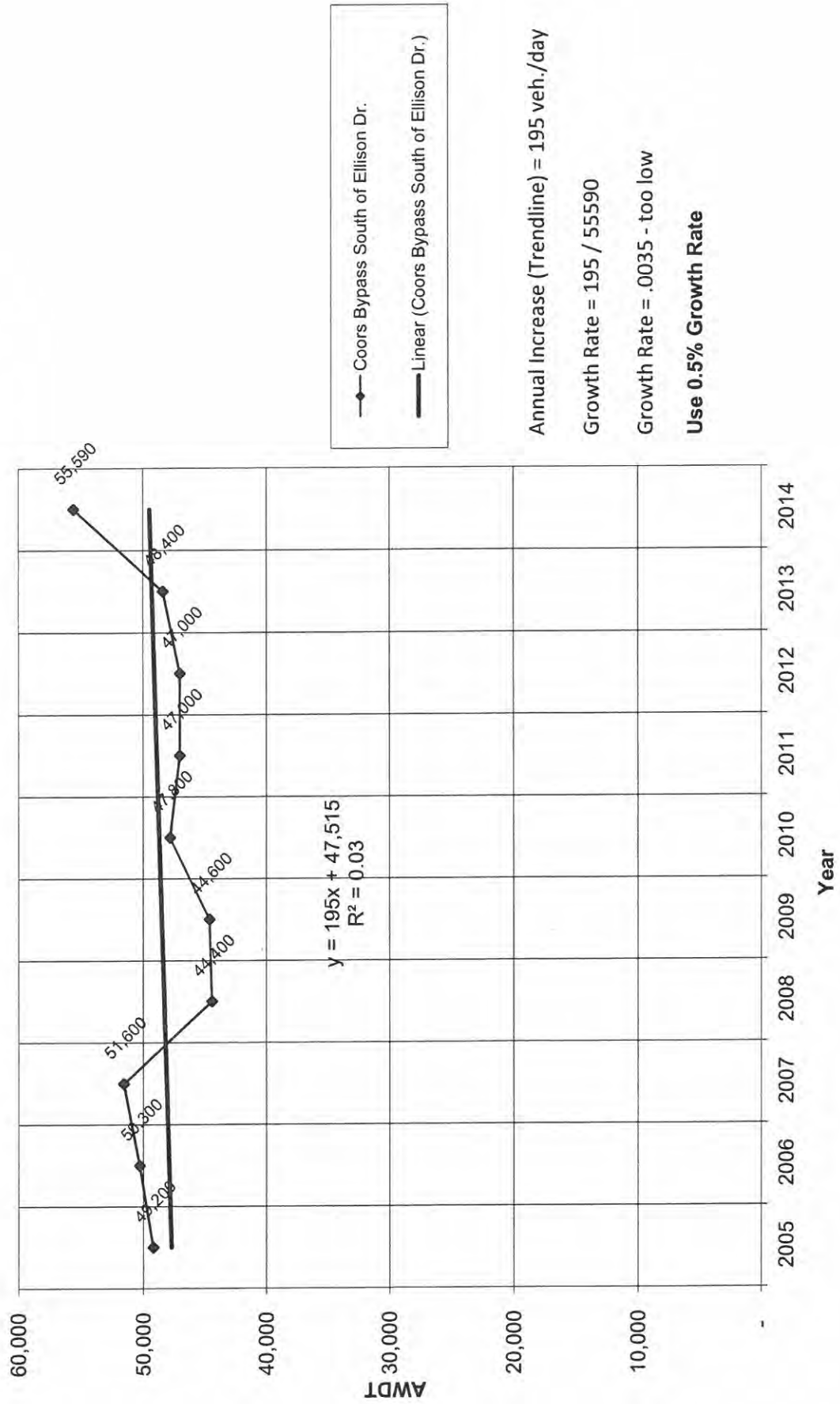
Growth Rate = .0003 - too low

Use 0.5 % Growth Rate

Historic Growth Chart Ellison Dr. East of Coors Bypass (2005-2014)



Historic Growth Chart Coors Bypass South of Ellison Dr. (2005-2014)

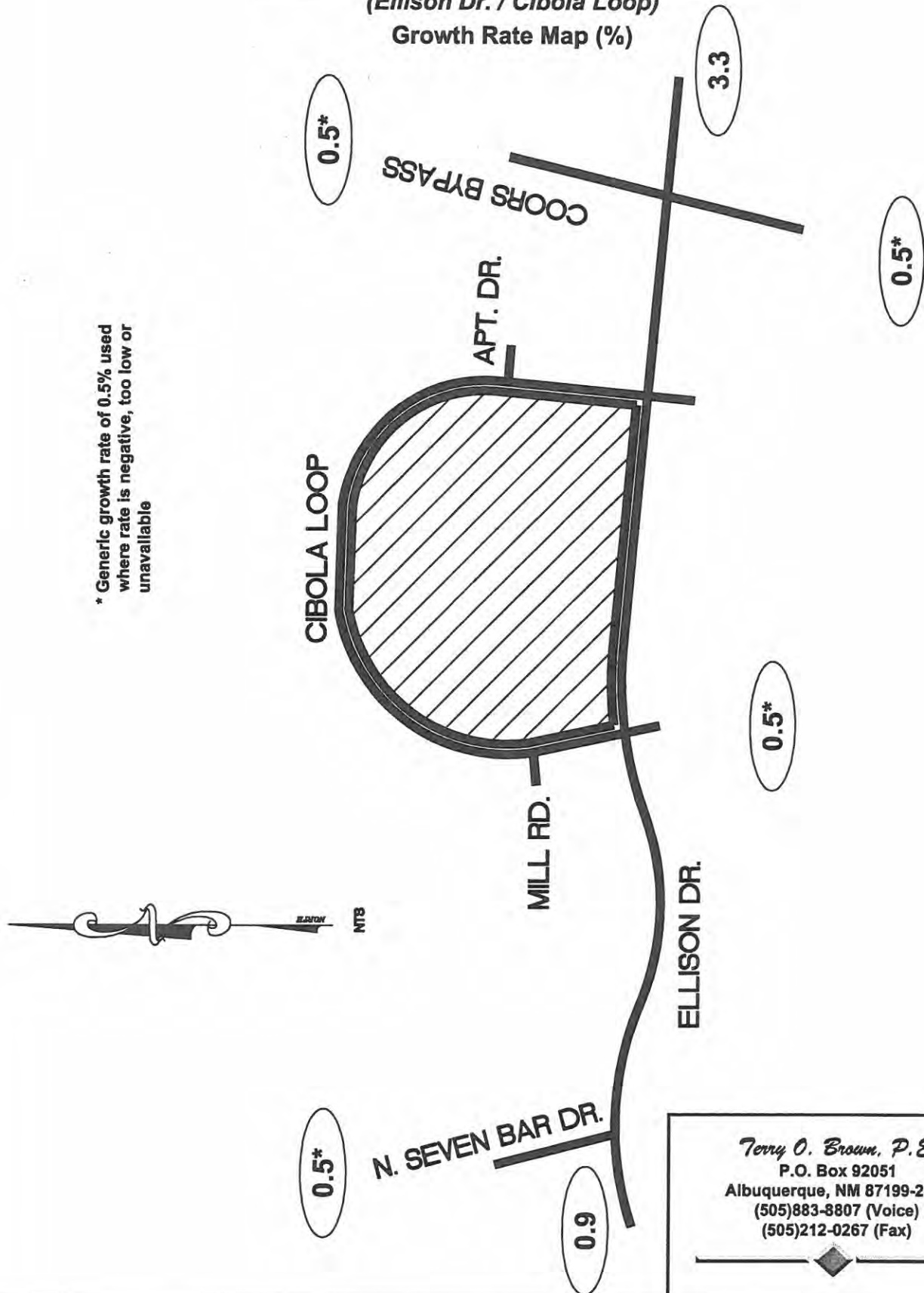


Cibola Loop Community Center

(Ellison Dr. / Cibola Loop)

Growth Rate Map (%)

* Generic growth rate of 0.5% used
where rate is negative, too low or
unavailable



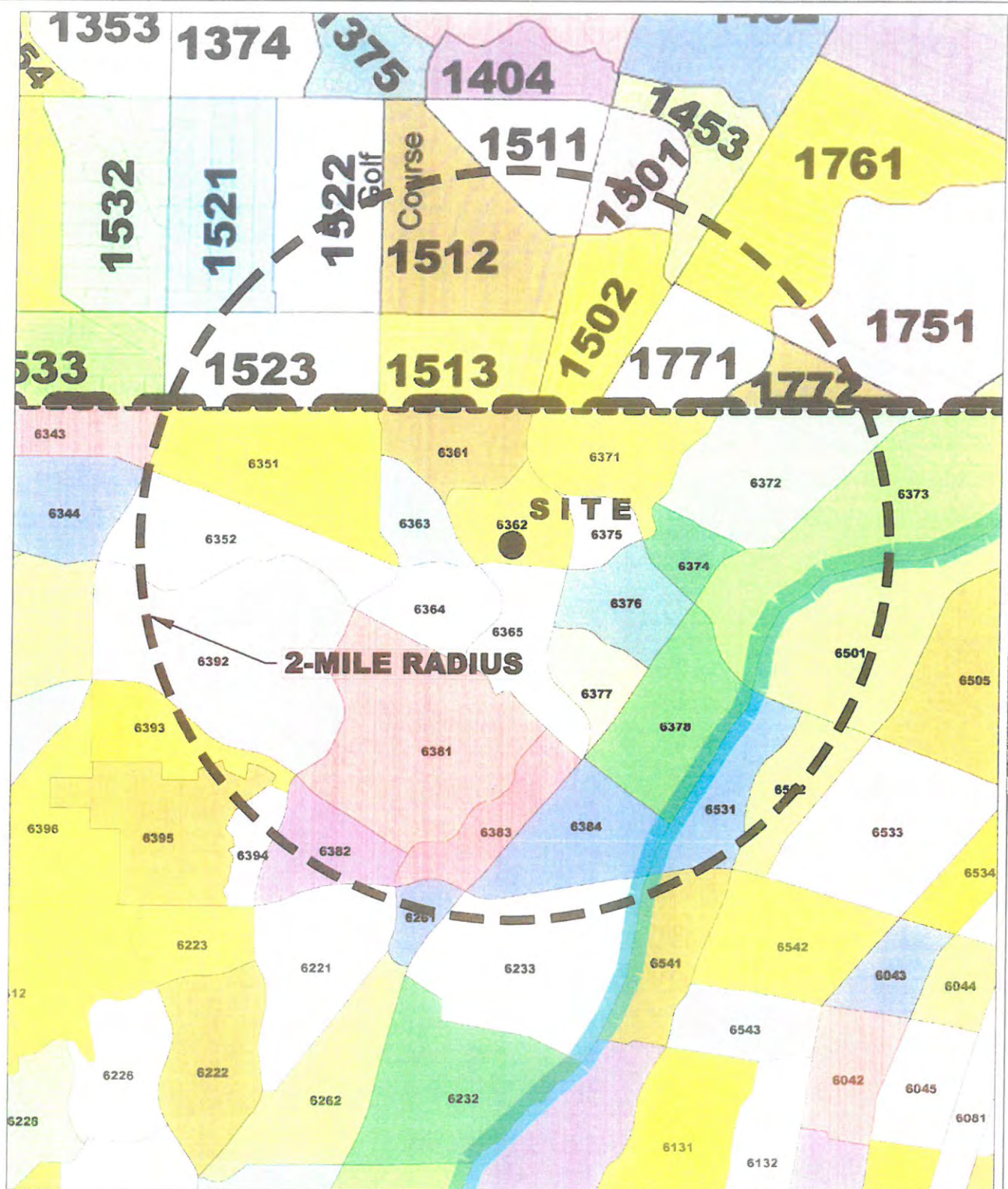
Terry O. Brown, P.E.

P.O. Box 92051

Albuquerque, NM 87199-2051

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(505)212-0267 (Fax)



DATA ANALYSIS SUBZONE (DASZ) MAP
Cibola Loop Community Center (N. of Ellison Dr.)

Trip Distribution Table Cibola Loop Community Center (N. of Ellison Dr.)

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

2015 and 2025 Data Taken from Mid-Region Council of Governments'
2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area In Study	2015 Population	2025 Population	Interpolated Population for the Year	Population In Study	Percent Population	(EW)		(7N)		(MW)	
Boundary Specified on DASZ Map							% Utilizing	% Population Utilizing	% Utilizing	% Population Utilizing	% Utilizing	% Population Utilizing
1453	10%	2231	2541	2,386	239	0.63%	0%	0.00%	0	0%	0	0.00%
1501	30%	860	854	857	257	0.68%	0%	0.00%	0	0%	0	0.00%
1502	100%	10	1169	590	590	1.55%	0%	0.00%	0	0%	0	0.00%
1511	40%	920	901	911	364	0.96%	0%	0.00%	0	0%	0	0.00%
1512	80%	2008	1944	1,976	1,581	4.16%	25%	1.04%	395	25%	395	0.00%
1513	100%	1071	1073	1,072	1,072	2.82%	25%	0.70%	268	25%	268	0.00%
1521	5%	2121	2094	2,108	105	0.28%	50%	0.14%	53	50%	53	0.00%
1522	45%	1474	1531	1,503	676	1.78%	50%	0.89%	338	50%	338	0.00%
1523	85%	2614	2639	2,627	2,233	5.87%	50%	2.93%	1,117	50%	1,117	0.00%
1751	5%	1282	1444	1,363	68	0.18%	0%	0.00%	0	0%	0	0.00%
1761	15%	1271	1358	1,315	197	0.52%	0%	0.00%	0	0%	0	0.00%
1771	100%	604	597	601	601	1.58%	0%	0.00%	0	0%	0	0.00%
1772	95%	151	187	169	161	0.42%	0%	0.00%	0	0%	0	0.00%
6233	10%	968	1069	1,019	102	0.27%	0%	0.00%	0	0%	0	0.00%
6251	45%	521	515	518	233	0.61%	0%	0.00%	0	0%	0	0.00%
6351	100%	3458	3372	3,415	3,415	8.98%	100%	8.98%	3,415	0%	0	0.00%
6352	90%	2515	2501	2,508	2,257	5.93%	100%	5.93%	2,257	0%	0	0.00%
6361	100%	1493	1448	1,471	1,471	3.87%	0%	0.00%	0	100%	0	0.00%
6362	100%	3164	3184	3,174	3,174	8.34%	0%	0.00%	0	0%	1,471	0.00%
6363	100%	821	795	808	808	2.12%	20%	0.42%	162	80%	0	1.25%
6364	100%	1465	1419	1,442	1,442	3.79%	100%	3.79%	1,442	0%	646	0.00%
6365	100%	1309	1269	1,289	1,289	3.39%	0%	0.00%	0	0%	0	0.00%
6371	100%	415	407	411	411	1.08%	0%	0.00%	0	0%	0	0.00%
6372	95%	362	425	394	374	0.98%	0%	0.00%	0	0%	0	0.00%
6373	45%	332	411	372	167	0.44%	0%	0.00%	0	0%	0	0.00%
6374	100%	1082	1045	1,064	1,064	2.80%	0%	0.00%	0	0%	0	0.00%
6375	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0	0.00%
6376	100%	761	753	767	767	2.02%	0%	0.00%	0	0%	0	0.00%
6377	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0	0.00%
6378	100%	258	248	253	253	0.66%	0%	0.00%	0	0%	0	0.00%
6381	100%	7037	6856	6,947	6,947	18.26%	0%	0.00%	0	0%	0	0.00%
6382	60%	964	930	947	588	1.49%	90%	1.34%	511	0%	0	0.00%
6383	100%	699	673	686	686	1.80%	0%	0.00%	0	0%	0	0.00%
6384	100%	260	248	254	254	0.67%	0%	0.00%	0	0%	0	0.00%
6392	80%	3930	3880	3,880	3,104	8.16%	100%	8.16%	3,104	0%	0	0.00%
6393	20%	1477	1427	1,452	200	0.76%	100%	0.76%	230	0%	0	0.00%
6394	30%	465	450	458	137	0.36%	100%	0.36%	137	0%	0	0.00%
6395	5%	15	15	15	1	0.00%	100%	0.00%	1	0%	0	0.00%
6501	45%	825	802	814	366	0.96%	0%	0.00%	0	0%	0	0.00%
6531	95%	122	122	122	116	0.30%	0%	0.00%	0	0%	0	0.00%
6532	50%	406	396	401	201	0.53%	0%	0.00%	0	0%	0	0.00%
6541	5%	166	159	163	8	0.02%	0%	0.00%	0	0%	0	0.00%
							52,522	38,049	100.00%	16,963	4,288	476
										44.58%	11.27%	1.25%

Trip Distribution Table Cibola Loop Community Center (N. of Ellison Dr.)

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

2015 and 2025 Data Taken from Mid-Region Council of Governments'
2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area In Study	2015 Population		2025 Population	Interpolated Population for the Year	Population In Study	Percent Population	(CC) Cibola Loop Central		(AE) Apartment Dr. East		(CN) Coors Bypass North	
		2015	2025					% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
Boundary Specified on DASZ Map													
1453	10%	2231	2541	2386	239	0.63%	0%	0.00%	0	0%	100%	0.63%	239
1501	30%	860	854	857	257	0.88%	0%	0.00%	0	0%	100%	0.88%	257
1502	100%	10	1169	590	590	1.55%	0%	0.00%	0	0%	100%	1.55%	590
1511	40%	920	901	911	364	0.96%	0%	0.00%	0	0%	100%	0.96%	364
1512	80%	2008	1944	1976	1581	4.16%	0%	0.00%	0	0%	100%	2.08%	791
1513	100%	1071	1073	1072	1072	2.82%	0%	0.00%	0	0%	50%	1.41%	536
1521	5%	2121	2094	2108	105	0.28%	0%	0.00%	0	0%	0%	0.00%	0
1522	45%	1474	1531	1503	676	1.78%	0%	0.00%	0	0%	0%	0.00%	0
1523	85%	2614	2639	2627	2,233	5.87%	0%	0.00%	0	0%	0%	0.00%	0
1751	5%	1262	1444	1,363	68	0.18%	0%	0.00%	0	0%	0%	0.00%	0
1761	15%	1271	1358	1,315	197	0.52%	0%	0.00%	0	0%	0%	0.00%	0
1771	100%	604	597	601	601	1.58%	0%	0.00%	0	0%	0%	0.00%	0
1772	95%	151	187	169	161	0.42%	0%	0.00%	0	0%	0%	0.00%	0
6233	10%	968	1069	1,019	102	0.27%	0%	0.00%	0	0%	0%	0.00%	0
6251	45%	521	515	518	233	0.61%	0%	0.00%	0	0%	0%	0.00%	0
6351	100%	3458	3372	3,415	3,415	8.88%	0%	0.00%	0	0%	0%	0.00%	0
6352	90%	2515	2501	2,508	2,257	5.83%	0%	0.00%	0	0%	0%	0.00%	0
6361	100%	1493	1448	1,471	1,471	3.87%	75%	6.26%	2,381	10%	0.83%	317	0
6362	100%	3164	3184	3,174	3,174	8.34%	0%	0.00%	0	0%	0%	0.00%	0
6363	100%	821	795	808	808	2.12%	0%	0.00%	0	0%	0%	0.00%	0
6364	100%	1465	1419	1,442	1,442	3.79%	0%	0.00%	0	0%	0%	0.00%	0
6365	100%	1309	1269	1,289	1,289	3.39%	0%	0.00%	0	0%	0%	0.00%	0
6371	100%	415	407	411	411	1.08%	0%	0.00%	0	0%	0%	0.00%	0
6372	95%	362	425	394	374	0.98%	0%	0.00%	0	0%	50%	0.54%	206
6373	45%	332	411	372	167	0.44%	0%	0.00%	0	0%	0%	0.00%	0
6374	100%	1082	1045	1,064	1,064	2.80%	0%	0.00%	0	0%	0%	0.00%	0
6375	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	50%	0.00%	0
6376	100%	781	753	767	767	2.02%	0%	0.00%	0	0%	0%	0.00%	0
6377	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0%	0.00%	0
6378	100%	258	248	253	253	0.66%	0%	0.00%	0	0%	0%	0.00%	0
6381	100%	7037	6856	6,947	6,947	18.26%	0%	0.00%	0	0%	0%	0.00%	0
6382	60%	964	930	947	568	1.49%	0%	0.00%	0	0%	0%	0.00%	0
6383	100%	699	673	686	686	1.80%	0%	0.00%	0	0%	0%	0.00%	0
6384	100%	260	248	254	254	0.67%	0%	0.00%	0	0%	0%	0.00%	0
6392	80%	3930	3830	3,880	3,104	8.16%	0%	0.00%	0	0%	0%	0.00%	0
6393	20%	1477	1427	1,452	290	0.76%	0%	0.00%	0	0%	0%	0.00%	0
6394	30%	465	450	458	137	0.36%	0%	0.00%	0	0%	0%	0.00%	0
6395	5%	15	15	15	1	0.00%	0%	0.00%	0	0%	0%	0.00%	0
6501	45%	825	802	814	366	0.96%	0%	0.00%	0	0%	0%	0.00%	0
6531	95%	122	122	122	116	0.30%	0%	0.00%	0	0%	0%	0.00%	0
6532	50%	406	396	401	201	0.53%	0%	0.00%	0	0%	0%	0.00%	0
6541	5%	166	159	163	8	0.02%	0%	0.00%	0	0%	0%	0.00%	0
						38,049	100.00%	2,381	6.26%	317	0.83%	2,982	7.84%

Trip Distribution Table Cibola Loop Community Center (N. of Ellison Dr.)

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

2015 and 2025 Data Taken from Mid-Region Council of Governments'
2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area In Study	2015 Population		2025 Population	Interpolated Population for the Year 2020	Population In Study	Percent Population	(EE) Ellison Dr. East		(CS) Coors Bypass South	
		2015	2025					% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map											
1453	10%	2231	2541	2366	239	0.63%	0%	0.00%	0	0%	0.00%
1501	30%	860	854	857	257	0.68%	0%	0.00%	0	0%	0.00%
1502	100%	10	1169	590	590	1.55%	0%	0.00%	0	0%	0.00%
1511	40%	920	901	911	364	0.96%	0%	0.00%	0	0%	0.00%
1512	80%	2008	1944	1976	1581	4.16%	0%	0.00%	0	0%	0.00%
1513	100%	1071	1073	1072	1,072	2.82%	0%	0.00%	0	0%	0.00%
1521	5%	2121	2094	2,108	105	0.28%	0%	0.00%	0	0%	0.00%
1522	45%	1474	1531	1,503	676	1.78%	0%	0.00%	0	0%	0.00%
1523	85%	2614	2639	2,627	2,233	5.87%	0%	0.00%	0	0%	0.00%
1751	5%	1282	1444	1,363	68	0.18%	100%	0.18%	68	0%	0.00%
1761	15%	1271	1358	1,315	197	0.52%	100%	0.52%	197	0%	0.00%
1771	100%	604	597	601	601	1.58%	100%	1.58%	601	0%	0.00%
1772	95%	151	187	169	161	0.42%	100%	0.42%	161	0%	0.00%
6233	10%	968	1069	1,019	102	0.27%	0%	0.00%	0	100%	0.27%
6261	45%	521	515	518	233	0.61%	0%	0.00%	0	100%	0.61%
6351	100%	3458	3372	3,415	3,415	8.98%	0%	0.00%	0	0%	0.00%
6352	90%	2515	2501	2,508	2,257	5.93%	0%	0.00%	0	0%	0.00%
6361	100%	1493	1448	1,471	1,471	3.87%	0%	0.00%	0	0%	0.00%
6362	100%	3164	3184	3,174	3,174	8.34%	0%	0.00%	0	0%	0.00%
6363	100%	821	795	808	808	2.12%	0%	0.00%	0	0%	0.00%
6364	100%	1465	1419	1,442	1,442	3.79%	0%	0.00%	0	0%	0.00%
6365	100%	1309	1269	1,289	1,289	3.39%	0%	0.00%	0	0%	0.00%
6371	100%	415	407	411	411	1.08%	50%	0.54%	206	80%	2.71%
6372	95%	362	425	394	374	0.98%	100%	0.98%	374	0%	0.00%
6373	45%	332	411	372	167	0.44%	100%	0.44%	167	0%	0.00%
6374	100%	1082	1045	1,064	1,064	2.80%	100%	2.80%	1,064	0%	0.00%
6375	100%	0	0	0	0	0.00%	50%	0.00%	0	0%	0.00%
6376	100%	781	753	767	767	2.02%	50%	1.01%	384	50%	1.01%
6377	100%	0	0	0	0	0.00%	0%	0.00%	0	100%	0.00%
6378	100%	258	248	253	253	0.66%	75%	0.50%	190	25%	0.17%
6381	100%	7037	6856	6,947	6,947	18.26%	0%	0.00%	0	50%	9.13%
6382	60%	964	930	947	568	1.49%	0%	0.00%	0	10%	0.15%
6383	100%	699	673	686	686	1.80%	0%	0.00%	0	100%	1.80%
6384	100%	260	248	254	254	0.67%	0%	0.00%	0	100%	0.67%
6392	80%	3930	3830	3,880	3,104	8.16%	0%	0.00%	0	0%	0.00%
6393	20%	1477	1427	1,452	290	0.76%	0%	0.00%	0	0%	0.00%
6394	30%	465	450	458	137	0.36%	0%	0.00%	0	0%	0.00%
6395	5%	15	15	15	1	0.00%	0%	0.00%	0	0%	0.00%
6501	45%	825	802	814	366	0.96%	100%	0.96%	366	0%	0.00%
6531	95%	122	122	122	116	0.30%	50%	0.15%	58	50%	0.15%
6532	50%	406	396	401	201	0.53%	50%	0.26%	101	50%	0.26%
6541	5%	166	159	163	8	0.02%	0%	0.00%	0	100%	0.02%
						38,049	100.00%			3,935	10.34%
						52,522				6,450	16.95%

Trip Distribution Table Cibola Loop Community Center (N. of Ellison Dr.)

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

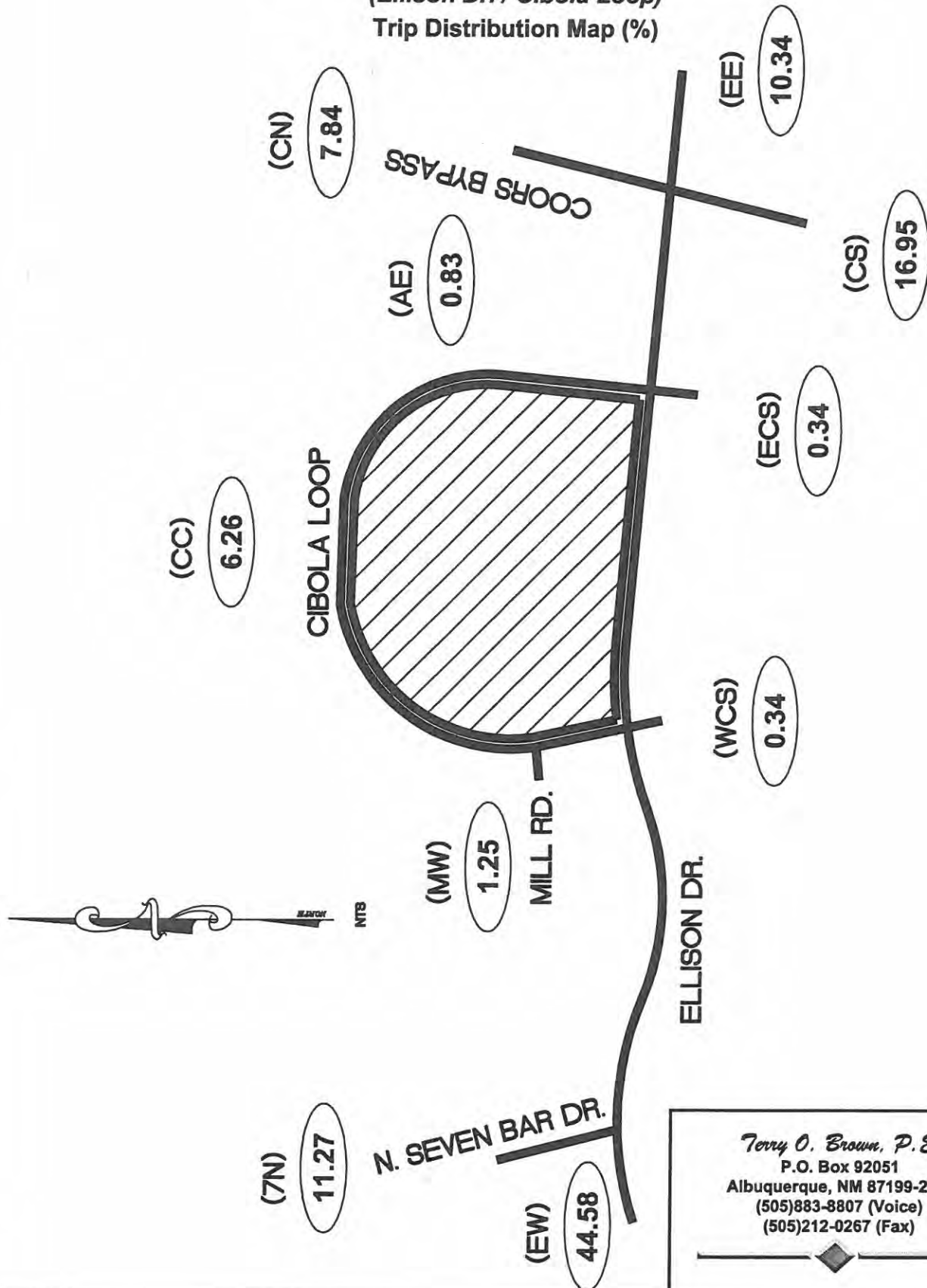
2015 and 2025 Data Taken from Mid-Region Council of Governments'
2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area In Study	2015 Population		2025 Population	Interpolated Population for the Year 2020	Population In Study	Percent Population	(WCS)			(ECS)		
		2015 Population	2025 Population	% Utilizing				% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	
Boundary Specified on DASZ Map													
1453	10%	2231	2541	2,386	239	0.63%	0	0.00%	0	0%	0.00%	0	
1501	30%	860	854	857	257	0.68%	0	0.00%	0	0%	0.00%	0	
1502	100%	10	1169	590	590	1.55%	0	0.00%	0	0%	0.00%	0	
1511	40%	920	901	911	364	0.96%	0	0.00%	0	0%	0.00%	0	
1512	80%	2008	1944	1,976	1,581	4.16%	0	0.00%	0	0%	0.00%	0	
1513	100%	1071	1073	1,072	1,072	2.82%	0	0.00%	0	0%	0.00%	0	
1521	5%	2121	2094	2,108	105	0.28%	0	0.00%	0	0%	0.00%	0	
1522	45%	1474	1531	1,503	676	1.78%	0	0.00%	0	0%	0.00%	0	
1523	85%	2614	2639	2,627	2,233	5.87%	0	0.00%	0	0%	0.00%	0	
1751	5%	1282	1444	1,363	68	0.18%	0	0.00%	0	0%	0.00%	0	
1761	15%	1271	1358	1,315	197	0.52%	0	0.00%	0	0%	0.00%	0	
1771	100%	604	597	601	601	1.58%	0	0.00%	0	0%	0.00%	0	
1772	95%	151	187	169	161	0.42%	0	0.00%	0	0%	0.00%	0	
6233	10%	968	1069	1,019	102	0.27%	0	0.00%	0	0%	0.00%	0	
6261	45%	521	515	518	233	0.61%	0	0.00%	0	0%	0.00%	0	
6351	100%	3458	3372	3,415	3,415	8.98%	0	0.00%	0	0%	0.00%	0	
6352	90%	2515	2501	2,508	2,257	5.93%	0	0.00%	0	0%	0.00%	0	
6361	100%	1493	1448	1,471	1,471	3.87%	0	0.00%	0	0%	0.00%	0	
6362	100%	3164	3184	3,174	3,174	8.34%	0	0.00%	0	0%	0.00%	0	
6363	100%	821	795	808	808	2.12%	0	0.00%	0	0%	0.00%	0	
6364	100%	1465	1419	1,442	1,442	3.79%	0	0.00%	0	0%	0.00%	0	
6365	100%	1309	1269	1,289	1,289	3.39%	10%	0.34%	129	10%	0.34%	129	
6371	100%	415	407	411	411	1.08%	0	0.00%	0	0%	0.00%	0	
6372	95%	362	425	394	374	0.98%	0	0.00%	0	0%	0.00%	0	
6373	45%	332	411	372	167	0.44%	0	0.00%	0	0%	0.00%	0	
6374	100%	1082	1045	1,064	1,064	2.80%	0	0.00%	0	0%	0.00%	0	
6375	100%	0	0	0	0	0.00%	0	0.00%	0	0%	0.00%	0	
6376	100%	781	753	767	767	2.02%	0	0.00%	0	0%	0.00%	0	
6377	100%	0	0	0	0	0.00%	0	0.00%	0	0%	0.00%	0	
6378	100%	268	248	253	253	0.66%	0	0.00%	0	0%	0.00%	0	
6381	100%	7037	6656	6,947	6,947	18.26%	0	0.00%	0	0%	0.00%	0	
6382	60%	964	930	947	568	1.49%	0	0.00%	0	0%	0.00%	0	
6383	100%	689	673	686	686	1.80%	0	0.00%	0	0%	0.00%	0	
6384	100%	260	248	254	254	0.67%	0	0.00%	0	0%	0.00%	0	
6392	80%	3930	3830	3,880	3,104	8.16%	0	0.00%	0	0%	0.00%	0	
6393	20%	1477	1427	1,452	290	0.76%	0	0.00%	0	0%	0.00%	0	
6394	30%	465	450	458	137	0.36%	0	0.00%	0	0%	0.00%	0	
6395	5%	15	15	15	1	0.00%	0	0.00%	0	0%	0.00%	0	
6501	45%	825	802	814	366	0.96%	0	0.00%	0	0%	0.00%	0	
6531	95%	122	122	122	116	0.30%	0	0.00%	0	0%	0.00%	0	
6532	50%	406	396	401	201	0.53%	0	0.00%	0	0%	0.00%	0	
6541	5%	166	159	163	8	0.02%	0	0.00%	0	0%	0.00%	0	
					52,522	100.00%			129	0.34%	0.34%	129	
					38,049								

Cibola Loop Community Center

(Ellison Dr. / Cibola Loop)

Trip Distribution Map (%)



Terry O. Brown, P.E.

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Albuquerque, NM 87199-2051

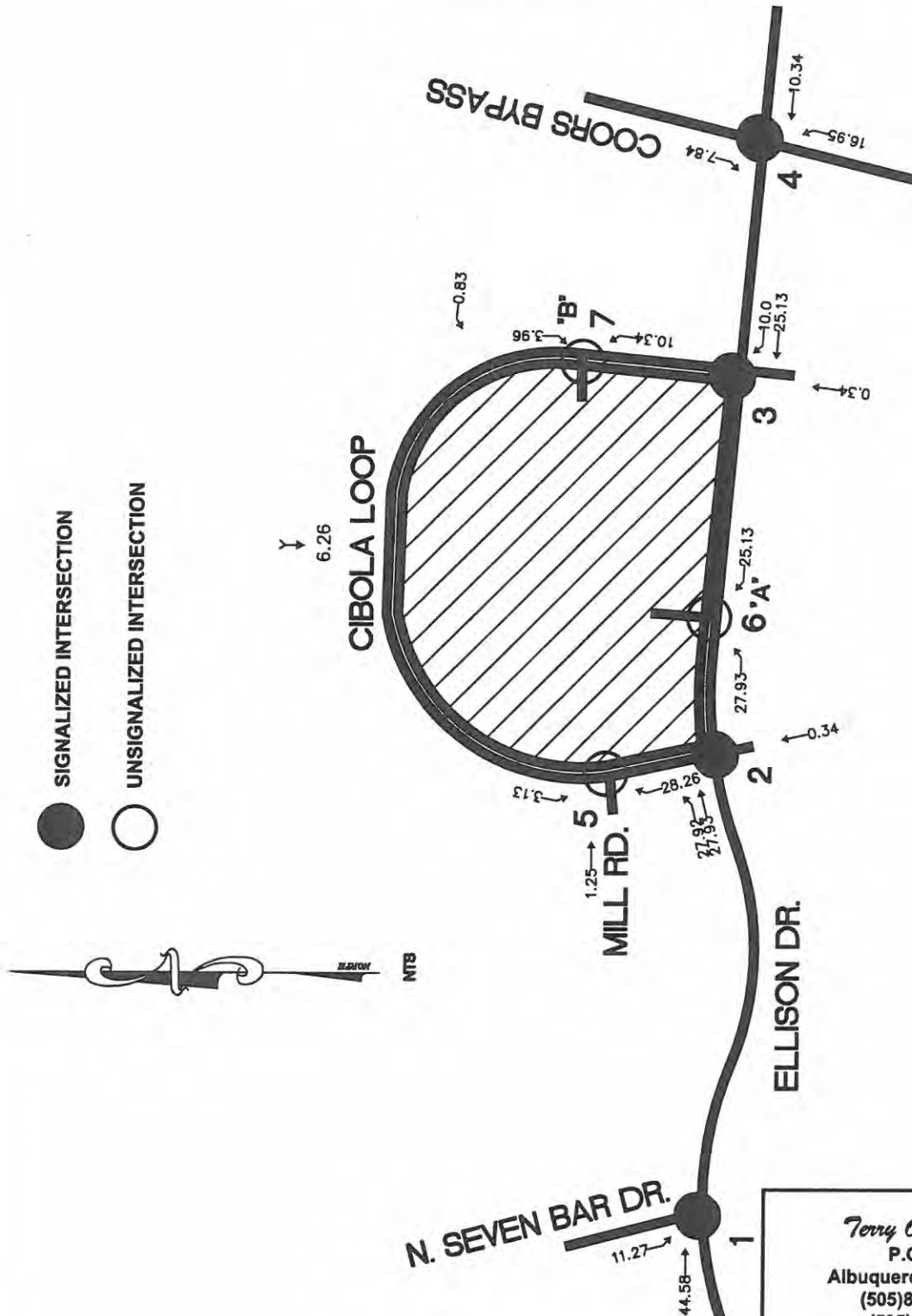
(505)883-8807 (Voice)

(505)212-0267 (Fax)

Cibola Loop Community Center

(Ellison Dr. / Cibola Loop)

Trip Assignments (% Entering)



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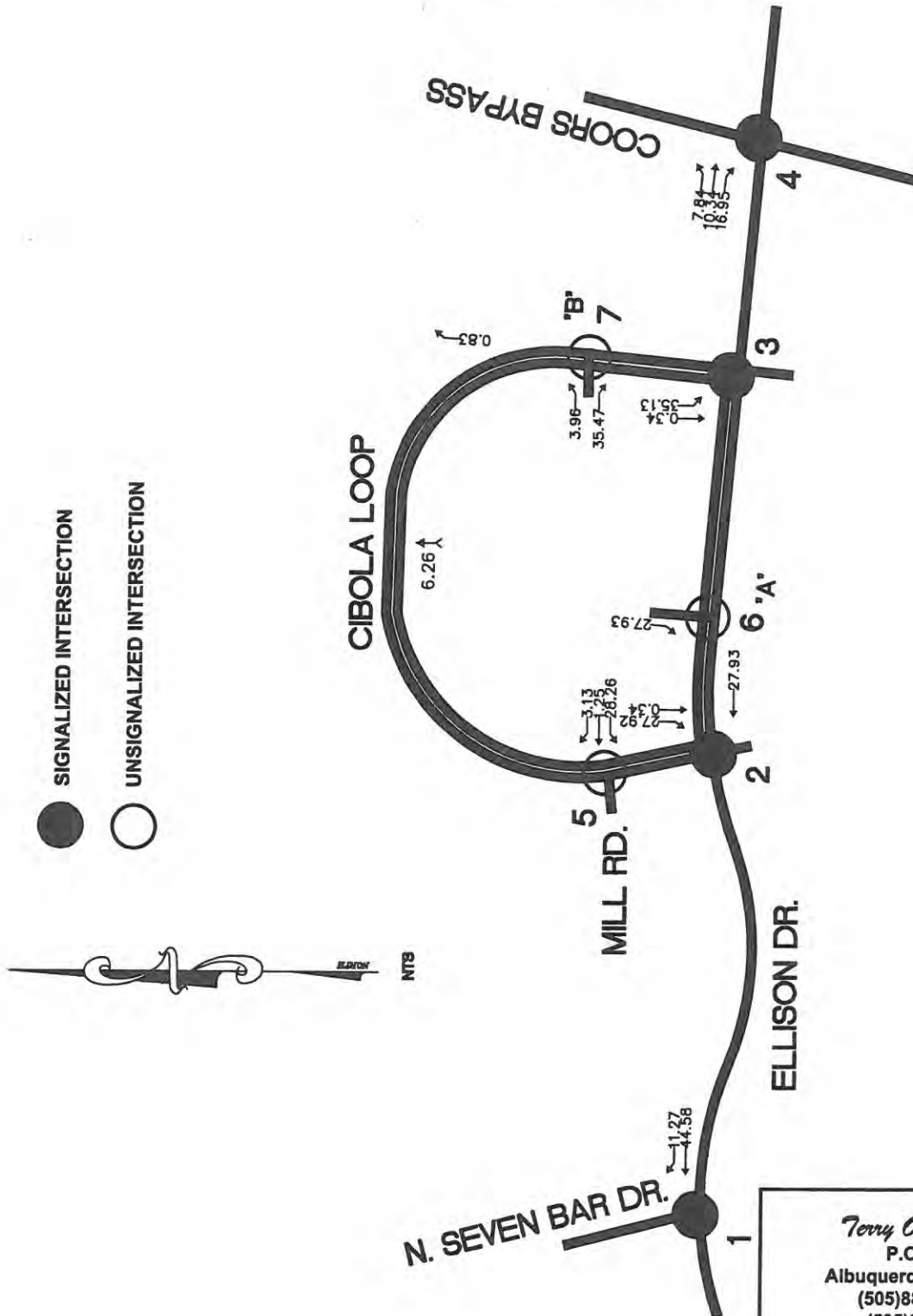
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Cibola Loop Community Center

(Ellison Dr. / Cibola Loop)

Trip Assignments (% Exiting)

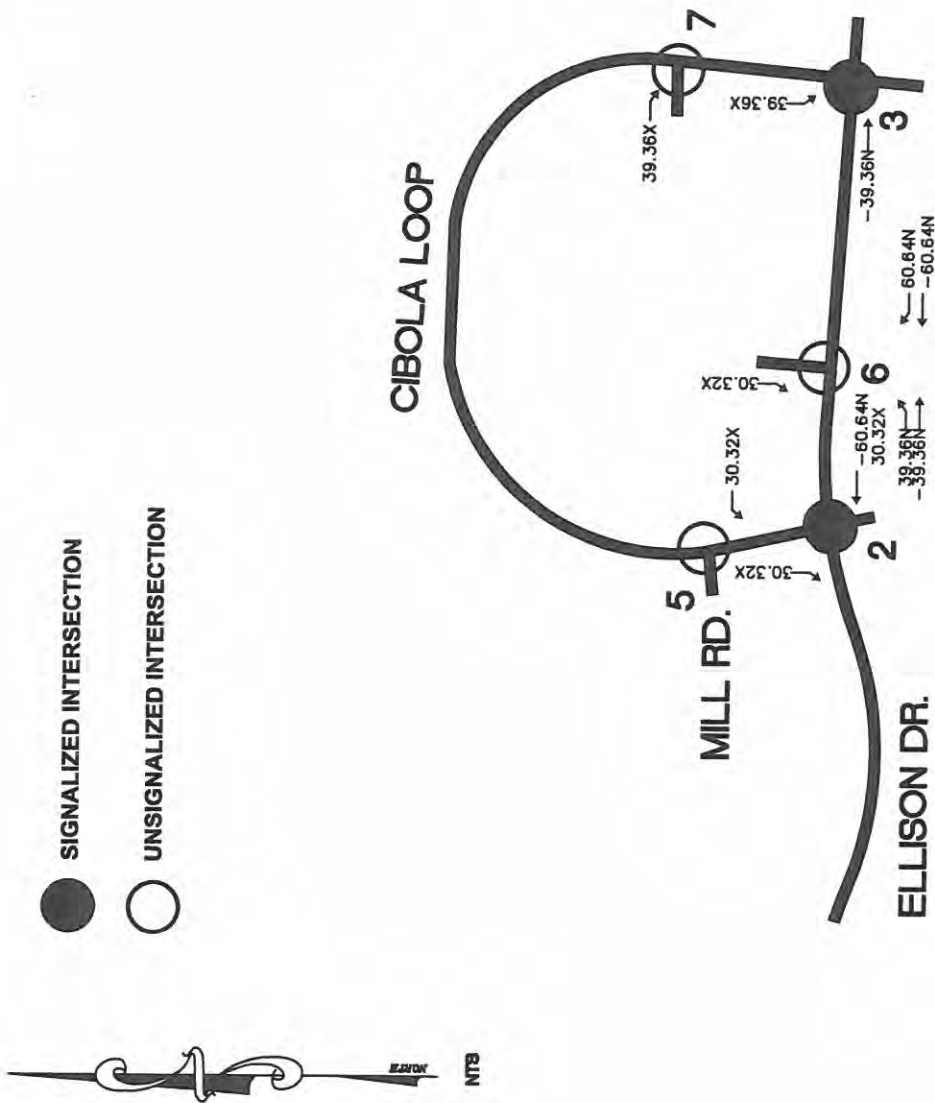


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Cibola Loop Community Center

(Ellison Dr. / Cibola Loop)

Passby Trip Assignments (eNtering, eXiting)



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Cibola Loop Community Center (Ellison Dr. / Cibola Loop)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2020) - 100% Development

INTERSECTION: Summary

Ellison Dr. / N.Seven Bar Dr.

(1)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (N.Seven Bar Dr.)			Southbound (N.Seven Bar Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
50	611	0	0	344	24	0	0	0	66	0	78	
52	919	0	0	486	58	0	0	0	139	0	80	
52	1,005	0	0	572	80	0	0	0	161	0	80	

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.94			0.94			0.94			0.94			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (N.Seven Bar Dr.)			Southbound (N.Seven Bar Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
81	853	0	0	1,159	133	0	0	0	65	96	0	
84	944	0	0	1,252	154	0	0	0	81	98	0	
84	1,155	0	0	1,438	201	0	0	0	134	98	0	

Ellison Dr. / W.Cibola Loop

(2)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	0	0	59	0	6	0	0	0	52	0	55	
19	1,040	179	173	544	6	84	13	53	53	28	56	
73	1,094	179	173	577	6	84	14	53	53	29	120	

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.94			0.94			0.94			0.94			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
75	0	0	3	0	48	0	0	0	26	0	69	
77	948	37	27	1,406	49	44	7	28	27	6	70	
209	1,080	37	27	1,499	49	44	9	28	27	7	213	

Ellison Dr. / E.Cibola Loop

(3)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.95			0.95			0.95			0.95			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	0	34	15	0	45	22	0	16	153	3	11	
19	781	214	128	480	46	106	12	69	156	257	11	
19	761	214	128	528	65	106	13	69	224	258	24	

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.75			0.75			0.75			0.75			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
23	0	51	45	0	195	76	4	40	147	4	37	
23	913	89	70	1,635	199	122	10	69	150	57	38	
23	880	89	70	1,754	246	122	12	69	296	58	73	

Ellison Dr. / Coors Bypass

(4)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.95			0.95			0.95			0.95			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
84	470	328	85	168	16	191	969	53	67	1,417	42	
110	510	386	96	256	18	304	988	54	68	1,445	93	
125	530	419	96	276	18	337	988	54	68	1,445	108	

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.75			0.75			0.75			0.75			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
141	579	334	331	893	106	720	2,603	194	123	1,164	109	
156	607	368	375	1,025	120	757	2,655	198	125	1,187	122	
189	650	439	375	1,074	120	837	2,655	198	125	1,187	159	

Cibola Loop Community Center (Ellison Dr. / Cibola Loop)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2020) - 100% Development

INTERSECTION:

Summary

Mill Rd. / W.Cibola Loop

(5)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	17	0	0	0	3	0	0	0	0	0	0
0	0	25	0	0	0	7	18	0	0	137	0	0
0	2	25	68	2	6	7	18	54	6	137	0	0

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.94			0.94			0.94			0.94			PHF
Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	10	0	0	0	15	0	0	0	0	0	0
0	0	12	0	0	0	17	109	0	0	103	0	0
0	6	12	153	5	13	17	109	134	15	103	0	0

Ellison Dr. / Driveway "A"

(6)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.83			0.83			0.83			0.83			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1,180	0	0	722	0	0	0	0	0	0	0	0
74	1,173	0	0	691	79	0	0	0	0	0	0	64

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.94			0.94			0.94			0.94			PHF
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1,062	0	0	1,481	0	0	0	0	0	0	0	0
165	1,064	0	0	1,431	169	0	0	0	0	0	0	143

Driveway "B" / E. Cibola Lp.

(7)

3.0% Truck

Existing (2016)

2020 (NO BUILD - A.M.)

2020 (BUILD - A.M.)

0.95			0.95			0.95			0.95			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	77	0	0	424	0	0
8	0	82	0	0	0	20	77	0	0	424	8	0

Existing (2016)

2020 (NO BUILD - P.M.)

2020 (BUILD - P.M.)

0.75			0.75			0.75			0.75			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	232	0	0	245	0	0
17	0	183	0	0	0	49	232	0	0	245	19	0

Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Ellison Dr. / N.Seven Bar Dr.

INTERSECTION :

E-W Street: Ellison Dr.

(1)

N-S Street: N.Seven Bar Dr.

Year of Existing Counts
 Implementation Year

2016

2020

Growth Rates

0.90%

0.50%

0.50%

0.50%

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (N.Seven Bar Dr.)			Southbound (N.Seven Bar Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
50	611	0	0	344	24	0	0	0	66	0	78
2	22	0	0	7	0	0	0	0	1	0	2
52	633	0	0	351	24	0	0	0	67	0	80
0	286	0	0	135	34	0	0	0	72	0	0
52	919	0	0	486	58	0	0	0	139	0	80
0.00%	44.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.27%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	44.58%	11.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	86	0	0	86	22	0	0	0	22	0	0
52	1,005	0	0	572	80	0	0	0	161	0	80

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (N.Seven Bar Dr.)			Southbound (N.Seven Bar Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
81	853	0	0	1,159	133	0	0	0	65	96	0
3	31	0	0	23	3	0	0	0	1	2	0
84	884	0	0	1,182	136	0	0	0	66	98	0
0	60	0	0	70	18	0	0	0	15	0	0
84	944	0	0	1,252	154	0	0	0	81	98	0
0.00%	44.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.27%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	44.58%	11.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	211	0	0	186	47	0	0	0	53	0	0
84	1,155	0	0	1,438	201	0	0	0	134	98	0

Number of Commercial Trips Generated

Entering

Exiting

192

194

A.M.

100% Commercial Development

473

417

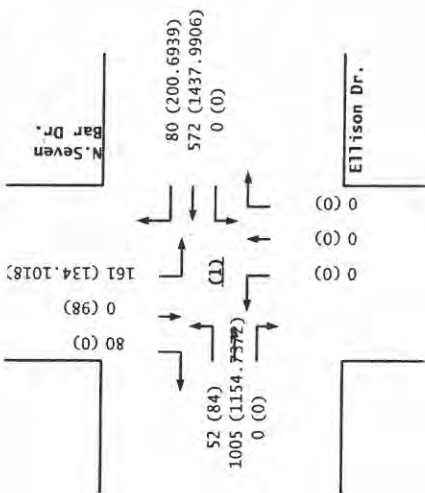
P.M.

2016 AM Peak Hr. Volumes

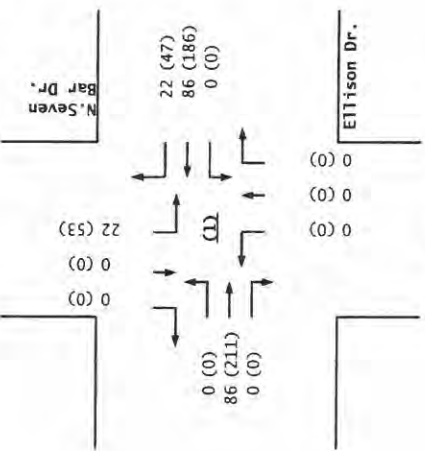
2016 PM Peak Hr. Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (N.Seven Bar Dr.)			Southbound (N.Seven Bar Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
50	611	0	0	344	24	0	0	0	66	0	78
81	853	0	0	1,159	133	0	0	0	65	96	0

2020
BUILD

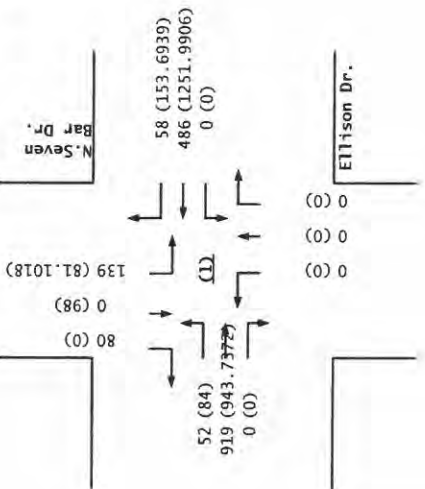


Trips



Ellison Dr. / N. Seven Bar Dr.

2020
NO BUILD



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Ellison Dr. / W.Cibola Loop

INTERSECTION :

E-W Street: Ellison Dr. (2)

N-S Street: W.Cibola Loop

Year of Existing Counts 2016

Implementation Year 2020

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

0.50%			0.50%			0.50%			0.50%		
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
19	0	0	59	0	6	0	0	0	52	0	55
0	0	0	1	0	0	0	0	0	1	0	1
19	0	0	60	0	6	0	0	0	53	0	56
0	179	179	113	84	0	84	13	53	0	28	0
19	1,040	179	173	544	6	84	13	53	53	28	56
27.92%	27.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	27.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	27.92%
54	54	0	0	54	0	0	1	0	0	1	54
73	1,094	179	173	598	6	84	14	53	53	29	110
0	0	0	0	-21	0	0	0	0	0	0	10
73	1,094	179	173	577	6	84	14	53	53	29	120

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
75	0	0	3	0	48	0	0	0	26	0	69
2	0	0	0	0	1	0	0	0	1	0	1
77	0	0	3	0	49	0	0	0	27	0	70
0	37	37	24	44	0	44	7	28	0	6	0
77	948	37	27	1,406	49	44	7	28	27	6	70
27.92%	27.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	27.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	27.92%
132	132	0	0	116	0	0	2	0	0	1	116
209	1,080	37	27	1,522	49	44	9	28	27	7	186
0	0	0	0	-23	0	0	0	0	0	0	27
209	1,080	37	27	1,499	49	44	9	28	27	7	213

Entering Exiting

Number of Commercial Trips Generated

192

194

A.M.

100% Commercial Development

473

417

P.M.

2016 AM Peak Hr. Volumes

2016 PM Peak Hr. Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
19	0	0	59	0	6	0	0	0	52	0	55
75	0	0	3	0	48	0	0	0	26	0	69

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
0.00%	0.00%	0.00%	0.00%	-50.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	-31	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	30.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.32%
0	0	0	0	10	0	0	0	0	0	0	10
0	0	0	0	-21	0	0	0	0	0	0	10

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net PM Passby Trips

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
0.00%	0.00%	0.00%	0.00%	-50.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	-50	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	30.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.32%
0	0	0	0	27	0	0	0	0	0	0	27
0	0	0	0	-23	0	0	0	0	0	0	27

Entering Exiting

Pass-by Trips

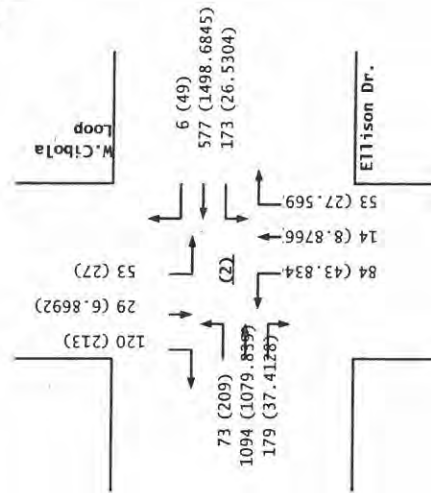
51

33 AM

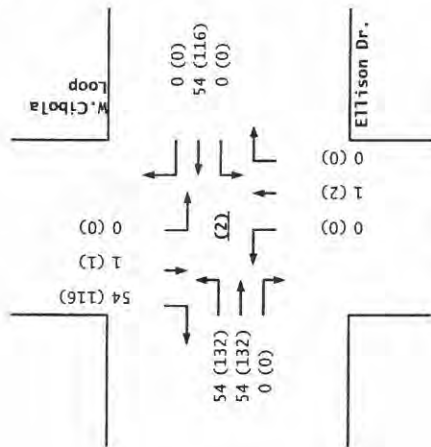
83

88 PM

2020
BUILD

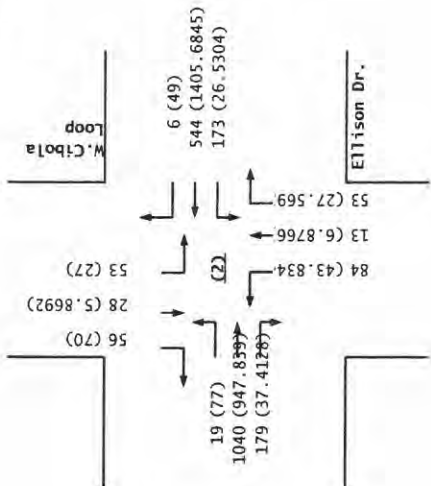


Trips



Ellison Dr. / W. Cibola Loop

2020
NO BUILD



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)

Projected Turning Movements Worksheet

Ellison Dr. / E.Cibola Loop

INTERSECTION:

E-W Street: Ellison Dr. (3)

N-S Street: E.Cibola Loop

Year of Existing Counts

2016

Implementation Year

2020

Growth Rates

	0.50%			0.50%			0.50%			0.50%		
	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	19	0	34	15	0	45	22	0	16	153	3	11
Background Traffic Growth	0	0	1	0	0	1	0	0	0	3	0	0
Subtotal	19	0	35	15	0	46	22	0	16	156	3	11
Cibola HS trips	0	53	179	113	113	0	84	12	53	0	254	0
Subtotal (NO BUILD - A.M.)	19	781	214	128	480	46	106	12	69	156	257	11
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	25.13%	10.00%	0.00%	0.34%	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%	35.13%	0.34%	0.00%
Total Trips Generated	0	0	0	0	48	19	0	1	0	68	1	0
Subtotal AM Pk Hr. BUILD Volumes	19	781	214	128	528	65	106	13	69	224	258	11
Pass-by Trip Adjustments	0	-20	0	0	0	0	0	0	0	0	0	13
Total AM Peak Hour BUILD Volumes	19	761	214	128	528	65	106	13	69	224	258	24

	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	23	0	51	45	0	195	76	4	40	147	4	37
Background Traffic Growth	0	0	1	1	0	4	2	0	1	3	0	1
Subtotal	23	0	52	46	0	199	78	4	41	150	4	38
Cibola HS trips	0	28	37	24	24	0	44	6	28	0	53	0
Subtotal (NO BUILD - P.M.)	23	913	89	70	1,635	199	122	10	69	150	57	38
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	25.13%	10.00%	0.00%	0.34%	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%	35.13%	0.34%	0.00%
Total Trips Generated	0	0	0	0	119	47	0	2	0	146	1	0
Subtotal PM Pk Hr. BUILD Volumes	23	913	89	70	1,754	246	122	12	69	296	58	38
Pass-by Trip Adjustments	0	-33	0	0	0	0	0	0	0	0	0	35
Total PM Peak Hour BUILD Volumes	23	880	89	70	1,754	246	122	12	69	296	58	73

Number of Commercial Trips Generated

Entering	Exiting	
192	194	A.M.
473	417	P.M.

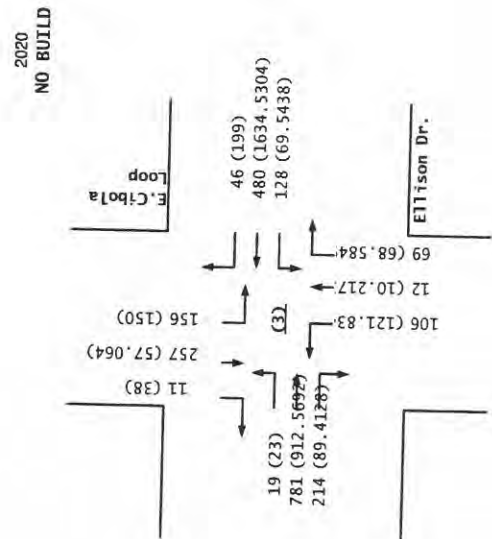
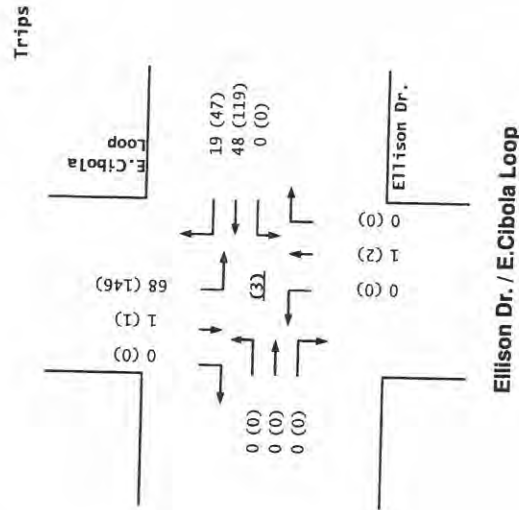
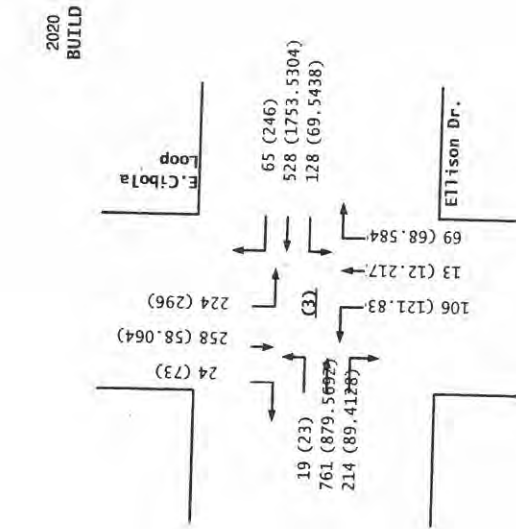
100% Commercial Development

2016 AM Peak Hr. Volumes
2016 PM Peak Hr. Volumes

	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2016 AM Peak Hr. Volumes	19	0	34	15	0	45	22	0	16	153	3	11
2016 PM Peak Hr. Volumes	23	0	51	45	0	195	76	4	40	147	4	37

Pass-by Trip Calculations:

AM Pass-by Trips												
	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	-39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	-20	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.36%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	13
Net AM Passby Trips	0	-20	0	0	0	0	0	0	0	0	0	13
PM Pass-by Trips												
	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (E.Cibola Loop)			Southbound (E.Cibola Loop)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	-39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	-33	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.36%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	35
Net PM Passby Trips	0	-33	0	0	0	0	0	0	0	0	0	35
Pass-by Trips	Entering	Exiting		Entering	Exiting		Entering	Exiting		Entering	Exiting	
	51	33	AM	83	88	PM						



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Ellison Dr. / Coors Bypass

INTERSECTION:

E-W Street: Ellison Dr.

(4)

N-S Street: Coors Bypass

Year of Existing Counts

2016

Implementation Year

2020

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

0.50%			3.30%			0.50%			0.50%		
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
84	470	328	85	168	16	191	969	53	67	1,417	42
2	9	7	11	22	2	4	19	1	1	28	1
86	479	335	96	190	18	195	988	54	68	1,445	43
24	31	51	0	66	0	109	0	0	0	0	50
110	510	386	96	256	18	304	988	54	68	1,445	93
0.00%	0.00%	0.00%	0.00%	10.34%	0.00%	16.95%	0.00%	0.00%	0.00%	0.00%	7.84%
7.84%	10.34%	16.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
15	20	33	0	20	0	33	0	0	0	0	15
125	530	419	96	276	18	337	988	54	68	1,445	108

Existing Volumes

Background Traffic Growth

Subtotal

Cibola HS trips

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
141	579	334	331	893	106	720	2,603	194	123	1,164	109
3	12	7	44	118	14	14	52	4	2	23	2
144	591	341	375	1,011	120	734	2,655	198	125	1,187	111
12	16	27	0	14	0	23	0	0	0	0	11
156	607	368	375	1,025	120	757	2,655	198	125	1,187	122
0.00%	0.00%	0.00%	0.00%	10.34%	0.00%	16.95%	0.00%	0.00%	0.00%	0.00%	7.84%
7.84%	10.34%	16.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
33	43	71	0	49	0	80	0	0	0	0	37
189	650	439	375	1,074	120	837	2,655	198	125	1,187	159

Number of Commercial Trips Generated

Entering Exiting

192

194

A.M.

100% Commercial Development

473

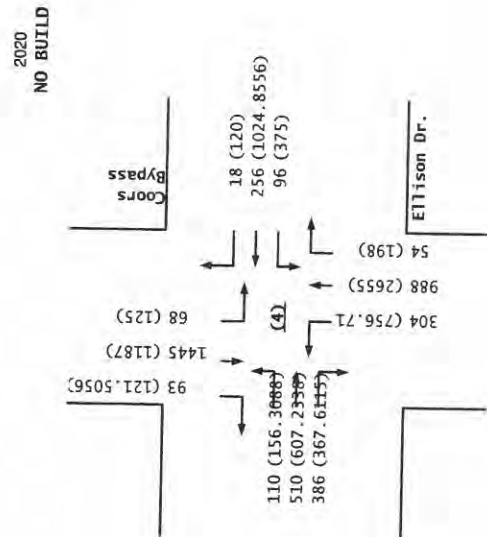
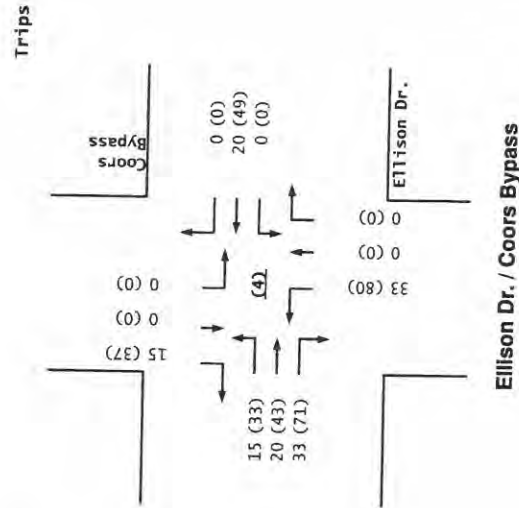
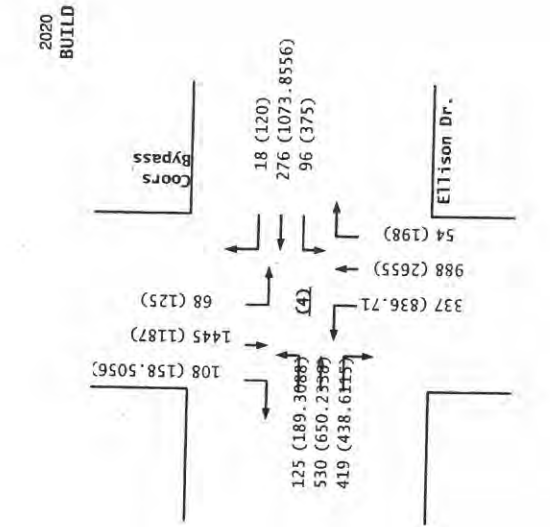
417

P.M.

2016 AM Peak Hr. Volumes

2016 PM Peak Hr. Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
84	470	328	85	168	16	191	969	53	67	1,417	42
141	579	334	331	893	106	720	2,603	194	123	1,164	109



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Mill Rd. / W.Cibola Loop

INTERSECTION:

E-W Street: Mill Rd.

(5)

N-S Street: W.Cibola Loop

Year of Existing Counts

2016

Implementation Year

2020

Growth Rates

Existing Volumes
 Background Traffic Growth
 Subtotal
 Cibola HS trips
 Subtotal (NO BUILD - A.M.)
 Percent Commercial Trips Generated(Entering)
 Percent Commercial Trips Generated(Exiting)
 Total Trips Generated
 Subtotal AM Pk Hr. BUILD Volumes
 Pass-by Trip Adjustments
 Total AM Peak Hour BUILD Volumes

0.50%			0.50%			0.50%			0.50%		
Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	17	0	0	0	3	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	17	0	0	0	3	0	0	0	0	0
0	0	0	0	0	0	4	9	0	0	20	0
0	0	25	0	0	0	7	18	0	0	137	0
0.00%	1.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.26%	3.13%	0.00%	0.00%
0.00%	0.00%	0.00%	28.26%	1.25%	3.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	2	0	55	2	6	0	0	54	6	0	0
0	2	25	55	2	6	7	18	54	6	137	0
0	0	0	13	0	0	0	0	0	0	0	0
0	2	25	68	2	6	7	18	54	6	137	0

Existing Volumes
 Background Traffic Growth
 Subtotal
 Cibola HS trips
 Subtotal (NO BUILD - P.M.)
 Percent Commercial Trips Generated(Entering)
 Percent Commercial Trips Generated(Exiting)
 Total Trips Generated
 Subtotal PM Pk Hr. BUILD Volumes
 Pass-by Trip Adjustments
 Total PM Peak Hour BUILD Volumes

Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	10	0	0	0	15	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	15	0	0	0	0	0
0	0	2	0	0	0	2	5	0	0	4	0
0	0	12	0	0	0	17	109	0	0	103	0
0.00%	1.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.26%	3.13%	0.00%	0.00%
0.00%	0.00%	0.00%	28.26%	1.25%	3.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	6	0	118	5	13	0	0	134	15	0	0
0	6	12	118	5	13	17	109	134	15	103	0
0	0	0	35	0	0	0	0	0	0	0	0
0	6	12	153	5	13	17	109	134	15	103	0

Number of Commercial Trips Generated
 Entering 192 194 A.M. 100% Commercial Development
 Exiting 473 417 P.M.

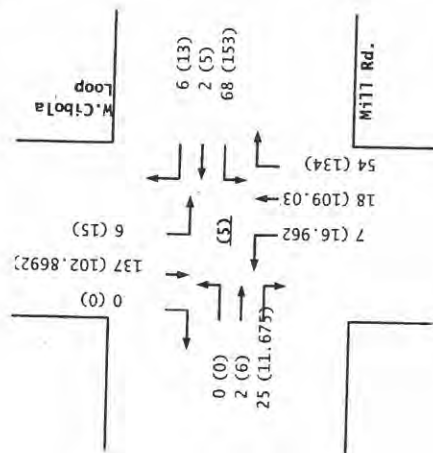
2016 AM Peak Hr. Volumes
 2016 PM Peak Hr. Volumes

Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	17	0	0	0	3	0	0	0	0	0
0	0	10	0	0	0	15	0	0	0	0	0

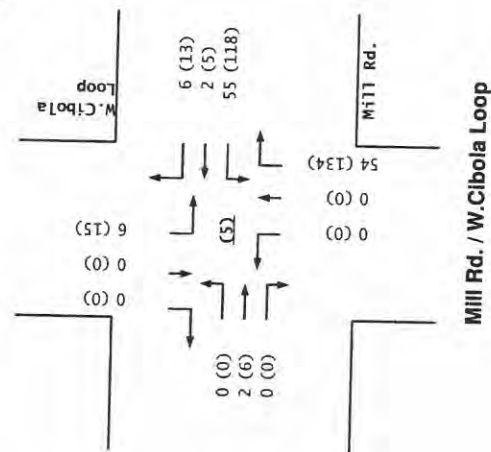
Pass-by Trip Calculations:

AM Pass-by Trips											
Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	13	0	0	0	0	0	0	0	0
0	0	0	13	0	0	0	0	0	0	0	0
PM Pass-by Trips											
Eastbound (Mill Rd.)			Westbound (Mill Rd.)			Northbound (W.Cibola Loop)			Southbound (W.Cibola Loop)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	35	0	0	0	0	0	0	0	0
0	0	0	35	0	0	0	0	0	0	0	0
Pass-by Trips											
Entering			Exiting								
51			33 AM								
83			88 PM								

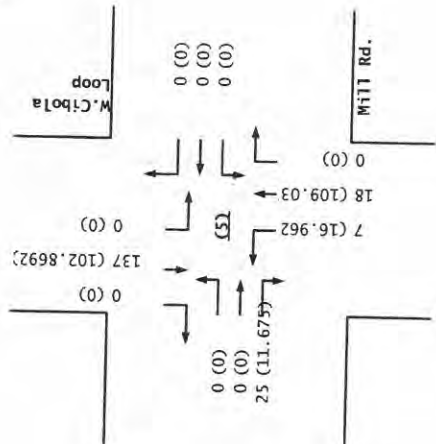
2020
BUILD



Trips



2020
NO BUILD



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Ellison Dr. / Driveway "A"

INTERSECTION:

E-W Street: Ellison Dr.

(6)

N-S Street: Driveway "A"

Year of Existing Counts

2016

Implementation Year

2020

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

0.50%			0.50%			0.50%			0.50%		
Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1,180	0	0	722	0	0	0	0	0	0	0
27.93%	0.00%	0.00%	0.00%	0.00%	25.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.93%
54	0	0	0	0	48	0	0	0	0	0	54
54	1,180	0	0	722	48	0	0	0	0	0	54
20	-7	0	0	-31	31	0	0	0	0	0	10
74	1,173	0	0	691	79	0	0	0	0	0	64

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1,062	0	0	1,481	0	0	0	0	0	0	0
27.93%	0.00%	0.00%	0.00%	0.00%	25.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.93%
132	0	0	0	0	119	0	0	0	0	0	116
132	1,062	0	0	1,481	119	0	0	0	0	0	116
33	2	0	0	-50	50	0	0	0	0	0	27
165	1,064	0	0	1,431	169	0	0	0	0	0	143

Number of Commercial Trips Generated

Entering Exiting

192 194 A.M.
473 417 P.M.

100% Commercial Development

2016 AM Peak Hr. Volumes

2016 PM Peak Hr. Volumes

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips**PM Pass-by Trips**

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

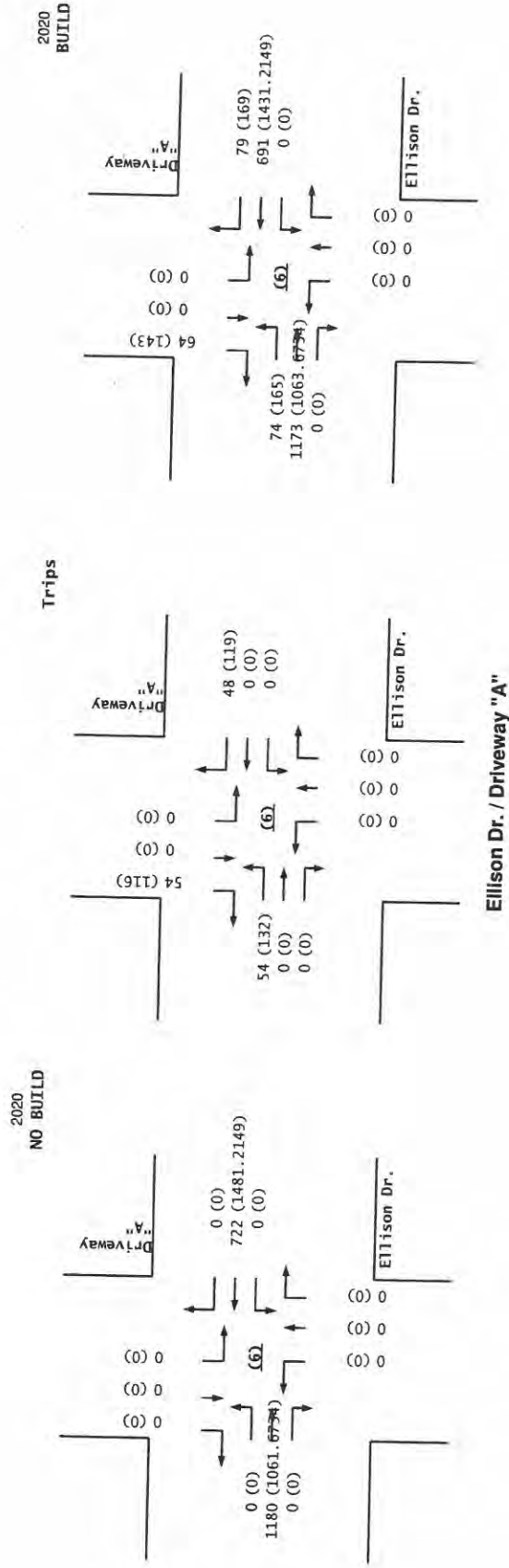
Net PM Passby Trips

Pass-by Trips

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
39.36%	-39.36%	0.00%	0.00%	-60.64%	60.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
20	-20	0	0	-31	31	0	0	0	0	0	0
0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.34%
0	13	0	0	0	0	0	0	0	0	0	10
20	-7	0	0	-31	31	0	0	0	0	0	10

Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
39.36%	-39.36%	0.00%	0.00%	-60.64%	60.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
33	-33	0	0	-50	50	0	0	0	0	0	0
0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.34%
0	35	0	0	0	0	0	0	0	0	0	27
33	2	0	0	-50	50	0	0	0	0	0	27

Entering	Exiting										
51	33	AM									
83	88	PM									



Cibola Loop Community Center (Ellison Dr. / Cibola Loop)
Projected Turning Movements Worksheet
Driveway "B" / E. Cibola Lp.

INTERSECTION:

E-W Street: Driveway "B"

(7)

N-S Street: E. Cibola Lp.

Year of Existing Counts

2016

Implementation Year

2020

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

0.50%			0.50%			0.50%			0.50%		
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	77	0	0	424	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.34%	0.00%	0.00%	0.00%	0.00%	3.96%
3.96%	0.00%	35.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8	0	69	0	0	0	20	0	0	0	0	8
8	0	69	0	0	0	20	77	0	0	424	8
0	0	13	0	0	0	0	0	0	0	0	0
8	0	82	0	0	0	20	77	0	0	424	8

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	232	0	0	245	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.34%	0.00%	0.00%	0.00%	0.00%	3.96%
3.96%	0.00%	35.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	0	148	0	0	0	49	0	0	0	0	19
17	0	148	0	0	0	49	232	0	0	245	19
0	0	35	0	0	0	0	0	0	0	0	0
17	0	183	0	0	0	49	232	0	0	245	19

Number of Commercial Trips Generated

Entering Exiting

192 194 A.M.

100% Commercial Development

473 417 P.M.

2016 AM Peak Hr. Volumes

2016 PM Peak Hr. Volumes

Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	13	0	0	0	0	0	0	0	0	0
0	0	13	0	0	0	0	0	0	0	0	0

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net PM Passby Trips

Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (E. Cibola Lp.)			Southbound (E. Cibola Lp.)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	39.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	35	0	0	0	0	0	0	0	0	0
0	0	35	0	0	0	0	0	0	0	0	0

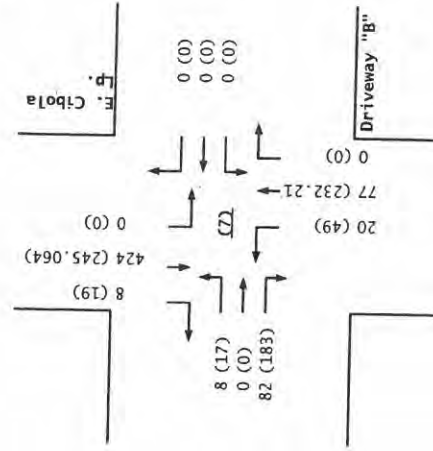
Entering Exiting

51 33 AM

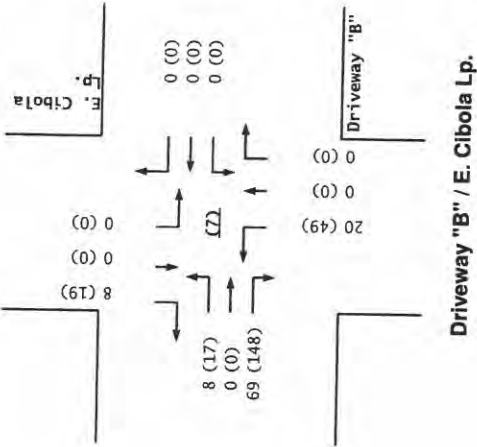
83 88 PM

Pass-by Trips

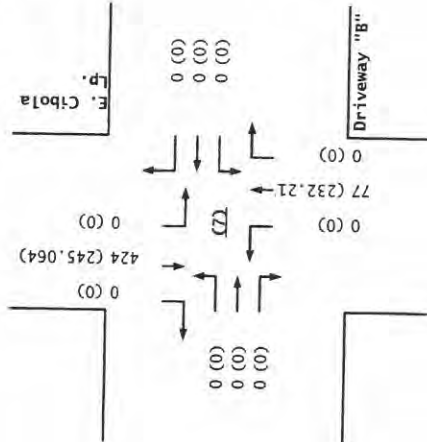
2020
BUILD



Trips



2020
NO BUILD



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	52	919	486	58	139	80
Future Volume (vph)	52	919	486	58	139	80
Turn Type	pm-rt	NA	NA	Perm	Prot	pm-rt
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	10.0	10.0
Total Split (s)	15.0	68.0	53.0	53.0	32.0	15.0
Total Split (%)	15.0%	68.0%	53.0%	53.0%	32.0%	15.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	C-Min	C-Min	Min
Act Eff Green (s)	75.2	75.2	63.7	63.7	14.8	26.3
Actuated g/c Ratio	0.75	0.75	0.64	0.64	0.15	0.26
g/c Ratio	0.10	0.42	0.26	0.07	0.64	0.20
Control Delay	4.3	5.5	7.2	2.9	51.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	5.5	7.2	2.9	51.0	6.2
LOS	A	A	A	A	D	A
Approach Delay	5.4	6.7			34.7	
Approach LOS	A	A			C	

Cycle Length: 100	Intersection LOS: A
Actuated Cycle Length: 100	ICU Level of Service A
Offset: 85 (85%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 9.5	
Intersection Capacity Utilization 41.4%	
Analysis Period (min) 15	

Splits and Phases: 1: Ellison Dr. & N.7 Bar Dr.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	52	919	486	58	139	80
Future Volume (veh/h)	52	919	486	58	139	80
Number	7	4	8	8	6	7
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845
Adj Sat Flow, veh/h	63	1107	586	70	167	96
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	576	2735	2385	1067	210	266
Arrive On Green	0.05	0.78	0.22	0.22	0.12	0.12
Sat Flow, veh/h	1757	3597	3597	1568	1757	1568
Grp Volume(v), veh/h	63	1107	586	70	167	96
Grp Sat Flow(s),veh/h	1757	1752	1568	1757	1568	1568
Q Serve(g.s), s	0.9	10.1	13.7	3.5	9.2	5.4
Cycle Q Clear(g.c), s	0.9	10.1	13.7	3.5	9.2	5.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	576	2735	2385	1067	210	266
V/C Ratio(X)	0.11	0.40	0.25	0.07	0.80	0.36
Avail Cap(c), veh/h	664	2735	2385	1067	474	502
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	4.6	3.5	17.7	13.8	42.8	36.7
Incr Delay (d2), s/veh	0.1	0.4	0.2	0.1	6.7	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/h	0.4	4.9	6.7	1.6	4.9	4.9
LnGrp Delay(d), s/veh	4.7	4.0	17.9	13.9	49.5	37.6
LnGrp LOS	A	A	B	B	D	D
Approach Vol, veh/h	1170	656			263	
Approach Delay, s/veh	4.0	17.5			45.2	
Approach LOS	A	B			D	

Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s				4		6	7	8
Change Period (Y+Rc), s				83.0		17.0	10.0	73.0
Max Green Setting (Gmax), s				5.0		5.0	5.0	5.0
Max Q Clear Time (g_c+1), s				63.0		27.0	10.0	48.0
Green Ext Time (p_c), s				12.1		11.2	2.9	15.7

Intersection Summary
HCM 2010 Ctrl Delay 13.4
HCM 2010 LOS B

Timings

2: W. Cibola Lp. & Ellison Dr.

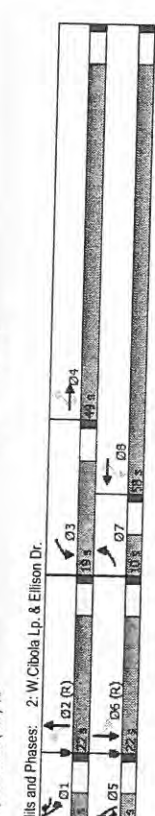
Terry O. Brown, P.E.

8/19/2016

HCM 2010 Signalized Intersection Summary
2: W. Cibola Lp. & Ellison Dr. Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	19	1040	179	173	544	6	84	13	53	28
Traffic Volume (vph)	19	1040	179	173	544	6	84	13	53	28
Future Volume (vph)	19	1040	179	173	544	6	84	13	53	28
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	4	5	3	8	1	5	2	1
Permitted Phases	4	4	4	8	8	8	2	2	6	6
Detector Phase	7	4	5	3	8	1	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	10.0	49.0	10.0	19.0	58.0	10.0	10.0	22.0	10.0	22.0
Total Split (%)	10.0%	49.0%	10.0%	19.0%	58.0%	10.0%	10.0%	22.0%	10.0%	22.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	48.3	42.3	55.2	60.1	49.5	61.5	25.4	17.5	23.8	16.7
Actuated g/C Ratio	0.48	0.42	0.55	0.60	0.50	0.62	0.25	0.18	0.24	0.17
v/c Ratio	0.05	0.84	0.23	0.69	0.38	0.01	0.29	0.24	0.19	0.30
Control Delay	6.7	26.5	1.8	38.8	17.3	0.0	32.5	16.4	31.2	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	26.5	1.8	38.8	17.3	0.0	32.5	16.4	31.2	19.7
LOS	A	C	A	D	B	A	C	B	C	B
Approach Delay	22.6									
Approach LOS	C									

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 98 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.8	
Intersection Capacity Utilization 62.2%	
Analysis Period (min) 15	



2020 AM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBP
Lane Configurations	19	1040	179	173	544	6	84	13	53	28	56
Traffic Volume (veh/h)	19	1040	179	173	544	6	84	13	53	28	56
Future Volume (veh/h)	19	1040	179	173	544	6	84	13	53	28	56
Number	7	4	4	3	8	18	5	2	12	1	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0
Pkg-Bike Adj(A, pct)	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/m	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	23	1253	216	208	655	7	101	16	64	34	67
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	420	1498	749	253	1627	806	397	76	305	415	131
Arrive On Green	0.02	0.14	0.14	0.09	0.46	0.46	0.05	0.24	0.05	0.24	0.24
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	323	1293	1757	1095
Grp Volume(v), veh/h	23	1253	216	208	655	7	101	0	80	64	0
Grp Sat Flow(s), veh/h/m	1757	1752	1568	1757	1752	1568	1757	0	1616	1757	0
Q Serve(g, s)	0.7	34.8	11.3	6.4	12.3	0.2	4.4	0.0	4.0	2.7	0.0
Cycle Q Clear(g, c), s	0.7	34.8	11.3	6.4	12.3	0.2	4.4	0.0	4.0	2.7	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	1.00	0.80	0.86
Lane Grp Cap(c), veh/h	420	1498	749	253	1627	806	397	0	391	415	0
V/C Ratio(X)	0.05	0.84	0.29	0.82	0.40	0.01	0.25	0.00	0.21	0.15	0.26
Avail Cap(c), veh/h	420	1542	768	346	1858	909	397	0	381	415	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.95	0.95	0.95	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	39.5	24.9	21.9	17.8	11.8	27.2	0.0	30.7	26.6	0.0
Incr Delay (d2), s/veh	0.0	3.7	0.2	10.4	0.2	0.0	0.3	0.0	1.3	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
%ile BackOfQ(50%) veh/h	0.3	17.7	5.0	3.8	5.9	0.1	2.1	0.0	1.9	1.3	0.0
LnGrp Delay(d), s/veh	14.8	43.2	25.1	32.2	17.8	11.9	27.5	0.0	32.0	26.7	0.0
LnGrp LOS	B	D	C	C	B	B	C	C	C	C	C
Approach Vol, veh/h	1492							181			165
Approach Delay, s/veh	40.2							29.5			30.4
Approach LOS	D							C			C
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2	3	4	5	6	7	8			
Phs Duration (G+Y+Rc), s	10.0	28.6	13.7	47.7	10.0	28.6	10.0	51.4			
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Max Green Setting (Gmax), s	5.0	17.0	14.0	44.0	5.0	17.0	5.0	53.0			
Max Q Clear Time (g, c+H), s	4.7	6.0	8.4	36.8	6.4	7.0	2.7	14.3			
Green Ext Time (g, c), s	0.0	0.7	0.3	5.9	0.0	0.7	0.0	20.5			

Intersection Summary
HCM 2010 Ctrl Delay
32.8 C

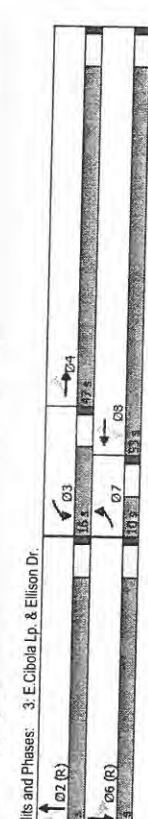
2020 AM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020ANX.syn

Timings
3: E.Cibola Lp. & Ellison Dr.
Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Configurations	19	781	128	480	46	106	12
Traffic Volume (vph)	19	781	128	480	46	106	12
Future Volume (vph)	19	781	128	480	46	106	12
Turn Type	pmrpt	NA	pmrpt	NA	Perm	NA	Perm
Protected Phases	7	4	3	8	2	2	6
Permitted Phases	4	4	8	8	8	2	6
Detector Phase	7	4	3	8	8	2	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0
Total Split (s)	10.0	47.0	16.0	53.0	37.0	37.0	37.0
Total Split (%)	10.0%	47.0%	16.0%	53.0%	37.0%	37.0%	37.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min
Act Eff Green (s)	43.8	37.8	50.5	41.2	37.8	37.8	37.8
Actuated G/C Ratio	0.44	0.38	0.50	0.41	0.38	0.38	0.38
v/c Ratio	0.05	0.80	0.56	0.35	0.07	0.33	0.13
Control Delay	4.9	13.0	21.3	17.3	6.5	28.5	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	13.0	21.3	17.3	6.5	28.5	8.4
LOS	A	B	C	B	A	C	A
Approach Delay	12.8						
Approach LOS	B						

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 8 (6%), Referenced to phase 2:NBT, and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 17.3
 Intersection Capacity Utilization 72.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C



2020 AM Peak NOBUILD Conditions
 Existing Geometry
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HCM 2010 Signalized Intersection Summary
 3: E.Cibola Lp. & Ellison Dr.
 Terry O. Brown, P.E.
 8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Configurations	19	781	128	480	46	106	12
Traffic Volume (veh/h)	19	781	128	480	46	106	12
Future Volume (veh/h)	19	781	128	480	46	106	12
Number	7	4	14	3	8	18	5
Initial Q (Qb), veh	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
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow (veh/h)	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate (veh/h)	20	822	225	135	505	48	112
Adj No. of Lanes	1	2	0	1	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3
Cap. veh/h	356	942	258	1281	573	430	105
Arrive On Green	0.10	0.69	0.69	0.02	0.12	0.43	0.43
Sat Flow (veh/h)	1757	2721	745	1757	3505	1568	1081
Grp Volume(v), veh/h	20	829	518	135	505	48	112
Grp Sat Flow(s), veh/h	1757	1752	1713	1757	1752	1568	1081
Q Serv(s), s	0.7	23.5	23.5	4.8	13.3	2.7	7.7
Cycle Q Clear(g_c), s	0.7	23.5	23.5	4.8	13.3	2.7	18.1
Prop In Lane	1.00	0.43	0.43	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	356	606	593	253	1281	573	430
V/C Ratio(X)	0.06	0.87	0.87	0.53	0.39	0.08	0.26
Avail Cap(c), veh/h	356	736	720	324	1682	753	430
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	1.00	1.00
Upstream Filter(i)	0.48	0.48	0.48	0.85	0.85	1.00	1.00
Uniform Delay(d), s/veh	18.1	13.7	13.7	23.4	33.7	29.1	25.0
Incr Delay(d2), s/veh	0.0	5.0	5.1	1.5	0.2	0.1	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOrd(50%), veh/h	0.3	11.7	11.5	2.4	6.5	1.2	2.5
LnGrp Delay(d), s/veh	18.1	18.7	18.8	24.9	33.9	29.1	26.4
LnGrp LOS	B	B	B	C	C	C	C
Approach Vol, veh/h	1067			688			
Approach Delay, s/veh	18.8			31.8			
Approach LOS	B			C			
Timer	1	2	3	4	5	6	7
Assigned Phs	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.5	11.9	39.6	48.5	10.0	41.5	8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	32.0	11.0	42.0	32.0	11.0	42.0	5.0
Max Q Clear Time (g_c+1), s	20.1	6.8	25.5	20.1	6.8	25.5	13.9
Green Ext Time (p_c), s	2.7	0.1	9.1	2.7	0.1	9.1	12.8
Intersection Summary							
HCM 2010 Ctrl Delay	23.2						
HCM 2010 LOS	C						

2020 AM Peak NOBUILD Conditions
 Existing Geometry
 Synchro 9 Report
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Timings

4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.

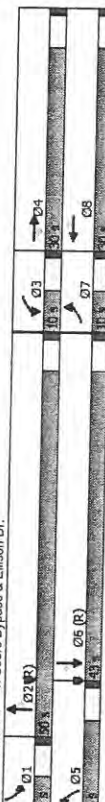
8/19/2016

Link Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	110	510	366	96	256	18	304	988	54	68	1445	93
Traffic Volume (vph)	110	510	366	96	256	18	304	988	54	68	1445	93
Future Volume (vph)	110	510	366	96	256	18	304	988	54	68	1445	93
Turn Types	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	10.0	30.0	30.0	10.0	30.0	30.0	10.0	30.0	10.0	30.0	30.0	30.0
Total Split (%)	10.0%	30.0%	30.0%	10.0%	30.0%	30.0%	10.0%	30.0%	10.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effort Green (s)	5.4	22.1	22.1	5.7	22.4	22.4	12.2	46.6	46.6	5.6	40.0	40.0
Actuated g/C Ratio	0.05	0.22	0.22	0.05	0.22	0.22	0.12	0.47	0.47	0.06	0.40	0.40
v/c Ratio	0.32	0.83	0.83	0.34	0.83	0.83	0.44	0.77	0.77	0.38	0.76	0.76
Control Delay	42.1	32.4	31.5	56.6	33.3	33.3	0.2	56.0	19.1	0.2	51.6	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	32.4	31.5	56.6	33.3	33.3	0.2	56.0	19.1	0.2	51.6	29.3
LOS	D	C	C	E	C	C	A	B	A	D	C	A
Approach Delay												
Approach LOS												

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 49 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 29.6
 Intersection Capacity Utilization: 71.5%
 Analysis Period (min): 15

Splits and Phases: 4: Coors Bypass & Ellison Dr.



2020 AM Peak NOBUILD Conditions
 Existing Geometry

Synchro 9 Report
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HCM 2010 Signalized Intersection Summary

4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
 8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	110	510	366	96	256	18	304	988	54	68	1445	93
Traffic Volume (veh/h)	110	510	366	96	256	18	304	988	54	68	1445	93
Future Volume (veh/h)	110	510	366	96	256	18	304	988	54	68	1445	93
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (Ob), 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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	58	537	0	101	269	0	320	1040	0	72	1521	0
Adj No. of Lanes	2	1	2	2	1	2	2	3	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	170	705	316	170	705	316	385	2512	782	170	2195	683
Arrive On Green	0.02	0.07	0.00	0.05	0.20	0.00	0.11	0.50	0.00	0.05	0.44	0.00
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	58	537	0	101	269	0	320	1040	0	72	1521	0
Grp Sat Flow(s), veh/h	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serv'd(s), s	1.7	15.1	0.0	2.9	6.6	0.0	9.2	13.0	0.0	2.1	24.4	0.0
Cycle Q Clear(g, c), s	1.7	15.1	0.0	2.9	6.6	0.0	9.2	13.0	0.0	2.1	24.4	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	170	705	316	170	705	316	385	2512	782	170	2195	683
V/C Ratio(X)	0.34	0.76	0.00	0.59	0.38	0.00	0.83	0.41	0.00	0.42	0.88	0.00
Avail Cap(c), veh/h	170	705	316	170	705	316	385	2512	782	170	2195	683
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.60	0.60	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.5	44.3	0.0	46.5	34.6	0.0	43.4	15.8	0.0	46.1	22.8	0.0
Incr Delay (d2), s/veh	0.7	1.9	0.0	5.4	0.3	0.0	13.0	0.5	0.0	1.7	1.8	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 BackOf(50%), veh/h	0.8	7.5	0.0	1.5	3.2	0.0	5.0	6.2	0.0	1.0	11.6	0.0
LnGrp Delay(d), s/veh	48.2	46.2	0.0	51.9	34.9	0.0	56.4	16.3	0.0	47.8	24.6	0.0
LnGrp LOS	D	D	D	D	C	D	E	B	D	D	C	C
Approach Vol, veh/h	595	370		370	395		1360	258		1593	257	
Approach Delay, s/veh	46.4	39.5		39.5	39.5		25.8	25.8		25.7	25.7	
Approach LOS	D	D		D	D		C	C		C	C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	54.9	10.0	25.1	16.3	48.6	10.0	25.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	45.0	5.0	25.0	12.0	38.0	5.0	25.0				
Max Q Clear Time (g, c+H), s	4.1	15.0	4.9	17.1	11.2	26.4	3.7	8.6				
Green Ext Time (p, c), s	0.0	21.7	0.0	3.1	0.1	9.9	0.0	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

2020 AM Peak NOBUILD Conditions
 Existing Geometry

Synchro 9 Report
 2020ANX.syn

Lanes, Volumes, Timings

5: W.Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Area Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Traffic Volume (vph)	1	25	7	18	137	1
Future Volume (vph)	1	25	7	18	137	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.869				0.969	
Flt Protected	0.998			0.987		
Satd. Flow (prot)	1600	0	0	1821	1843	0
Flt Permitted	0.998			0.987		
Satd. Flow (perm)	1600	0	0	1821	1843	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	315			388	398	
Travel Time (s)	7.2			10.6	10.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	30	8	22	165	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	30	166	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12			12	12	
Link Offset (ft)	0			0	0	
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.3%					
Analysis Period (min)	15					
ICU Level of Service	A					

2020 AM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020ANX.syn

HCM 2010 TWSC

5: W.Cibola Lp. & Mill Rd.

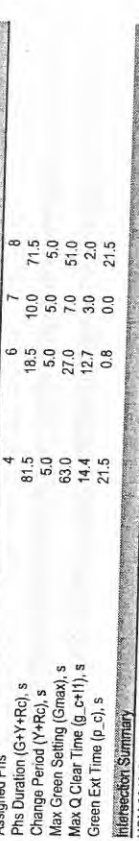
Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	1.6					
Lane Configurations	W					
Traffic Vol, veh/h	1	25	7	18	137	1
Future Vol, veh/h	1	25	7	18	137	1
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					
Grade, %	0					
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	30	8	22	165	1
Major/Minor	Minor2	Major1	Major1	Major2	Minor2	Major1
Conflicting Flow All	205	166	166	0	0	0
Stage 1	166					
Stage 2	39					
Critical Hdwy	7.13	6.23	4.13			
Critical Hdwy Sig 1	6.13					
Critical Hdwy Sig 2	6.13					
Follow-up Hdwy	3.527	3.327	2.227			
Pot Cap-1 Maneuver	758	876	1406			
Stage 1	834					
Stage 2	961					
Platoon blocked, %	1					
Mov Cap-1 Maneuver	755	876	1406			
Mov Cap-2 Maneuver	755					
Stage 1	829					
Stage 2	975					
Approach	EB	EB	NB	SB	SB	EB
HCM Control Delay, s	9.3	9.3	2.1			0
HCM LOS	A	A				
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBR	SBT	SBR
Capacity (veh/h)	1406		871			
HCM Lane V/C Ratio	0.006		0.036			
HCM Control Delay (s)	7.6	0	9.3			
HCM Lane LOS	A	A	A			
HCM 95th %ile Q(veh)	0		0.1			

2020 AM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020ANX.syn

Movement	EBL	EBT	WBT	WBR	SEL	SEB
Lane Configurations	↑	↑↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	52	1005	572	80	161	80
Future Volume (veh/h)	52	1005	572	80	161	80
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbtt)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	63	1211	689	96	194	96
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh. %	3	3	3	3	3	3
Cap. veh/h	612	2681	2331	1043	237	290
Arrive On Green	0.05	0.77	1.00	1.00	0.13	0.13
Sat Flow, veh/h	1757	3597	3597	1568	1757	1568
Grp Volume(s), veh/h	63	1211	689	96	194	96
Grp Sat Flow(s), veh/h/ln	1757	1752	1752	1568	1757	1568
Q Served, s, s	1.0	12.4	0.0	0.0	10.7	5.3
Cycle Q Clear(g, c), s	1.0	12.4	0.0	0.0	10.7	5.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	612	2681	2331	1043	237	290
V/C Ratio(X)	0.10	0.45	0.30	0.09	0.82	0.33
Avail Cap(c), veh/h	647	2681	2331	1043	474	502
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	0.92	0.92	1.00	1.00
Uniform Delay (d), s/veh	3.7	4.2	0.0	0.0	42.1	35.4
Incr Delay (d2), s/veh	0.1	0.6	0.3	0.2	6.8	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.5	6.1	0.1	0.0	5.7	4.9
LnGrp Delay(d), s/veh	3.7	4.8	0.3	0.2	48.9	36.0
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	1274	785		290		
Approach Delay, s/veh	4.7	0.3		44.6		
Approach LOS	A	A		D		

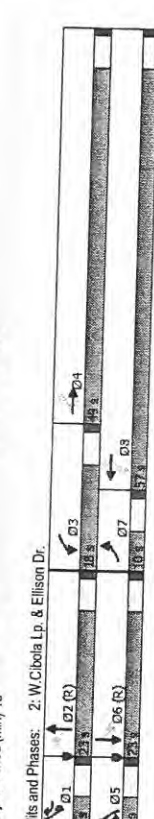


Timings 2: W.Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	73	1094	179	173	577	6	84	14	53	29
Traffic Volume (vph)	73	1094	179	173	577	6	84	14	53	29
Future Volume (vph)	73	1094	179	173	577	6	84	14	53	29
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	4	4	5	3	8	1	5	2	1	6
Permitted Phases	7	4	4	8	8	2	2	6	6	6
Detector Phase	7	4	5	3	8	1	5	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	10.0	21.0	10.0
Minimum Split (s)	10.0	49.0	10.0	18.0	57.0	10.0	10.0	10.0	23.0	10.0
Total Split (%)	10.0%	49.0%	10.0%	18.0%	57.0%	10.0%	10.0%	10.0%	23.0%	10.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag Optimize?	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effort Green (s)	51.4	44.1	56.0	61.2	49.5	60.7	24.0	17.1	22.4	16.3
Actuated g/C Ratio	0.51	0.44	0.56	0.61	0.50	0.61	0.24	0.17	0.22	0.16
v/c Ratio	0.21	0.85	0.23	0.71	0.40	0.01	0.38	0.25	0.20	0.47
Control Delay	7.0	28.3	1.5	37.6	20.8	0.0	35.7	16.1	31.7	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	28.3	1.5	37.6	20.8	0.0	35.7	16.1	31.7	15.3
LOS	A	C	A	D	C	A	D	B	C	B
Approach Delay	23.6	C	A	D	C	A	D	B	C	B
Approach LOS	C	C	C	C	C	C	C	C	C	C

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 91 (91%) Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 23.8
 Intersection Capacity Utilization: 70.1%
 Analysis Period (min): 15
 Intersection LOS: C
 ICU Level of Service: C



2020 AM Peak Build Conditions
 Existing Geometry
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HCM 2010 Signalized Intersection Summary 2: W.Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

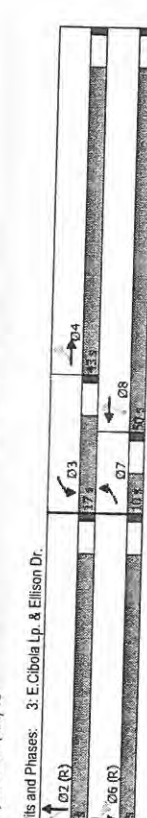
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	73	1094	179	173	577	6	84	14	53	53	29	120
Future Volume (veh/h)	73	1094	179	173	577	6	84	14	53	53	29	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbT})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/hln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	88	1318	216	208	695	7	101	17	64	64	35	145
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	370	1511	754	246	1633	809	324	79	299	411	73	304
Arrive On Green	0.03	0.29	0.29	0.03	0.15	0.15	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	340	1279	1757	314	1301
Grp Volume(V), veh/h	88	1318	216	208	695	7	101	0	81	64	0	180
Grp Sat Flow(S), veh/hln	1757	1752	1568	1757	1752	1568	1757	0	1619	1757	0	1615
Q Served, s	2.7	35.8	9.8	6.3	18.0	0.3	4.4	0.0	4.0	2.7	0.0	9.6
Cycle Q Clear(g _c), s	2.7	35.8	9.8	6.3	18.0	0.3	4.4	0.0	4.0	2.7	0.0	9.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	370	1511	754	246	1633	809	324	0	379	411	0	378
V/C Ratio(X)	0.24	0.87	0.29	0.85	0.43	0.01	0.31	0.00	0.21	0.16	0.00	0.48
Avail Cap(c _a), veh/h	370	1542	768	325	1823	894	324	0	379	411	0	378
HCM Platoon Ratio	0.87	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	32.9	20.0	23.4	30.2	18.7	27.7	0.0	30.9	26.7	0.0	33.0
Incr Delay (d ₂), s/veh	0.3	5.0	0.2	14.5	0.2	0.0	0.5	0.0	1.3	0.2	0.0	4.3
Initial Q Delay(d ₃), 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 BackQ(50%), veh/hln	1.3	18.4	4.3	4.0	8.8	0.2	2.2	0.0	1.9	1.3	0.0	4.7
LnGrp Delay(d), s/veh	15.9	37.9	20.2	37.9	30.4	18.7	28.2	0.0	32.2	26.9	0.0	37.3
LnGrp LOS	B	D	C	D	C	B	C	C	C	C	C	D
Approach Vol, veh/h	1622	910	320	320	910	320	182	300	244	34.5	C	
Approach Delay, s/veh	34.4	C	C	C	C	C	C	C	C	C	C	C
Approach LOS	C	C	C	C	C	C	C	C	C	C	C	C
Timer	1	2	3	4	5	6	7	8	9	10	11	12
Assigned Phs	1	2	3	4	5	6	7	8	9	10	11	12
Phs Duration (G+Y+Rc), s	10.0	28.4	13.5	48.1	10.0	28.4	10.0	51.6	10.0	28.4	10.0	28.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (G _{max}), s	5.0	18.0	13.0	44.0	5.0	18.0	5.0	52.0	5.0	18.0	5.0	52.0
Max Q Clear Time (g _c +1), s	4.7	6.0	8.3	37.8	6.4	11.6	4.7	20.0	4.7	6.0	4.7	20.0
Green Ext Time (p _c), s	0.0	1.2	0.2	5.4	0.0	0.8	0.0	19.7	0.0	1.2	0.0	19.7
Intersection Summary	33.4 C											
2010 Ctrl Delay	33.4 C											
2010 LOS	C											

2020 AM Peak Build Conditions
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Timings
3: E.Cibola Lp. & Ellison Dr.
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	19	761	128	528	65	106	13	224
Traffic Volume (vph)	19	761	128	528	65	106	13	224
Future Volume (vph)	19	761	128	528	65	106	13	224
Turn Type	pmrpt	NA	pmrpt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	8	8	8	2	6	6
Permitted Phases	4	4	8	8	8	2	6	6
Detector Phase	7	4	3	8	8	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	10.0	43.0	17.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	10.0%	43.0%	17.0%	50.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag
Lead/Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	41.2	35.5	48.8	39.5	39.5	39.8	39.8	39.8
Actuated g/C Ratio	0.41	0.36	0.49	0.40	0.40	0.40	0.40	0.40
W/C Ratio	0.03	0.84	0.56	0.40	0.10	0.32	0.13	0.46
Control Delay	5.3	16.1	20.9	15.9	7.2	26.0	7.6	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	16.1	20.9	15.9	7.2	26.0	7.6	27.4
LOS	A	B	C	B	A	C	A	C
Approach Delay	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Approach LOS	B	B	B	B	A	C	A	C

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 18.3
Intersection Capacity Utilization: 72.5%
Analysis Period (min): 15



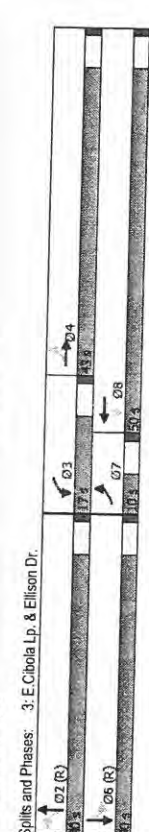
2020 AM Peak BUILD Conditions
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HCM 2010 Signalized Intersection Summary
3: E.Cibola Lp. & Ellison Dr.
Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	19	761	214	128	528	65	106	13	69	224	258	24
Traffic Volume (veh/h)	19	761	214	128	528	65	106	13	69	224	258	24
Future Volume (veh/h)	19	761	214	128	528	65	106	13	69	224	258	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) 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	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
Adj Sat Flow (veh/h)	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate (veh/h)	10	801	225	135	556	68	112	14	73	236	272	25
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	324	906	254	247	1246	558	431	115	599	605	740	68
Arrive On Green	0.10	0.67	0.67	0.02	0.12	0.12	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1757	2704	759	1757	3505	1568	1067	259	1348	1292	1665	153
Grp Volume (v), veh/h	10	519	507	135	556	68	112	0	87	236	0	237
Grp Sat Flow (s), veh/h	1757	1752	1711	1757	1752	1568	1067	0	1607	1292	0	1818
Q Serve (g.s.), s	0.3	24.0	24.0	4.9	14.8	3.9	7.8	0.0	3.2	13.1	0.0	10.9
Cycle Q Clear (g.c.), s	0.3	24.0	24.0	4.9	14.8	3.9	16.6	0.0	3.2	16.3	0.0	10.9
Prop In Lane	1.00	0.44	0.44	1.00	1.00	1.00	1.00	0.84	1.00	0.84	0.08	0.08
Lane Grp Cap (c), veh/h	324	587	573	247	1246	558	431	0	714	605	0	808
V/C Ratio (X)	0.03	0.88	0.88	0.55	0.45	0.12	0.26	0.00	0.12	0.39	0.00	0.37
Avail Cap (c), veh/h	324	666	650	334	1577	706	431	0	714	605	0	808
HCM Platoon Ratio	2.00	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter (f)	1.00	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	14.9	14.9	24.2	35.0	30.2	24.6	0.0	16.3	21.1	0.0	18.4
Incr Delay (d2), s/veh	0.0	12.4	12.7	1.5	0.2	0.1	1.5	0.0	0.3	1.9	0.0	1.3
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/h	0.2	13.3	13.0	2.5	7.2	1.7	2.5	0.0	1.5	5.0	0.0	5.7
LnGrp Delay (d), s/veh	18.8	27.3	27.8	25.7	35.2	30.2	26.1	0.0	16.7	23.0	0.0	19.7
LnGrp LOS	B	C	C	C	D	C	C	C	B	C	C	B
Approach Vol, veh/h	1036	759	331	199	533	21.2	533	199	533	21.2	533	199
Approach Delay, s/veh	27.4	33.1	33.1	22.0	21.2	21.2	21.2	22.0	21.2	21.2	21.2	21.2
Approach LOS	C	C	C	C	C	C	C	C	C	C	C	C
Time	1	2	3	4	5	6	7	8	9	10	11	12
Assigned Phs	2	3	3	4	4	6	7	8	8	8	8	8
Phs Duration (G+Y+R), s	49.4	12.1	38.5	49.4	49.4	10.0	40.6	40.6	40.6	40.6	40.6	40.6
Change Period (Y+R), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	35.0	12.0	38.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g.c+ff), s	20.8	6.9	26.0	20.8	20.8	18.3	23.3	16.8	18.3	23.3	16.8	16.8
Green Ext Time (p.c), s	3.3	0.1	7.5	3.3	3.3	3.5	0.0	12.4	3.5	0.0	12.4	12.4
Intersection Summary	27.3	33.1	33.1	22.0	21.2	21.2	21.2	22.0	21.2	21.2	21.2	21.2
HCM 2010 Ctrl Delay	27.3	33.1	33.1	22.0	21.2	21.2	21.2	22.0	21.2	21.2	21.2	21.2
HCM 2010 LOS	C	C	C	C	C	C	C	C	C	C	C	C

2020 AM Peak BUILD Conditions
Existing Geometry
Synchro 9 Report
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EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBT
19	761	128	528	106	13	224	258
19	761	128	528	106	13	224	258
pmvpt	NA	pmvpt	NA	Perm	NA	Perm	NA
7	4	3	8	2	2	6	6
4	4	8	8	2	2	6	6
7	4	3	8	2	2	6	6
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
10.0	43.0	17.0	50.0	40.0	40.0	40.0	40.0
10.0%	43.0%	17.0%	50.0%	40.0%	40.0%	40.0%	40.0%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Min	Min	Min	Min	Min	Min	Min	Min
41.2	35.5	48.8	39.5	39.8	39.8	39.8	39.8
0.41	0.36	0.49	0.40	0.40	0.40	0.40	0.40
0.03	0.84	0.58	0.32	0.32	0.13	0.46	0.41
5.3	16.1	20.1	15.9	26.0	7.6	27.4	24.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.3	16.1	20.1	15.9	26.0	7.6	27.4	24.8
A	B	C	B	C	A	C	C
16.0	16.0	16.7	18.0	18.0	18.0	26.0	26.0
B	B	B	B	B	B	C	C



EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBT
19	761	128	528	106	13	224	258
19	761	128	528	106	13	224	258
7	4	14	3	8	18	5	2
0	0	0	0	0	0	0	0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1845	1845	1845	1845	1845	1845	1845	1845
10	801	225	135	556	68	112	14
0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
3	3	3	3	3	3	3	3
351	906	254	248	196	430	115	599
0.10	0.67	0.67	0.12	0.12	0.44	0.44	0.44
1757	2704	759	1757	4555	550	1067	259
10	519	507	135	408	216	112	0
1757	1752	1711	1757	1679	1748	1067	0
0.3	24.0	24.0	4.9	11.2	11.4	7.8	0.0
0.3	24.0	24.0	4.9	11.2	11.4	18.6	0.0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
351	587	573	248	1194	622	430	0
0.03	0.88	0.88	0.55	0.34	0.35	0.26	0.00
351	666	650	335	1511	786	430	0
2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00
1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00
18.4	14.9	14.9	24.2	33.4	33.5	24.8	0.0
0.0	12.4	12.6	1.5	0.1	0.3	1.5	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	13.3	13.0	2.5	5.2	5.6	2.5	0.0
18.5	27.3	27.5	25.7	33.5	33.7	26.1	0.0
B	C	C	C	C	C	C	C
1036	27.3	759	32.2	199	533	21.2	C
27.3	C	C	C	C	C	C	C
2	2	3	4	5	6	7	8
49.4	12.1	38.5	49.4	10.0	40.6	7	8
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
35.0	12.0	38.0	35.0	5.0	45.0	5.0	5.0
20.6	8.9	26.0	18.3	2.3	13.4	18.3	2.3
3.3	0.1	7.5	3.5	0.0	13.1	3.5	0.0
27.1	C	C	C	C	C	C	C

Timings

4: Coors Bypass & Ellison Dr.

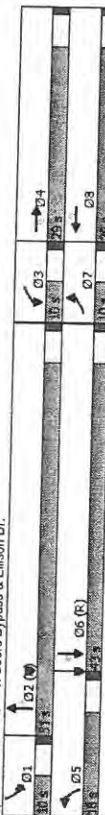
Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT
Traffic Volume (vph)	125	530	419	96	276	18	337	988	54	68	1445	108
Future Volume (vph)	125	530	419	96	276	18	337	988	54	68	1445	108
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (%)	10.0%	29.0%	29.0%	10.0%	29.0%	29.0%	10.0%	29.0%	10.0%	29.0%	29.0%	29.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimizer?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effort Green (s)	5.2	22.3	22.3	5.4	22.4	22.4	13.0	46.9	46.9	5.4	39.3	39.3
Actuated g/C Ratio	0.05	0.22	0.22	0.05	0.22	0.22	0.13	0.47	0.47	0.05	0.39	0.39
v/c Ratio	0.37	0.72	0.90	0.55	0.37	0.04	0.80	0.44	0.07	0.39	0.77	0.16
Control Delay	43.0	34.8	39.7	58.6	33.9	0.2	57.0	18.7	0.2	52.3	29.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	34.8	39.7	58.6	33.9	0.2	57.0	18.7	0.2	52.3	29.9	0.8
LOS	D	C	D	E	C	A	E	B	A	D	C	A
Approach Delay	37.4											
Approach LOS	D											

Intersection Summary

Cycle Length: 100	
Offset: 47 (47%), Referenced to Phase 2: NBT and 6: SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 31.2	
Intersection Capacity Utilization 73.0%	
Analysis Period (min): 15	
Intersection LOS: C	
ICU Level of Service D	

Splits and Phases: 4: Coors Bypass & Ellison Dr.



2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
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HCM 2010 Signalized Intersection Summary 4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT
Traffic Volume (veh/h)	125	530	419	96	276	18	337	988	54	68	1445	108
Future Volume (veh/h)	125	530	419	96	276	18	337	988	54	68	1445	108
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (vph)	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	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
Adj Sat Flow (veh/h)	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate	66	558	0	101	291	0	355	1040	0	72	1521	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	170	715	320	170	715	320	420	2497	778	170	2129	663
Arrive On Green	0.02	0.07	0.00	0.05	0.20	0.00	0.12	0.50	0.00	0.05	0.42	0.00
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Sat Flow (veh/h)	66	558	0	101	291	0	355	1040	0	72	1521	0
Q Serve (g/s)	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Cycle Q Clear (g/c/s)	1.9	15.7	0.0	2.9	7.2	0.0	10.2	13.1	0.0	2.1	25.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
V/C Ratio(X)	0.39	0.78	0.00	0.59	0.41	0.00	0.85	0.42	0.00	0.42	0.71	0.00
Avail Cap(c/s)	170	715	320	170	715	320	420	2497	778	170	2129	663
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.56	0.56	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	47.7	44.4	0.0	46.5	34.5	0.0	42.9	16.0	0.0	46.1	23.9	0.0
Incr Delay (d2), s/veh	0.8	2.3	0.0	5.4	0.4	0.0	13.6	0.5	0.0	1.7	2.1	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 BackOfJ(50%)veh/h	0.9	7.9	0.0	1.5	3.5	0.0	5.6	6.2	0.0	1.0	12.0	0.0
LnGrp Delay(d4), s/veh	48.5	46.7	0.0	51.9	34.9	0.0	56.5	16.5	0.0	47.8	25.9	0.0
LnGrp LOS	D	D	D	D	C	D	E	B	D	D	C	D
Approach Vol, veh/h	624			392			1395			1593		
Approach Delay, s/veh	46.9			39.3			26.7			26.9		
Approach LOS	D			D			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	54.6	10.0	25.4	17.3	47.3	10.0	25.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	46.0	5.0	24.0	13.0	38.0	5.0	24.0				
Max Q Clear Time (g _c +t ₁), s	4.1	15.1	4.8	17.2	12.2	27.0	3.9	9.2				
Green Ext Time (p _c), s	0.0	22.2	0.0	2.7	0.1	9.5	0.0	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay							31.2					
HCM 2010 LOS							C					

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
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Lanes, Volumes, Timings
5: W Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	2	25	68	2	6	7	16	54	6	137	1
Traffic Volume (vph)	1	2	25	68	2	6	7	16	54	6	137	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.877	0.998	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957
Flt Protected	0	1615	0	0	1748	0	0	1663	0	0	1839	0
Satd. Flow (prot)	0	1615	0	0	1748	0	0	1663	0	0	1839	0
Flt Permitted	0	0	0	0	0	0	0	0	0	0	0	0
Satd. Flow (perm)	0	0	0	0	0	0	0	0	0	0	0	0
Link Speed (mph)	0	1615	0	0	1748	0	0	1663	0	0	1839	0
Link Distance (ft)	30	315	30	30	265	30	30	388	30	30	388	30
Travel Time (s)	7.2	0.83	0.83	0.83	6.0	0.83	0.83	10.6	0.83	0.83	10.9	0.83
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1	2	30	82	2	7	8	19	65	7	165	1
Shared Lane Traffic (%)	0	33	0	0	91	0	0	92	0	0	173	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	15	15	9	15	15	9	15	15	9
Turning Speed (mph)	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization:	26.2%
Analysis Period (min):	15
ICU Level of Service:	A

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

HCM 2010 TWSC
5: W Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Int Delay, s/vch	3.7											
Lane Configurations	1	2	25	68	2	6	7	16	54	6	137	1
Traffic Vol, veh/h	1	2	25	68	2	6	7	16	54	6	137	1
Future Vol, veh/h	1	2	25	68	2	6	7	16	54	6	137	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-	-	-	-	-	-	-
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	2	30	82	2	7	8	19	65	7	165	1
Major/Minor	Minor2	Minor2	Minor2	Minor1	Minor1	Minor1	Major1	Major1	Major1	Major2	Major2	Major2
Conflicting Flow All	253	281	166	265	250	52	166	0	0	84	0	0
Stage 1	180	180	-	69	69	-	-	-	-	-	-	-
Stage 2	73	101	-	196	181	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	688	828	876	688	851	1013	1406	-	-	1506	-	-
Stage 1	819	749	-	939	835	-	-	-	-	-	-	-
Stage 2	934	810	-	803	748	-	-	-	-	-	-	-
Platoon blocked, %	685	619	876	655	644	1013	1406	-	-	1506	-	-
Mov Cap-1 Maneuver	685	619	-	655	644	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	814	745	-	933	830	-	-	-	-	-	-	-
Stage 1	919	805	-	769	744	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB	WB	NB	WB	NB	SB	SB	SB	SB	SB	SB	SB
HCM Control Delay, s	9.4			11.2			0.7					
HCM LOS	A			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	843	673	1506	-	-	-	-	-	-
HCM Lane V/C Ratio	0.006	-	-	0.04	0.136	0.005	-	-	-	-	-	-
HCM Control Delay (s)	7.6	0	-	9.4	11.2	7.4	0	-	-	-	-	-
HCM Lane LOS	A	A	-	A	A	A	A	-	-	-	-	-
HCM 95th %ile Q(veh)	0	-	-	0.1	0.5	0	-	-	-	-	-	-

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

Lanes, Volumes, Timings 6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↖	↖↖	↖↖	↖↖	↖↖	↖↖
Traffic Volume (vph)	74	1173	691	79	0	64
Future Volume (vph)	74	1173	691	79	0	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500			0	0	325
Storage Lanes	1			1	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt				0.850		0.865
Flt Protected	0.950					
Satd. Flow (prot)	1752	3505	3505	1568	0	1596
Flt Permitted	0.950					
Satd. Flow (perm)	1752	3505	3505	1568	0	1596
Link Speed (mph)		40	40		30	
Link Distance (ft)		450	816		232	
Travel Time (s)		7.7	13.9		5.3	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	89	1413	833	95	0	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	1413	833	95	0	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)		12	12		0	
Link Offset (ft)		0	0		0	
Crosswalk Width (ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control		Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.8%					
Analysis Period (min)	15					
ICU Level of Service A						

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

HCM 2010 TWSC 6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Intersection		0.6					
Int Delay, s/veh							
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖↗	↖↗	↖↗	↖↗		↖↗	
Traffic Vol, veh/h	74	1173	691	79	0	64	
Future Vol, veh/h	74	1173	691	79	0	64	
Conflicting Peds. #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	500	-	-	0	-	-	
Veh in Median Storage, #	-	0	-	0	-	-	
Grade, %	-	0	-	0	-	-	
Peak Hour Factor	83	83	83	83	83	83	
Heavy Vehicles, %	3	3	3	3	3	3	
Mvmt Flow	89	1413	833	95	0	77	
Major/Minor							
Major		Major2		Minor2			
Conflicting Flow All	833	0	-	0	-	416	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	4.16	-	-	-	-	6.96	
Critical Hdwy Slg 1	-	-	-	-	-	-	
Critical Hdwy Slg 2	-	-	-	-	-	-	
Follow-up Hdwy	2.23	-	-	-	-	3.33	
Pot Cap-1 Maneuver	1126	-	-	-	0	*798	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	0	-	
Platoon blocked, %	1	-	-	-	-	1	
Mov Cap-1 Maneuver	1126	-	-	-	-	*798	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach							
HCM Control Delay, s	0.5	-	-	-	SB	-	
HCM LOS	-	-	-	0	10	B	
Minor Lane/Major Mvmt							
Capacity (veh/h)	1126	-	-	-	-	798	
HCM Lane V/C Ratio	0.079	-	-	-	-	0.097	
HCM Control Delay (s)	8.5	-	-	-	-	10	
HCM Lane LOS	A	-	-	-	-	B	
HCM 95th %ile Q(veh)	0.3	-	-	-	-	0.3	
Notes							
~: Volume exceeds capacity \$: Delay exceeds 300s *: Computation Not Defined **: All major volume in platoon							

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

Lanes, Volumes, Timings

7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SSR
Lane Configurations	W			4	4	
Traffic Volume (vph)	8	82	20	77	424	8
Future Volume (vph)	8	82	20	77	424	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr	0.876				0.998	
Flt Protected	0.996			0.990		
Satd Flow (prot)	1609	0	0	1826	1841	0
Flt Permitted	0.996			0.990		
Satd Flow (perm)	1609	0	0	1826	1841	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	197			442	149	
Travel Time (s)	4.5			12.1	4.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	86	21	81	446	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	102	454	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.0%					
Analysis Period (min)	15					
ICU Level of Service A						

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

HCM 2010 TWSC

7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Intersection	2.1					
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SSR
Lane Configurations	W		4	4	4	4
Traffic Vol, veh/h	8	82	20	77	424	8
Future Vol, veh/h	8	82	20	77	424	8
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	-	-	-	-	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	8	86	21	81	446	8
Major/Minor						
Conflicting Flow All	574	451	455	0	-	0
Stage 1	451	-	-	-	-	-
Stage 2	123	-	-	-	-	-
Critical Hwy	6.43	6.23	4.13	-	-	-
Critical Hwy Sig 1	5.43	-	-	-	-	-
Critical Hwy Sig 2	5.43	-	-	-	-	-
Follow-up Hwy	3.527	3.327	2.227	-	-	-
Por Cap-1 Maneuver	484	606	1100	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	474	606	1100	-	-	-
Mov Cap-2 Maneuver	474	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Approach						
EB	12.3	EB	1.7	SB	0	
HCM Control Delay, s	B					
HCM LOS						
Minor Lane/Major Mvmt						
Capacity (veh/h)	1100	-	591	-	-	-
HCM Lane V/C Ratio	0.019	-	0.16	-	-	-
HCM Control Delay (s)	8.3	0	12.3	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0.1	-	0.6	-	-	-

2020 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020ABX.syn

Timings
1: Ellison Dr. & N.7 Bar Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	944	1252	154	81	98
Traffic Volume (vph)	84	944	1252	154	81	98
Future Volume (vph)	84	944	1252	154	81	98
Turn Type	pm-rt	NA	NA	Perm	Prot	pm-ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	6
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	18.0	114.0	96.0	96.0	26.0	18.0
Total Split (%)	12.9%	81.4%	68.6%	68.6%	18.6%	12.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	Lag	Lag	Lead	Lead
Recall Mode	Yes	Yes	Yes	Yes	Yes	Yes
Act Effct Green (s)	117.8	117.8	106.1	106.1	122	23.9
Actuated g/C Ratio	0.84	0.84	0.76	0.76	0.09	0.17
v/c Ratio	0.27	0.34	0.50	0.13	0.57	0.32
Control Delay	4.2	3.0	1.5	0.2	74.9	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	3.0	1.5	0.2	74.9	20.6
LOS	A	A	A	A	E	C
Approach Delay	3.1	1.4	A	A	45.2	D
Approach LOS	A	A	A	A	D	D

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 103 (74%), Referenced to phase 4 EBL and 8 WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 5.0
 Intersection Capacity Utilization: 56.2%
 Analysis Period (min): 15

Intersection LOS: A
 ICU Level of Service: B

Spits and Phases: 1: Ellison Dr. & N.7 Bar Dr.

2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX.syn

HCM 2010 Signalized Intersection Summary
1: Ellison Dr. & N.7 Bar Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	944	1252	154	81	98
Traffic Volume (veh/h)	84	944	1252	154	81	98
Future Volume (veh/h)	84	944	1252	154	81	98
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	89	1004	1332	164	86	104
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap. veh/h	383	2975	2724	1219	140	181
Arrive On Green	0.04	0.85	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1757	3597	3597	1568	1757	1568
Grp Volume(v), veh/h	89	1004	1332	164	86	104
Grp Sat Flow(s), veh/h	1757	1752	1752	1568	1757	1568
Q Serve(g, s), s	1.3	8.5	0.0	0.0	6.6	8.8
Cycle Q Clear(g, c), s	1.3	8.5	0.0	0.0	6.6	8.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	383	2975	2724	1219	140	181
V/C Ratio(X)	0.23	0.34	0.49	0.13	0.61	0.57
Avail Cap(c), veh/h	484	2975	2724	1219	264	291
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(i)	1.00	1.00	0.56	0.56	1.00	1.00
Uniform Delay (d), s/veh	2.2	2.2	0.0	0.0	62.3	59.6
Incr Delay (d2), s/veh	0.3	0.3	0.4	0.1	4.3	2.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/in	0.7	4.2	0.1	0.0	3.4	7.7
LnGrp Delay(d), s/veh	2.5	2.6	0.4	0.1	66.6	61.5
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	1093	1496	190	63.8	E	E
Approach Delay, s/veh	2.6	0.3	A	A	E	E
Approach LOS	A	A	A	A	E	E

Timer

1	2	3	4	5	6	7	8
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Assigned Phs
 Phs Duration (G+Y+R), s
 Change Period (Y+R), s
 Max Green Setting (Gmax), s
 Max Q Clear Time (g, c+11), s
 Green Ext Time (p, c), s

Intersection Summary

HCM 2010 Ctrl Delay
 HCM 2010 LOS

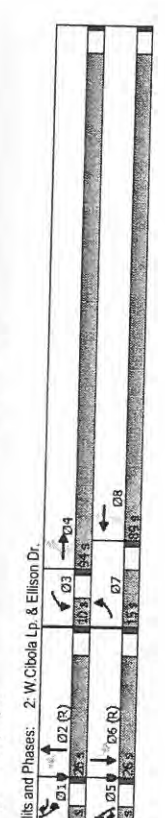
2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX.syn

Timings
2: W. Cibola Lp. & Ellison Dr.
Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	77	948	37	27	1406	49	44	7	27	6
Traffic Volume (vph)	77	948	37	27	1406	49	44	7	27	6
Future Volume (vph)	77	948	37	27	1406	49	44	7	27	6
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	4	8	8	8	2	2	1	6
Permitted Phases	4	4	4	8	8	8	2	2	1	6
Detector Phase	7	4	4	8	8	8	2	2	1	6
Switch Phase	7	4	4	8	8	8	2	2	1	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	15.0	94.0	10.0	10.0	89.0	10.0	10.0	26.0	10.0	26.0
Yellow Time (s)	10.7%	67.1%	7.1%	7.1%	63.6%	7.1%	7.1%	18.6%	7.1%	18.6%
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lost Time Adjust (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Lost Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead/Lag Optimize?	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	89.0	79.4	92.8	82.7	76.2	88.5	35.2	26.8	33.1	25.7
Audited g/C Ratio	0.64	0.57	0.66	0.59	0.54	0.63	0.25	0.19	0.24	0.18
Control Delay	21.0	17.0	0.5	6.7	20.4	0.1	43.0	23.5	42.7	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	17.0	0.5	6.7	20.4	0.1	43.0	23.5	42.7	16.0
LOS	C	B	A	A	C	A	D	C	D	B
Approach Delay	16.7									
Approach LOS	B									

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 6 (4%), Referenced to phase 2: NBT and 6: SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 19.0
Intersection Capacity Utilization 64.7%
Analysis Period (min) 15



2020 PM Peak NOBUILD Conditions
Existing Geometry
Synchro 9 Report
2020PNX.syn

HCM 2010 Signalized Intersection Summary
2: W. Cibola Lp. & Ellison Dr.
Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	77	948	37	27	1406	49	44	7	28	27	6
Traffic Volume (veh/h)	77	948	37	27	1406	49	44	7	28	27	6
Future Volume (veh/h)	77	948	37	27	1406	49	44	7	28	27	6
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	82	1009	39	29	1496	52	47	7	30	29	6
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	284	1791	857	245	1787	856	421	84	360	463	33
Arrive On Green	0.01	0.17	0.17	0.07	1.00	1.00	0.04	0.27	0.27	0.04	0.27
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	305	1308	1757	119
Grp Volume(v), veh/h	82	1009	39	29	1496	52	47	0	37	29	0
Grp Sat Flow(s), veh/h	1757	1752	1568	1752	1752	1568	1757	0	1614	1757	0
Q Served(s), s	3.1	37.0	2.7	1.0	0.0	0.0	2.7	0.0	2.4	1.6	0.0
Cycle Q Clear(g, c), s	3.1	37.0	2.7	1.0	0.0	0.0	2.7	0.0	2.4	1.6	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.00	0.93
Lane Grp Cap(c), veh/h	284	1791	857	245	1787	856	421	0	443	463	0
V/C Ratio(X)	0.29	0.56	0.05	0.12	0.84	0.06	0.11	0.00	0.08	0.08	0.18
Avail Cap(c), veh/h	345	2228	1053	245	2103	997	421	0	443	463	0
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Uniform Delay (d), s/veh	15.5	43.9	25.5	19.1	0.0	0.0	34.3	0.0	37.7	33.9	0.0
Incr Delay (d2), s/veh	0.5	0.3	0.0	0.1	0.7	0.0	0.1	0.0	0.4	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
%ile BackOfQ(50%), veh/h	1.5	18.1	1.2	0.5	0.2	0.0	1.3	0.0	1.1	0.8	0.0
LnGrp Delay(d), s/veh	16.0	44.1	25.5	19.1	0.7	0.0	34.4	0.0	38.1	33.9	0.0
LnGrp LOS	B	D	C	B	A	A	C	D	C	C	D
Approach Vol, veh/h	1130										
Approach Delay, s/veh	41.4										
Approach LOS	D										
Assigned Phs	1	2	3	4	5	6	7	8			
Phs Duration (G+Y+Rc), s	10.0	43.5	10.0	76.5	10.0	43.5	10.1	76.4			
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Max Green Setting (Gmax), s	5.0	21.0	5.0	89.0	5.0	21.0	10.0	84.0			
Max Q Clear Time (g, c+1), s	3.8	4.4	3.0	39.0	4.7	7.4	5.1	2.0			
Green Ext Time (p, c), s	0.0	0.5	0.0	32.5	0.0	0.5	0.1	42.7			

Intersection Summary
HCM 2010 Ctrl Delay
HCM 2010 LOS
2020 PM Peak NOBUILD Conditions
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Timings

3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	913	70	1635	199	122	10	150
Traffic Volume (vph)	23	913	70	1635	199	122	10	150
Future Volume (vph)	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm
Turn Type	7	4	3	8	8	2	2	6
Protected Phases	4	4	3	8	8	2	2	6
Permitted Phases	7	4	3	8	8	2	2	6
Detector Phases	7	4	3	8	8	2	2	6
Switch Phase	7	4	3	8	8	2	2	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	10.0	96.0	11.0	97.0	97.0	33.0	33.0	33.0
Total Split (%)	7.1%	68.6%	7.9%	69.3%	69.3%	23.6%	23.6%	23.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	96.5	91.3	98.5	92.2	82.2	27.5	27.5	27.5
Actuated g/C Ratio	0.69	0.65	0.70	0.66	0.65	0.20	0.20	0.20
Queue Delay	0.13	0.59	0.37	0.94	0.24	0.77	0.27	0.86
Control Delay	7.8	9.9	10.3	32.3	6.4	76.5	13.5	86.8
Queue Delay	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0
Total Delay	7.8	9.9	10.3	37.2	6.4	76.5	13.5	86.8
LOS	A	A	B	D	A	E	B	F
Approach Delay	9.9	9.9	10.3	37.2	6.4	76.5	13.5	86.8
Approach LOS	A	A	B	D	A	E	B	F
Intersection LOS: C								
ICU Level of Service D								
Analysis Period (min) 15								
Cycle Length: 140								
Actuated Cycle Length: 140								
Offset: 113 (81%), Referenced to phase 2:NBL and 6:SBTL, Start of Green								
Natural Cycle: 90								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.94								
Intersection Signal Delay: 29.9								
Intersection Capacity Utilization 76.8%								
Analysis Period (min) 15								
Splits and Phases: 3: E.Cibola Lp. & Ellison Dr.								
02 (R)	03	04	05 (R)	06 (R)	07	08	09	10
02 (R)	03	04	05 (R)	06 (R)	07	08	09	10
02 (R)	03	04	05 (R)	06 (R)	07	08	09	10

2020 PM Peak NOBUILD Conditions
Existing Geometry
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HCM 2010 Signalized Intersection Summary
3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	913	70	1635	199	122	10	150
Traffic Volume (veh/h)	23	913	70	1635	199	122	10	150
Future Volume (veh/h)	7	4	14	3	8	5	2	12
Initial Q (Qb), veh	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	15	1217	119	93	2180	265	163	13
Adj No. of Lanes	1	2	0	1	2	1	1	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	3	3	3	3	3	3	3
Cap. veh/h	136	2098	205	377	2279	1019	231	41
Arrive On Green	0.07	1.00	1.00	0.05	0.86	0.86	0.21	0.21
Sat Flow, veh/h	1757	3227	315	1757	3505	1568	1246	198
Grp Volume(v), veh/h	15	660	678	93	2180	265	163	13
Grp Sat Flow(s), veh/h	1757	1752	1789	1757	1752	1568	1246	198
Q Serve(s), s	0.4	0.0	0.0	0.0	2.5	68.2	4.1	18.0
Cycle Q Clear(Q_c), s	0.4	0.0	0.0	0.0	2.5	68.2	4.1	18.0
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	136	1139	1163	377	2279	1019	231	41
V/C Ratio(X)	0.11	0.58	0.58	0.25	0.96	0.26	0.71	0.00
Avail Cap(c), veh/h	136	1139	1163	389	2303	1030	231	41
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.09	0.09	0.09	0.00	0.00
Uniform Delay (d), s/veh	24.6	0.0	0.0	7.2	7.9	3.6	59.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	0.0	1.3	0.0	16.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	0.3	0.2	0.2	1.2	31.5	1.7	7.3	0.0
LnGrp Delay(d), s/veh	24.9	0.6	0.6	7.2	9.3	3.6	75.7	0.0
LnGrp LOS	C	A	A	A	A	A	E	D
Approach Vol, veh/h	1351	0.9	2538	8.6	268	65.5	327	71.8
Approach Delay, s/veh	0.9	A	A	A	E	E	F	E
Approach LOS	A	A	A	A	E	E	F	E
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2	3	4	4	6	7	8	
Phs Duration (G+Y+Rc), s	34.0	10.0	96.0	34.0	10.0	96.0		
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		
Max Green Setting (Gmax), s	28.0	6.0	91.0	28.0	5.0	92.0		
Max Q Clear Time (g_c+H), s	28.9	4.5	2.0	31.0	2.4	70.2		
Green Ext Time (p_c), s	0.0	0.0	75.4	0.0	0.0	20.8		
Intersection Summary								
HCM 2010 Ctrl Delay	14.3							
HCM 2010 LOS	B							

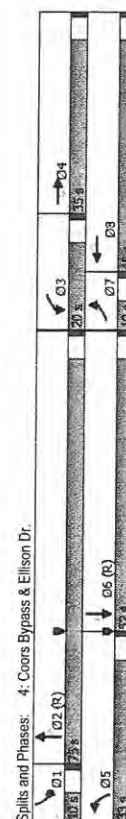
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Timings 4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	156	607	368	375	1025	120	757	2655	198	125	1187	122
Traffic Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Future Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Spill (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Spill (s)	10.0	35.0	35.0	20.0	45.0	45.0	33.0	75.0	75.0	10.0	52.0	52.0
Total Spill (%)	7.1%	25.0%	25.0%	14.3%	32.1%	32.1%	23.6%	53.6%	53.6%	7.1%	37.1%	37.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	5.0	30.0	30.0	15.0	40.0	40.0	28.0	70.0	70.0	5.0	47.0	47.0
Act Effct Green (s)	0.04	0.21	0.21	0.11	0.29	0.29	0.20	0.50	0.50	0.04	0.34	0.34
Actuated g/c Ratio	0.86	1.08	0.84	1.37	1.37	1.37	0.30	1.48	1.41	0.31	1.38	0.94
v/c Ratio	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS	F	F	C	F	F	F	B	F	F	A	F	E
Approach Delay	70.4	E	E	F	F	F	F	F	F	A	F	E
Approach LOS	E	E	E	F	F	F	F	F	F	A	F	E

Intersection Summary
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: (32 (94%), Referenced to phase 2 NBT and 6 SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 164.1
 Intersection Capacity Utilization: 104.6%
 Analysis Period (min): 15
 Intersection LOS: F
 ICU Level of Service: G



2020 PM Peak NOBUILD Conditions
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Timings 4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	156	607	368	375	1025	120	757	2655	198	125	1187	122
Traffic Volume (veh/h)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Future Volume (veh/h)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (Qb) veh	0	0	0	0	0	0	0	0	0	0	0	0
Peak-Hike Adj(A,phT)	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	104	809	0	500	1367	0	1009	3540	0	167	1583	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	122	751	336	365	1001	448	682	2518	784	122	1691	526
Arrive On Green	0.01	0.07	0.00	0.11	0.29	0.00	0.20	0.50	0.00	0.04	0.34	0.00
Sat Flow, veh/h	3408	3505	1588	3408	3505	1588	3408	3505	1588	3408	3505	1588
Grp Volume(v), veh/h	104	809	0	500	1367	0	1009	3540	0	167	1583	0
Grp Sat Flow(s) veh/h/ln	1704	1752	1588	1704	1752	1588	1704	1752	1588	1704	1752	1588
Q Serv(g, s), s	4.3	30.0	0.0	15.0	40.0	0.0	28.0	70.0	0.0	5.0	42.6	0.0
Cycle Q Clear(g, c), s	4.3	30.0	0.0	15.0	40.0	0.0	28.0	70.0	0.0	5.0	42.6	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	122	751	336	365	1001	448	682	2518	784	122	1691	526
VIC Ratio(X)	0.85	1.08	0.00	1.37	1.37	0.00	1.48	1.41	0.00	1.37	0.94	0.00
Avail Cap(c, a), veh/h	122	751	336	365	1001	448	682	2518	784	122	1691	526
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	0.74	0.74	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	88.8	65.1	0.0	62.5	50.0	0.0	56.0	35.0	0.0	67.5	45.1	0.0
Incr Delay (d2), s/veh	33.0	51.4	0.0	182.8	170.8	0.0	224.0	185.1	0.0	210.7	112.0	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 BackOf(50%), veh/ln	2.6	19.9	0.0	16.3	43.1	0.0	34.4	75.3	0.0	5.9	21.5	0.0
LnGrp Delay(d) s/veh	101.8	116.5	0.0	245.3	220.8	0.0	280.0	220.1	0.0	278.2	56.3	0.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	E
Approach Vol, veh/h	913	F	F	1867	227.3	F	4549	233.4	F	1750	77.5	E
Approach Delay, s/veh	114.8	F	F	227.3	F	F	233.4	F	F	175.0	77.5	E
Approach LOS	F	F	F	F	F	F	F	F	F	F	F	E

Intersection Summary
 HCM 2010 Ctrl Delay
 HCM 2010 LOS
 190.2 F

2020 PM Peak NOBUILD Conditions
 Existing Geometry
 Synchro 9 Report
 2020PNX.syn

Lanes, Volumes, Timings
5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	EBR	SBT
Lane Configurations	1	12	17	109	103	1	1
Traffic Volume (vph)	1	12	17	109	103	1	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.875					0.999	
Flt Protected	0.996			0.993			
Satd. Flow (prot)	1608	0	0	1832	1843	0	
Flt Permitted	0.996			0.993			
Satd. Flow (perm)	1608	0	0	1832	1843	0	
Link Speed (mph)	30			25	25		
Link Distance (ft)	315			388	398		
Travel Time (s)	7.2			10.6	10.9		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	1	13	18	116	110	1	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	14	0	0	134	111	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width (ft)	12			12	12		
Link Offset (ft)	0			0	0		
Crosswalk Width (ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Sign Control	Stop			Free	Free		
Intersection Summary							
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	23.3%						
Analysis Period (min)	15						

ICU Level of Service A

2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX syn

HCM 2010 TWSC
5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

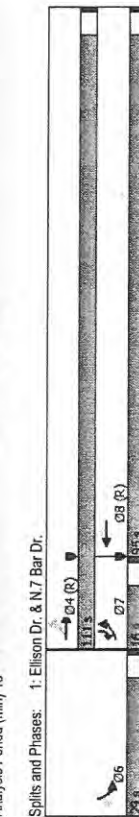
Intersection	EBL	EBR	NBL	NBT	SBT	EBR	SBT
Int Delay, s/veh	1						
Movement	W						
Lane Configurations	1	12	17	109	103	1	1
Traffic Vol. veh/h	1	12	17	109	103	1	1
Future Vol. veh/h	1	12	17	109	103	1	1
Conflicting Peds. #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	-	-	-
Grade, %	0	-	-	-	-	-	-
Peak Hour Factor	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	1	13	18	116	110	1	1
Major/Minor	Minor2	Major2	Major1	Major1	Major2	Minor2	Major2
Conflicting Flow All	262	110	111	0	0	0	0
Stage 1	110	-	-	-	-	-	-
Stage 2	152	-	-	-	-	-	-
Critical Hwy	6.43	6.23	4.13	-	-	-	-
Critical Hwy Sig 1	5.43	-	-	-	-	-	-
Critical Hwy Sig 2	5.43	-	-	-	-	-	-
Follow-up Hwy	3.527	3.327	2.227	-	-	-	-
Pl Cap-1 Maneuver	763	941	1473	-	-	-	-
Stage 1	912	-	-	-	-	-	-
Stage 2	902	-	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	753	941	1473	-	-	-	-
Mov Cap-2 Maneuver	753	-	-	-	-	-	-
Stage 1	912	-	-	-	-	-	-
Stage 2	890	-	-	-	-	-	-
Approach	EB	EB	NB	NB	SB	SB	SB
HCM Control Delay, s	9		1				0
HCM LOS	A						
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBR	SBT	SBT	SBT
Capacity (veh/h)	1473	-	923	-	-	-	-
HCM Lane V/C Ratio	0.012	-	0.015	-	-	-	-
HCM Control Delay (s)	7.5	0	9	-	-	-	-
HCM Lane LOS	A	A	A	-	-	-	-
HCM 95th %ile Q(veh)	0	-	0	-	-	-	-

2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX syn

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	1155	1438	201	134	98
Traffic Volume (vph)	84	1155	1438	201	134	98
Future Volume (vph)	84	1155	1438	201	134	98
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	7
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	16.0	111.0	95.0	95.0	29.0	16.0
Total Split (s)	11.4%	79.3%	67.9%	67.9%	20.7%	11.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	Lag	Lag	Lead	Lead
Lead/Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	113.3	113.3	101.3	101.3	16.7	28.7
Actuated g/c Ratio	0.81	0.81	0.72	0.72	0.12	0.20
W/C Ratio	0.35	0.43	0.80	0.18	0.89	0.29
Control Delay	6.9	4.8	2.8	0.2	75.2	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	4.8	2.8	0.2	75.2	27.6
LOS	A	A	A	A	E	C
Approach Delay	4.9	2.5	A	A	55.2	E
Approach LOS	A	A	A	A	E	E

Intersection Summary
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 133 (95%), Referenced to phase 4 EBL and 8 WBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum W/C Ratio: 0.69
 Intersection Signal Delay: 7.4
 Intersection Capacity Utilization: 64.3%
 Analysis Period (min): 15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	1155	1438	201	134	98
Traffic Volume (veh/h)	84	1155	1438	201	134	98
Future Volume (veh/h)	84	1155	1438	201	134	98
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	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
Adj Sat Flow, veh/h/m	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	89	1229	1530	214	143	104
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	321	2911	2660	1190	172	210
Arrive On Green	0.04	0.83	1.00	1.00	0.10	0.10
Sat Flow, veh/h	1757	3597	3597	1568	1757	1568
Grp Volume(v), veh/h	89	1229	1530	214	143	104
Grp Sat Flow(s), veh/h/m	1757	1752	1752	1568	1757	1568
Q Served(g, s), s	1.4	12.8	0.0	0.0	11.2	8.6
Cycle Q Clear(g, c), s	1.4	12.8	0.0	0.0	11.2	8.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	321	2911	2660	1190	172	210
V/C Ratio(X)	0.28	0.42	0.58	0.18	0.83	0.50
Avail Cap(c, a), veh/h	396	2911	2660	1190	301	325
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	0.38	0.38	1.00	1.00
Uniform Delay (d), s/veh	2.7	3.1	0.0	0.0	62.0	56.2
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.1	9.7	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfC(50%), veh/h	0.7	6.3	0.1	0.0	5.9	7.6
LnGrp Delay(d), s/veh	3.2	3.6	0.3	0.1	71.7	58.1
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	1318	1744			247	
Approach Delay, s/veh	3.5	0.3			66.0	
Approach LOS	A	A			E	
Timer	1	2	3	4	5	6
Assigned Phs				4	6	7
Phs Duration (G+Y+Rc), s				121.3	18.7	10.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				106.0	24.0	11.0
Max Q Clear Time (g, c+1), s				14.8	13.2	3.4
Green Ext Time (p, c), s				55.5	0.6	0.1
Intersection Summary						
HCM 2010 Ctrl Delay				6.5		
HCM 2010 LOS				A		

Timings 2: W.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBT
Lane Configurations	209	1080	49	27	1499	49	44	9	27	7
Traffic Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Future Volume (veh/h)	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA
Turn Type	7	4	5	3	8	1	5	2	1	6
Protected Phases	4	4	4	8	8	2	2	6	6	6
Permitted Phases	7	4	5	3	8	1	5	2	1	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	26.0	95.0	10.0	10.0	79.0	10.0	25.0	10.0	25.0	25.0
Total Split (%)	18.6%	67.9%	7.1%	7.1%	56.4%	7.1%	17.9%	7.1%	17.9%	17.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimizer?										
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	C-Min
Act Effct Green (s)	97.5	86.4	96.6	78.2	72.1	83.6	28.1	21.0	26.8	20.3
Actuated g/c Ratio	0.70	0.62	0.70	0.56	0.52	0.60	0.20	0.15	0.19	0.14
vic Ratio	0.72	0.53	0.03	0.10	0.88	0.05	0.32	0.15	0.11	0.56
Control Delay	52.3	13.7	0.5	5.0	19.4	0.4	52.7	26.0	47.1	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	13.7	0.5	5.0	19.4	0.4	52.7	26.0	47.1	14.5
LOS	D	B	A	A	B	A	D	C	D	B
Approach Delay										
Approach LOS										

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 45 (32%), Referenced to phase 2:NBT and 6:SBTL Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

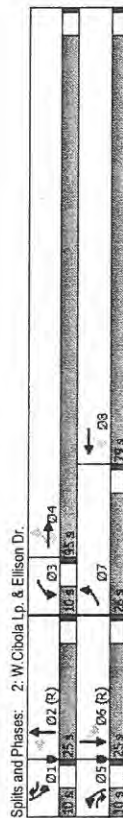
Intersection Signal Delay: 19.4

Intersection Capacity Utilization 87.4%

Analysis Period (min) 15

Intersection LOS: B

ICU Level of Service E



2020 PM Peak BUILD Conditions

Existing Geometry

Synchro 9 Report

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HCM 2010 Signalized Intersection Summary 2: W.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBT
Lane Configurations	209	1080	37	27	1499	49	44	9	27	7
Traffic Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Future Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Number	7	4	14	3	8	18	5	2	12	1
Initial Q (Ob), veh	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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	222	1149	39	29	1595	52	47	10	30	29
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	281	1841	880	251	1690	812	263	106	318	440
Arrive On Green	0.08	0.53	0.53	0.07	0.96	0.96	0.04	0.26	0.04	0.26
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	407	1222	1757
Grp Volume(v), veh/h	222	1149	39	29	1595	52	47	0	40	29
Grp Sat Flow(s), veh/h	1757	1752	1568	1757	1752	1568	1757	0	1629	1757
Q Serve(g, s), s	8.6	32.4	1.6	1.1	25.1	0.2	2.7	0.0	2.6	1.7
Cycle Q Clear(g, c), s	8.6	32.4	1.6	1.1	25.1	0.2	2.7	0.0	2.6	1.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	281	1841	880	251	1690	812	263	0	424	440
VIC Ratio(X)	0.78	0.62	0.04	0.12	0.94	0.06	0.18	0.00	0.09	0.07
Avail Cap(c-a), veh/h	406	2253	1064	251	1853	885	263	0	424	440
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(1)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	23.5	13.8	18.5	1.7	1.1	36.9	0.0	39.3	35.3
Incr Delay (d2), s/veh	5.9	0.3	0.0	0.2	10.0	0.0	0.3	0.0	0.4	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
%ile BackOfQ(50%), veh/h	4.7	15.7	0.7	0.5	9.9	0.1	1.3	0.0	1.2	0.8
LnGrp Delay(d), s/veh	28.9	23.8	13.8	18.7	11.7	1.1	37.2	0.0	39.7	35.4
LnGrp LOS	C	C	B	B	B	A	D	D	D	D
Approach Vol, veh/h	1410	1676	1676	1676	1676	1676	1676	1676	1676	1676
Approach Delay, s/veh	24.3	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Approach LOS	C	B	B	B	B	B	D	D	D	D
Timer	1	2	3	4	5	6	7	8	9	10
Assigned Phs	1	2	3	4	5	6	7	8	9	10
Phs Duration (G+Y+Rc), s	10.0	41.4	10.0	78.6	10.0	41.4	16.0	72.5	10.0	41.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	90.0	5.0	20.0	21.0	74.0	5.0	20.0
Max Q Clear Time (g, c+1), s	3.7	4.8	3.1	34.4	4.7	20.1	10.6	27.1	3.7	4.8
Green Ext Time (p, c), s	0.0	1.6	0.0	39.1	0.0	0.0	0.4	34.7	0.0	1.6
Intersection Summary										
HCM 2010 Ctrl Delay										
HCM 2010 LOS										

2020 PM Peak BUILD Conditions

Existing Geometry

Synchro 9 Report

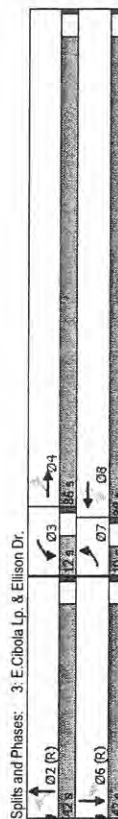
2020PBX.syn

Timings 3: E.Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	246	122	12	296
Traffic Volume (vph)	23	880	70	1754	246	122	12	296
Future Volume (vph)	23	880	70	1754	246	122	12	296
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4	8	8	8	2	2	6	6
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	10.0	86.0	12.0	88.0	42.0	42.0	42.0	42.0
Total Split (s)	7.1%	61.4%	8.6%	62.9%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Ad Effort Green (s)	86.1	81.1	89.9	83.0	37.0	37.0	37.0	37.0
Actuated g/c Ratio	0.82	0.58	0.64	0.59	0.26	0.26	0.26	0.26
v/c Ratio	0.13	0.64	0.41	1.13	0.32	0.62	0.14	1.14
Control Delay	11.9	18.5	4.7	67.1	0.1	56.9	14.9	137.3
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	11.9	18.5	4.7	67.3	0.1	56.9	14.9	137.3
LOS	B	B	A	E	A	E	B	F
Approach Delay	B	B	A	E	A	E	B	F
Approach LOS	B	B	A	E	A	E	B	F

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2-NBTL and 6-SBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 51.8
 Intersection Capacity Utilization: 89.9%
 Analysis Period (min): 15



2020 PM Peak BUILD Conditions
 Existing Geometry

Synchro 9 Report
 2020PBX.syn

HCM 2010 Signalized Intersection Summary 3: E.Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	246	122	12	296
Traffic Volume (veh/h)	23	880	70	1754	246	122	12	296
Future Volume (veh/h)	23	880	70	1754	246	122	12	296
Number	7	4	3	8	2	2	6	6
Initial Q (Ob.) veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Peak-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
Adj Sat Flow veh/h	1845	1845	1845	1845	1845	1845	1845	1845
Adj Sat Flow veh/h	15	1173	119	93	2339	328	163	16
Adj Flow Rate, veh/h	1	2	0	1	2	1	1	0
Adj No. of Lanes	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	3	3	3	3	3	3	3
Cap. veh/h	166	1719	174	344	1883	842	334	122
Arrive On Green	0.07	1.00	1.00	0.08	1.00	1.00	0.32	0.32
Sat Flow, veh/h	1757	3214	325	1757	3505	1568	1194	382
Grp Volume(v), veh/h	15	639	653	93	2339	328	163	0
Grp Sat Flow(s), veh/h	1757	1752	1787	1752	1568	1194	0	1625
Q Served(s), s	0.5	0.0	0.0	3.4	0.0	16.9	0.0	4.2
Cycle Q Clear(g_c), s	0.5	0.0	0.0	3.4	0.0	28.6	0.0	4.2
Prop In Lane	1.00	0.18	1.00	1.00	1.00	1.00	0.76	1.00
Lane Grp Cap(c), veh/h	166	937	956	344	1883	842	334	0
V/C Ratio(X)	0.09	0.68	0.68	0.27	1.24	0.39	0.49	0.13
Avail Cap(c_a), veh/h	166	1014	1034	364	2078	930	334	0
HCN Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Delay (d), s/veh	12.8	0.0	0.0	13.0	0.0	47.2	0.0	33.8
Uniform Delay (d), s/veh	0.2	1.7	1.7	0.0	109.4	0.0	5.0	28.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(d3), veh/h	0.3	0.4	0.5	1.6	28.6	0.0	6.0	0.0
LnGrp Delay(d), s/veh	13.1	1.7	1.7	13.0	109.4	0.0	52.3	37.9
LnGrp LOS	B	A	A	B	F	A	C	E
Approach Vol, veh/h	1307	1.8	2760	93.1	231	47.0	589	86.4
Approach Delay, s/veh	1.8	A	F	F	D	D	E	E
Approach LOS	A	A	F	F	D	D	E	E
Assigned Phs	2	3	4	5	6	7	8	8
Phs Duration (G+Y+Rc), s	50.3	10.4	79.3	50.3	10.0	79.7	50.3	10.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	37.0	7.0	81.0	37.0	5.0	83.0	37.0	5.0
Max Q Clear Time (g_c+1), s	30.6	5.4	2.0	46.8	2.5	2.0	46.8	2.5
Green Ext Time (p_c), s	2.1	0.0	70.6	0.0	0.0	72.2	0.0	0.0
Intersection Summary	63.3							
HCN 2010 Ctrl Delay	E							
HCN 2010 LOS	E							

2020 PM Peak BUILD Conditions
 Existing Geometry

Synchro 9 Report
 2020PBX.syn

Timings 3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	122	12	296	58
Traffic Volume (vph)	23	880	70	1754	122	12	296	58
Future Volume (vph)	23	880	70	1754	122	12	296	58
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4	8	3	8	2	2	6	6
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	10.0	74.0	15.0	79.0	51.0	51.0	51.0	51.0
Total Split (s)	7.1%	52.9%	10.7%	56.4%	36.4%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimizer?	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Recall Mode	Min	77.5	72.3	84.0	75.6	44.3	44.3	44.3
Act Effect Green (s)	0.55	0.52	0.60	0.54	0.32	0.32	0.32	0.32
Actuated g/c Ratio	0.13	0.72	0.45	0.99	0.49	0.12	0.95	0.31
v/c Ratio	15.7	23.8	14.0	10.9	44.1	12.4	79.9	26.9
Control Delay	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0
Queue Delay	15.7	23.8	14.0	26.0	44.1	12.4	79.9	26.9
Total Delay	B	C	B	C	D	B	E	C
LOS	C	C	B	C	D	B	E	C
Approach Delay	23.7	25.6	C	C	34.8	C	63.7	E
Approach LOS	C	C	C	C	C	C	E	E

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 138 (99%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

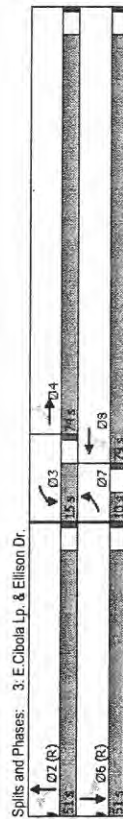
Intersection Signal Delay: 30.0

Intersection Capacity Utilization: 80.8%

Analysis Period (min): 15

Intersection LOS: C

ICU Level of Service: D



2020 PM Peak Build Conditions Mit

Mitigated Geometry

Synchro 9 Report

2020PBX_MIT.syn

HCM 2010 Signalized Intersection Summary 3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	122	12	296	58
Traffic Volume (veh/h)	23	880	70	1754	122	12	296	58
Future Volume (veh/h)	23	880	70	1754	122	12	296	58
Number	7	4	14	3	8	5	2	12
Initial Q (Ob.) veh	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
Adj Sat Flow (veh/h)	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate (veh/h)	15	1173	119	93	2339	328	163	16
Adj No. of Lanes	1	2	0	1	3	0	1	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh. %	3	3	3	3	3	3	3	3
Cap. veh/h	114	1687	171	342	2370	322	351	128
Arrive On Green	0.07	1.00	1.00	0.06	1.00	0.33	0.33	0.33
Sat Flow (veh/h)	1757	3214	325	1757	4484	610	1194	382
Grp Volume (V), veh/h	15	639	93	1733	934	163	0	68
Grp Sat Flow (S), veh/h	1757	1752	1787	1757	1737	1194	0	1625
Q Serve (s), s	0.5	0.0	0.0	3.5	0.0	74.0	16.6	0.0
Cycle Q Clear (g_c), s	0.5	0.0	0.0	3.5	0.0	74.0	27.4	0.0
Prop In Lane	1.00	0.18	1.00	1.00	0.35	1.00	0.76	1.00
Lane Grp Cap (c), veh/h	114	920	938	342	1775	918	351	0
V/C Ratio (X)	0.13	0.69	0.70	0.27	0.88	1.02	0.46	0.00
Avail Cap (c-a), veh/h	114	920	938	398	1775	918	351	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter (I)	1.00	1.00	1.00	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	0.0	13.5	0.0	45.5	0.0	32.9
Incr Delay (d2), s/veh	0.5	2.3	2.3	0.0	2.9	13.7	4.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ (50%), veh/h	0.3	0.6	0.6	1.6	0.7	3.5	5.9	0.0
LnGrp Delay (d), s/veh	32.2	2.3	2.3	13.5	2.9	49.8	0.0	33.4
LnGrp LOS	C	A	A	B	A	F	D	C
Approach Vol, veh/h	1307	26	2760	69	231	450	569	60.8
Approach Delay, s/veh	2.6	A	A	A	D	E	E	E
Approach LOS	A	A	A	A	D	E	E	E
Assigned Phs	2	3	4	4	6	7	8	8
Phs Duration (G+Y+Rc), s	51.0	10.5	78.5	51.0	10.0	79.0	5.0	5.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (G _{max}), s	46.0	10.0	69.0	46.0	5.0	74.0	5.0	5.0
Max Q Clear Time (g_c+H ₁), s	29.4	5.5	2.0	46.0	2.5	76.0	2.5	2.5
Green Ext Time (p_c), s	3.4	0.1	60.5	0.0	0.0	0.0	0.0	0.0
Intersection Summary	13.9							
HCM 2010 Ctrl Delay	B							
HCM 2010 LOS	B							

2020 PM Peak Build Conditions Mit

Mitigated Geometry

Synchro 9 Report

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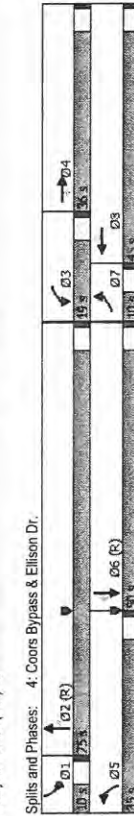
Timings
4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Series Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	189	650	439	375	1074	120	837	2655	198	125	1187	159
Traffic Volume (vph)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Future Volume (vph)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	10.0	36.0	36.0	19.0	45.0	45.0	35.0	75.0	75.0	10.0	50.0	50.0
Total Split (%)	7.1%	25.7%	13.6%	32.1%	32.1%	32.1%	25.0%	53.6%	53.6%	7.1%	35.7%	35.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimizer?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	5.0	31.0	31.0	14.0	40.0	40.0	30.0	70.0	70.0	5.0	45.0	45.0
Actuated g/c Ratio	0.04	0.22	0.22	0.10	0.29	0.29	0.21	0.50	0.50	0.04	0.32	0.32
Control Delay	138.6	116.0	47.0	269.4	236.6	236.6	10.9	283.7	215.1	9.9	261.3	64.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	138.6	116.0	47.0	269.4	236.7	236.7	10.9	284.5	215.1	9.9	261.3	64.7
LOS	F	F	D	F	F	F	F	F	F	A	F	B
Approach Delay												
Approach LOS												

Intersection Summary

Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 122 (87%), Referenced to phase 2 NBT and 6 SBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 175.4	
Intersection Capacity Utilization 106.0%	
Analysis Period (min) 15	



2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX syn

4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	189	650	439	375	1074	120	837	2655	198	125	1187	159
Traffic Volume (veh/h)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Future Volume (veh/h)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (Ob) 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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	126	867	0	500	1432	0	1116	3540	0	167	1583	0
Adj No. of Lanes	2	2	1	2	2	2	1	2	3	1	2	3
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
Arrive On Green	0.07	0.44	0.00	0.10	0.29	0.00	0.21	0.50	0.00	0.04	0.32	0.00
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grip Volume(v), veh/h	126	867	0	500	1432	0	1116	3540	0	167	1583	0
Grip Sat Flow(s), veh/h	1704	1752	1704	1752	1752	1704	1752	1752	1704	1752	1752	1704
Q Serve(g, s)	5.0	31.0	0.0	14.0	40.0	0.0	30.0	70.0	0.0	5.0	43.6	0.0
Cycle Q Clear(g, s)	5.0	31.0	0.0	14.0	40.0	0.0	30.0	70.0	0.0	5.0	43.6	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
VIC Ratio(X)	1.04	1.12	0.07	1.47	1.43	0.00	1.53	1.41	0.00	1.37	0.88	0.00
Avail Cap(c), veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	0.56	0.56	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	65.0	39.0	0.0	63.0	50.0	0.0	55.0	35.0	0.0	67.5	47.0	0.0
Incr Delay (d2), s/veh	70.8	63.2	0.0	225.6	199.3	0.0	244.6	185.1	0.0	210.7	17.0	0.0
Initial Q Delay(d3), s/veh	0.5	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/h	3.5	21.7	0.0	17.3	47.1	0.0	38.9	75.3	0.0	5.9	22.9	0.0
LnGrp Delay(d), s/veh	135.3	102.2	0.0	288.6	249.3	0.0	299.6	220.1	0.0	278.2	64.7	0.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h	963	106.5	0	1932	259.5	0	239.1	4636	0	85.1	1750	0
Approach Delay, s/veh	106.5	106.5	0	259.5	259.5	0	239.1	239.1	0	85.1	85.1	0
Approach LOS	F	F	F	F	F	F	F	F	F	F	F	F
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	75.0	19.0	36.0	35.0	50.0	10.0	45.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	70.0	14.0	31.0	30.0	45.0	5.0	40.0				
Max Q Clear Time (g_c+1), s	7.0	72.0	16.0	33.0	32.0	45.6	7.0	42.0				
Green Ext Time (p, s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX syn

Lanes, Volumes, Timings

5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	6	12	153	5	13	17	109	134	15	103	1
Traffic Volume (vph)	1	6	12	153	5	13	17	109	134	15	103	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.912	0.998	0.957	0.957	0.957	0.957	0.930	0.994	0.994	0.994	0.994	0.994
Flt Protected	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Satd. Flow (prot)	0.998	0.957	0.957	0.957	0.957	0.957	0.930	0.994	0.994	0.994	0.994	0.994
Flt Permitted	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Satd. Flow (perm)	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Link Speed (mph)	30	30	30	30	30	30	25	25	25	25	25	25
Link Distance (ft)	315	315	265	265	265	265	388	388	388	388	388	388
Travel Time (s)	7.2	7.2	6.0	6.0	6.0	6.0	10.6	10.6	10.6	10.6	10.6	10.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1	6	13	163	5	14	18	116	143	16	110	1
Shared Lane Traffic (%)	0	20	0	0	182	0	0	277	0	0	127	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0	0	0	0	0	0	12	12	0	12	12	0
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	9	15	15	9	15	15	9	15	15	9
Turning Speed (mph)	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 40.1%
Analysis Period (min) 15

ICU Level of Service A

HCM 2010 TWSC

5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Int Delay, s/vch	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	6	12	153	5	13	17	109	134	15	103	1
Traffic Vol. veh/h	1	6	12	153	5	13	17	109	134	15	103	1
Future Vol. veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds. #/hr	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Sign Control	-	-	-	-	-	-	-	-	-	-	-	-
RT Channelized	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-	-	-	-	-	-	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	6	13	163	5	14	18	116	143	16	110	1
Major/Minor	Minor2	Minor2	Minor2	Minor2	Minor2	Minor2	Major1	Major1	Major1	Major2	Major2	Major2
Conflicting Flow All	375	437	110	375	366	187	111	0	0	259	0	0
Stage 1	142	142	-	223	223	-	-	-	-	-	-	-
Stage 2	233	295	-	152	143	-	-	-	-	-	-	-
Critical Hwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hwy Sig 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hwy Sig 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	614	528	941	614	592	900	1473	-	-	1308	-	-
Stage 1	859	777	-	814	734	-	-	-	-	-	-	-
Stage 2	804	680	-	848	777	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	588	513	941	587	566	900	1473	-	-	1308	-	-
Mov Cap-2 Maneuver	588	513	-	587	566	-	-	-	-	-	-	-
Stage 1	846	767	-	802	723	-	-	-	-	-	-	-
Stage 2	774	670	-	819	767	-	-	-	-	-	-	-
Approach	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
HCM Control Delay, s	10.1			13.5			0.5					
HCM LOS	B			B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR
Capacity (veh/h)	1473	-	-	727	602	1308	-	-	-	-	-	-
HCM Lane V/C Ratio	0.012	-	-	0.028	0.302	0.012	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	10.1	13.5	7.8	0	-	-	-	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-	-	-	-
HCM 95th %ile Q(veh)	0	-	-	0.1	1.3	0	-	-	-	-	-	-

2020 PM Peak BUILD Conditions
Existing Geometry

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Synchro 9 Report
2020PBX.syn

Lanes, Volumes, Timings

6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	165	1064	1431	169	0	143
Future Volume (vph)	165	1064	1431	169	0	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	0	0	0	0	325
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	0.95	0.95	1.00	1.00	0.865
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.865
Fr						
Flt Protected	0.950					
Satd. Flow (prot)	1752	3505	3505	1568	0	1596
Flt Permitted	0.950					
Satd. Flow (perm)	1752	3505	3505	1568	0	1596
Link Speed (mph)	40	40	40	30	30	30
Link Distance (ft)	450	816	816	232	232	232
Travel Time (s)	7.7	13.9	13.9	5.3	5.3	5.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	176	1132	1522	180	0	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	176	1132	1522	180	0	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	0	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	15	9	9
Sign Control	Free	Free	Free	Stop	Stop	Stop

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 55.4%
Analysis Period (min) 15
ICU Level of Service B

HCM 2010 TWSC

6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	1.4					
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol. veh/h	165	1064	1431	169	0	143
Future Vol. veh/h	165	1064	1431	169	0	143
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	500	-	-	0	-	-
Veh in Median Storage, #	-	0	-	0	-	-
Grade, %	-	0	-	0	-	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	176	1132	1522	180	0	152
Major/Minor	Major1	Major1	Major2	Minor2		
Conflicting Flow All	1522	0	-	0	-	761
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	-	-	3.33
Pot Cap-1 Maneuver	727	-	-	-	0	486
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-	-	1
Mov Cap-1 Maneuver	727	-	-	-	-	486
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EB	WB	WB	SB	C
HCM Control Delay, s	1.5				15.7	
HCM LOS					C	

Minor Lane/Minor Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	727	-	-	-	-	486
HCM Lane V/C Ratio	0.241	-	-	-	-	0.313
HCM Control Delay (s)	11.5	-	-	-	-	15.7
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %ile Q(veh)	0.9	-	-	-	-	1.3

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

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Synchro 9 Report
2020PBX.syn

Lanes, Volumes, Timings
7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	17	183	49	232	245	19
Traffic Volume (vph)	17	183	49	232	245	19
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.877				0.990	
Flt	0.991					
Flt Protected	1611	0	0	1828	1826	0
Satd. Flow (prot)	0.996					
Flt Permitted	1611	0	0	1828	1826	0
Satd. Flow (perm)	30					
Link Speed (mph)	197					
Link Distance (ft)	4.5					
Travel Time (s)	0.75	0.75	0.75	0.75	0.75	0.75
Peak Hour Factor	23	244	65	309	327	25
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)	267	0	0	374	352	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12			12	12	
Link Offset (ft)	0			0	0	
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	51.2%					
Analysis Period (mn)	15					
ICU Level of Service A						

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

HCM 2010 TWSC
7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/wch	4.4					
Movement	17	183	49	232	245	19
Lane Configurations	17	183	49	232	245	19
Traffic Vol. veh/h	17	183	49	232	245	19
Future Vol. veh/h	0	0	0	0	0	0
Conflicting Peds. #/hr	Stop	Stop	Free	Free	Free	Free
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	-	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	23	244	65	309	327	25
Major/Minor	Minor2	Major1	Major1	Major2	Minor2	Major2
Conflicting Flow All	779	339	352	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Plat Cap-1 Maneuver	369	701	1201	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	345	701	1201	-	-	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	EB	EB	NB	SB	SB	SB
HCM Control Delay, s	14.5	14.5	1.4	-	-	0
HCM LOS	B	B	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	1201	-	644	-	-	-
HCM Lane V/C Ratio	0.054	-	0.414	-	-	-
HCM Control Delay (s)	8.2	0	14.5	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	2	-	-	-

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Data Entry Sheet
Determination of Warrants for Deceleration Lanes
NM DOT State Access Management Manual Criteria
Driveway "A" / Ellison Dr.

Project Information:

Project Name: Cibola Loop Community Center
 Project Location: Ellison Dr. / Cibola Loop
 Implementation Year: 2020
 Project Environment: Urban Multi-Lane

Street Information:

Major Street Name: Ellison Dr.
 Minor Street Name: Driveway "A"

Intersection Information:

	Orientation	Prevailing Speed	No. Lanes Each Direction
Driveway "A"	Southbound	25	N/A
Ellison Dr.	East-West	40	2

Determine Case:

Case

- 1 Urban Two-Lane Highway - Use Table 17.B.1
- 2 Urban Multi-Lane Highway - Use Table 17.B-2
- 3 Rural Two Lane Highway - Use Table 17.B-3 and 17.B-5
- 4 Rural Multi-Lane Highway - Use Table 17.B-4 and 17.B-6

Ellison Dr. is Case **2**
 Speed Category **35 to 40**

WB Right Turn Volumes

2020 AM Pk. Hr. NO BUILD	0
2020 AM Pk. Hr. BUILD	67
2020 PM Pk. Hr. NO BUILD	0
2020 PM Pk. Hr. BUILD	166

WB Thru Volumes

441
441
1370
1370

EB Leftt Turn Volumes

2020 AM Pk. Hr. NO BUILD	0
2020 AM Pk. Hr. BUILD	54
2020 PM Pk. Hr. NO BUILD	0
2020 PM Pk. Hr. BUILD	132

EB Thru Volumes

737
806
943
1091

Determination of Warrants for Auxiliary Lanes

Project Name: **Cibola Loop Community Center**
 Name of Highway: **Ellison Dr.**
 Name of Cross Street: **Driveway "A"**

Determination of Warrants for: **Southbound Driveway**

Implementation Year Volumes - **2020** Posted Speed Limit: **40**

Right Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Right Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ If Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	2020	-	-	221		N/A		-	N/A	N/A
AM Peak Hour BUILD	2020	67	1	221	✓	325	1.00	-	325	10.5:1
PM Peak Hour NO BUILD	2020	-	-	685		N/A		-	N/A	N/A
PM Peak Hour BUILD	2020	166	1	685	✓	325	1.00	-	325	10.5:1

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

Left Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Left Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ If Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	2020	-	-	369		N/A		N/A	N/A	N/A
AM Peak Hour BUILD	2020	54	1	403	✓	325	1.00	75	400	10.5:1
PM Peak Hour NO BUILD	2020	-	-	472		N/A		N/A	N/A	N/A
PM Peak Hour BUILD	2020	132	1	546	✓	325	1.00	175	500	10.5:1

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

* Lane Length Requirements based on Table 18.K-1 (Deceleration and Acceleration Lengths)

** Enter Grade Adjustment Factor from Table 18.K-2 or other criteria.

*** Lane Storage Length is Based on a calculated 3-minute queue based on average arrival rate per minute.

= Volume/Hr. divided by 60 times three (rounded) times 25 feet per vehicle.

Lane Storage Length for right turn decel lanes is zero unless there is a stop condition.

Notes and Comments:

1. This warrant sheet is for the southbound Driveway "A" at 100% Development of the Project

Table 17.B-2
Criteria For Deceleration Lanes On
URBAN MULTI-LANE HIGHWAYS

Turning Volume ¹ (vph)	LEFT-TURN DECELERATION LANE			RIGHT-TURN DECELERATION LANE		
	Minimum Volume in Adjacent Through Lane (vphpl) ²			Minimum Volume in Adjacent Through Lane (vphpl) ²		
	≤30 mph	35 to 40 mph	45 to 55 mph	≤30 mph	35 to 40 mph	45 to 55 mph
<5	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
5	Not Required	490	420	1,200	730	450
10	420	370	300	820	490	320
15	360	290	220	600	350	240
20	310	230	160	460	260	180
25	270	190	130	360	230	150
30	240	160	110	290	200	130
35	210	130	100	260	180	120
40	180	120	Required	240	170	110
45	160	110	Required	220	160	Required
50	140	Required	Required	200	Required	Required
55	120	Required	Required	190	Required	Required
≥56	Required	Required	Required	Required	Required	Required
	Left-turn Decelerataion Lanes are Required on Urban Multi-lane Highways for the following Left-turn Volumes: • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 36 vph or more			Right-turn Decelerataion Lanes are Required on Urban Multi-lane Highways for the following Right-turn Volumes: • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 41 vph or more		
Notes: 1. Use linear interpolation for turning volumes between 5 and 55 vph. 2. The volume in the adjacent through lane includes through vehicles and turning vehicles.						

Table 18.K.K-1
Deceleration and Acceleration Lengths (feet)

Speed Change Lane Condition	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
Deceleration Distance										
Stop Condition	150	200	250	325	400	475	550	650	725	850
Slow to 15 MPH	130	175	230	300	370	450	525	620	700	820
Deceleration Taper										
Length for 12-foot Lane	50	75	100	125	150	175	200	225	250	250
Straight Line Ratios (L:W)	4:1	6:1	8:1	10.5:1	12.5:1	14.5:1	16.5:1	18.5:1	21:1	21:1
Acceleration Lane Length										
Acceleration Taper	N/A	190	270	380	550	760	960	1,170	1,380	1,590
Length of 12-foot Lane	N/A	100	120	150	170	180	230	270	300	300
Straight Line Ratios (L:W)	N/A	8:1	10:1	12.5:1	14:1	15:1	19:1	22.5:1	25:1	25:1

Traffic Count Data Sheet

Year Counts Taken: 2016 E-W Street: EllisonDr. 35 MPH
 N-S Street: 7 Bar Loop E. 35 MPH
 8/4/16

UN SIGNALIZED

Begin Time	End Time	Eastbound (EllisonDr.)			Westbound (EllisonDr.)			Northbound (7 Bar Loop E.)			Southbound (7 Bar Loop E.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	40	426	0	0	0	57	3	0	48	0	22	0
7:15 AM	7:30 AM	5	156	0	0	0	80	5	0	17	0	26	0
7:30 AM	7:45 AM	23	182	0	1	0	101	3	2	19	0	25	0
7:45 AM	8:00 AM	10	135	0	1	0	81	8	0	14	0	18	0
8:00 AM	8:15 AM	12	138	0	0	0	82	8	1	16	0	9	0
8:15 AM	8:30 AM	3	428	0	4	0	70	5	0	8	0	45	0
8:30 AM	8:45 AM	46	436	0	0	0	87	7	0	7	0	42	0
8:45 AM	9:00 AM	40	464	0	0	0	105	4	0	40	0	46	0
AM Peak Hour Volumes		50	611	0	2	0	344	24	3	66	0	78	0
% of Total Traffic		4.2%	51.9%	0.0%	0.0%	0.0%	29.2%	2.0%	0.0%	5.6%	0.0%	0.0%	0.0%
% Directional			56.1%				31.2%		0.0%		5.6%		0.0%
AM Peak Hour Factor			0.81				0.88		0.83				0.82
									Intersection				
									0.83				
Begin Time	End Time	Eastbound (EllisonDr.)			Westbound (EllisonDr.)			Northbound (7 Bar Loop E.)			Southbound (7 Bar Loop E.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	42	477	0	0	0	228	27	0	0	0	49	0
4:15 PM	4:30 PM	19	206	0	0	0	272	26	0	14	0	18	0
4:30 PM	4:45 PM	16	230	0	0	0	278	39	0	13	0	21	0
4:45 PM	5:00 PM	22	207	0	0	0	299	28	0	15	0	28	0
5:00 PM	5:15 PM	24	210	0	0	0	310	40	0	23	0	29	0
5:15 PM	5:30 PM	28	202	0	0	0	244	27	0	41	0	30	0
5:30 PM	5:45 PM	20	493	0	4	0	266	35	4	49	0	49	0
5:45 PM	6:00 PM	44	482	0	0	0	232	20	0	0	0	22	0
PM Peak Hour Volumes		81	853	0	0	0	1159	133	0	65	0	96	0
% of Total Traffic		3.4%	35.7%	0.0%	0.0%	0.0%	48.6%	5.6%	0.0%	2.7%	0.0%	4.0%	0.0%
% Directional			39.1%				54.1%		0.0%		6.7%		0.0%
PM Peak Hour Factor			0.95				0.92		0.94				0.77
									Intersection				
									0.94				

Traffic Count Data Sheet

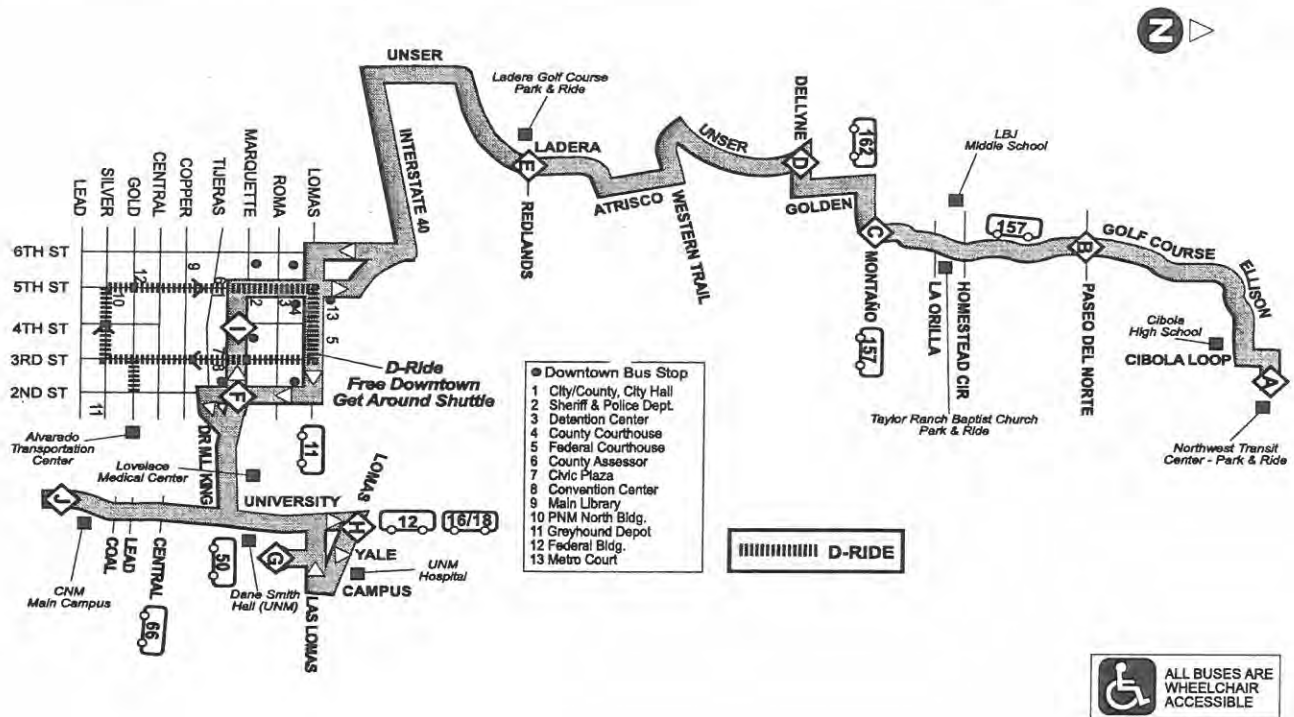
Year Counts Taken:

2016

E-W Street:
N-S Street:Ellison Dr.
Coors BypassSpeed Limit (Ellison Dr.)=
Speed Limit (Coors Bypass)=40 MPH
45 MPH
8/4/16

SIGNALIZED

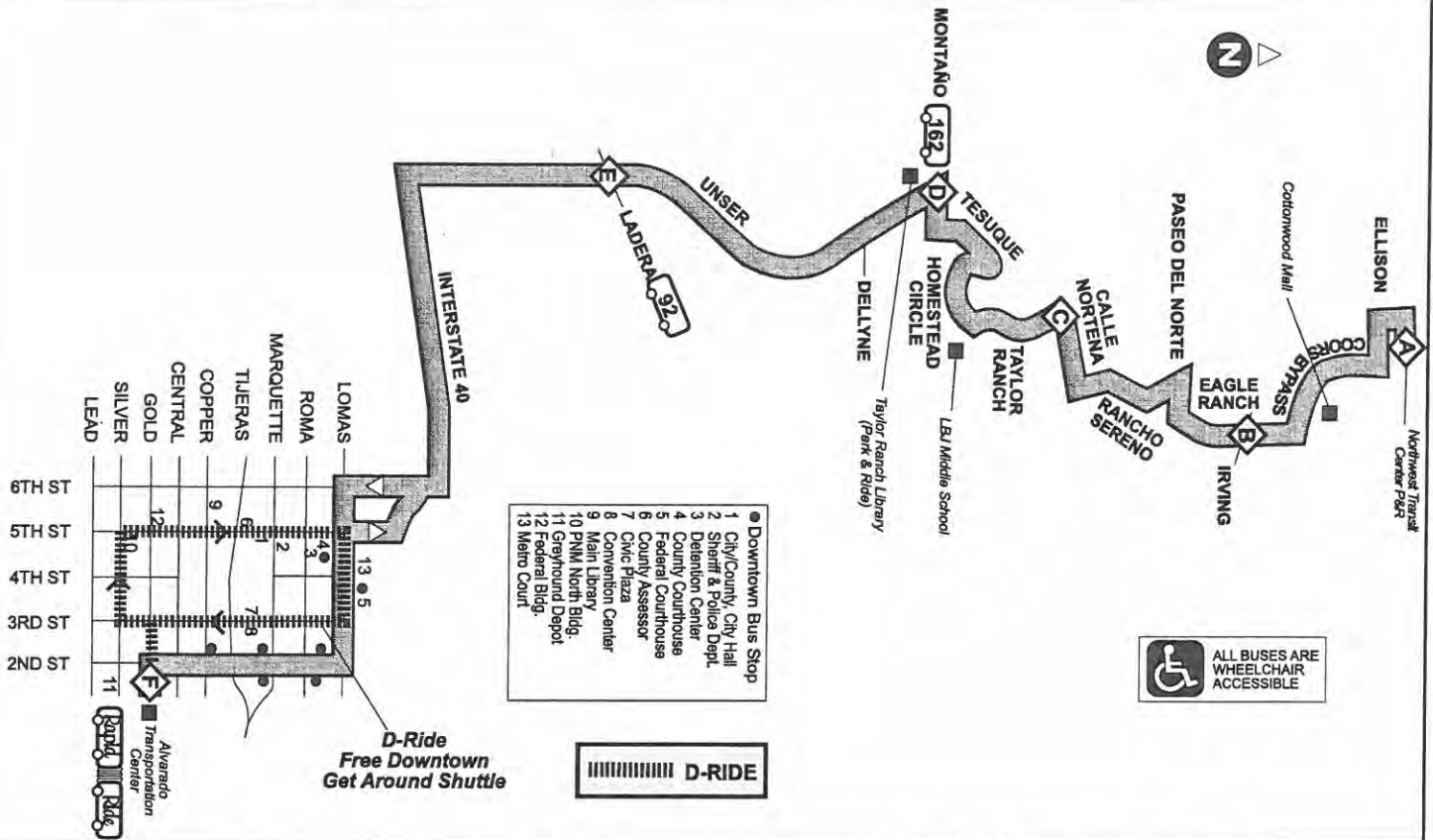
Begin Time	End Time	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	42	109	87	4	40	32	2	2	36	183	40	46
7:15 AM	7:30 AM	18	118	88	0	18	32	5	2	39	231	5	13
7:30 AM	7:45 AM	28	117	89	0	22	39	5	1	51	215	13	22
7:45 AM	8:00 AM	19	148	74	1	29	63	3	2	50	273	16	18
8:00 AM	8:15 AM	19	87	77	1	16	34	3	0	51	250	19	14
8:15 AM	8:30 AM	20	99	72	4	29	40	5	4	41	249	15	13
8:30 AM	8:45 AM	22	98	55	2	19	40	14	5	35	205	13	17
8:45 AM	9:00 AM	34	89	78	4	34	50	7	0	54	220	26	17
AM Peak Hour Volumes		84	470	328	2	85	168	16	5	191	969	53	67
% of Total Traffic		2.2%	12.0%	8.4%		2.2%	4.3%	0.4%		4.9%	24.8%	1.4%	1.7%
% Directional			22.6%				6.9%				31.1%		
AM Peak Hour Factor			0.91				0.71		0.95		0.89		0.89
Intersection		0.95											
Begin Time	End Time	Eastbound (Ellison Dr.)			Westbound (Ellison Dr.)			Northbound (Coors Bypass)			Southbound (Coors Bypass)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	49	113	84	4	50	162	25	2	130	457	44	46
4:15 PM	4:30 PM	32	97	78	0	77	166	15	4	144	503	35	33
4:30 PM	4:45 PM	25	124	85	3	88	170	6	2	144	504	47	34
4:45 PM	5:00 PM	38	138	69	1	76	177	9	0	136	540	42	36
5:00 PM	5:15 PM	39	137	91	2	64	182	16	2	157	522	35	27
5:15 PM	5:30 PM	32	160	101	1	63	179	20	0	146	530	39	33
5:30 PM	5:45 PM	32	144	73	1	128	355	61	6	281	1011	78	27
5:45 PM	6:00 PM	24	128	92	0	40	5	0	0	24	79	3	28
PM Peak Hour Volumes		141	579	334	5	331	893	106	8	720	2603	194	123
% of Total Traffic		1.9%	7.9%	4.6%		4.5%	12.2%	1.4%		9.8%	35.5%	2.7%	1.7%
% Directional			14.4%				18.2%				48.1%		
PM Peak Hour Factor			0.90				0.61		0.73		0.64		0.92
Intersection		0.73											

Effective: 8/10/2013**Route 92 - Weekday Southbound**

UNIVERSITY & BAEHART (CNI)	DAVE SMITH HALL (UNI)	UNIVERSITY & LOMAS	2ND & MARQUETTE	LADERA & REDLANDS	DELYNNE & UMBER	MONTARO & TAYLOR RANCH	GOLF COURSE & PASO DEL NORTE	NORTHEAST TRANSIT CENTER
J	G	H	F	E	D	C	B	A
7:20a 7:48a	7:11a 7:39a	7:08a 7:35a	7:01a 7:28a	6:42a 7:08a	6:36a 7:01a	6:31a 6:56a	6:26a 6:51a	6:17a 6:41a

Route 94 / Ruta 94 Unser Express

Effective: 8/10/2013



Route 94 - Weekday Southbound

F	E	D	C	B	A
ALVARADO TRANSPORTATION CENTER	UNSER & LADERA	UNSER & MONTANO	CALLE NORTENA & TAYLOR RANCH	EAGLE RANCH & IRVING	NORTHWEST TRANSIT CENTER PARK
6:43a	6:27a	6:20a	6:10a	6:02a	5:58a
7:46a	7:26a	7:15a	7:05a	6:56a	6:52a

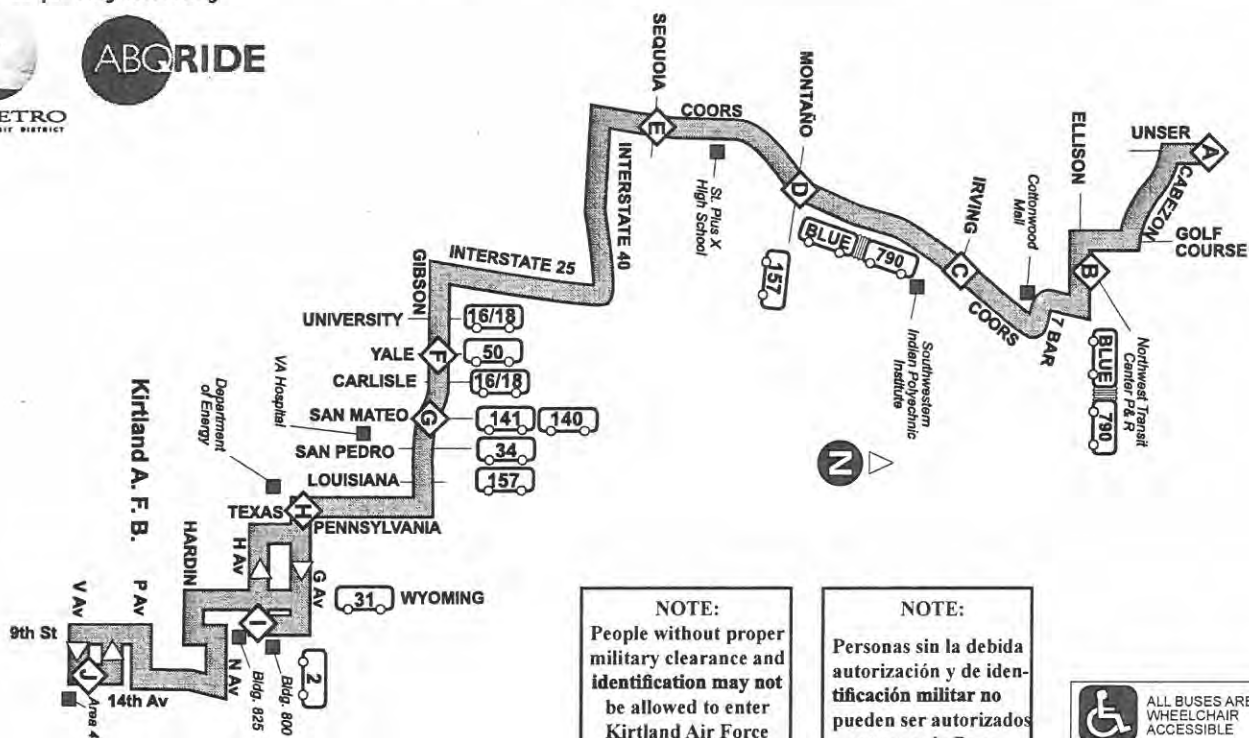
Route 94 - Weekday Northbound

F	E	D	C	B	A
ALVARADO TRANSPORTATION CENTER	UNSER & LADERA	UNSER & MONTANO	CALLE NORTENA & TAYLOR RANCH	EAGLE RANCH & IRVING	NORTHWEST TRANSIT CENTER PARK
4:41p	5:01p	5:09p	5:18p	5:27p	5:34p
5:11p	5:32p	5:40p	5:49p	5:57p	6:04p

Route / Ruta 96 Crosstown Commuter

Effective: 5/17/2014

Route partially funded by



NOTE:
People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

NOTE:
Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.



Route 96 - Weekday Southbound

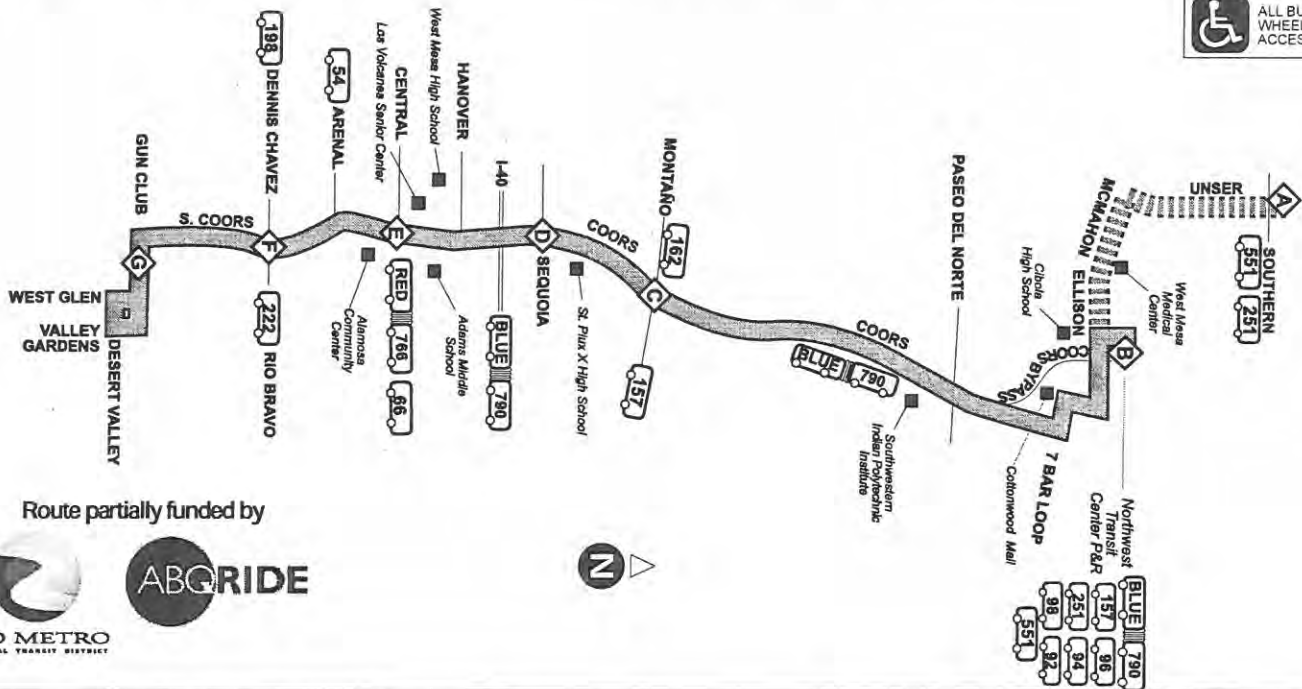
Route 96 - Weekday Northbound

AREA 4	BUILDING 800	G STREET D.O.E. BLDG.	GIBSON & SAN MATEO	GIBSON & YALE	COORS & SEQUOIA	COORS & MONTANO	COORS & IRVING	NORTHWEST TRANSIT CENTER PAR	SOUTHERN & UNSER
J	I	H	G	F	E	D	C	B	A
6:27a	6:41a	6:57a	7:09a	7:11a	7:16a	7:23a	7:27a	7:39a	6:46a
6:15a	6:29a	6:45a	6:57a	7:00a	7:04a	7:11a	7:15a	7:27a	5:16a
6:11a	6:25a	6:41a	6:53a	6:57a	7:02a	7:09a	7:13a	7:25a	5:10a
6:04a	6:18a	6:34a	6:46a	6:50a	6:54a	7:01a	7:05a	7:17a	5:04a
6:00a	6:14a	6:30a	6:42a	6:46a	6:50a	6:57a	7:01a	7:13a	5:00a
5:48a	6:02a	6:18a	6:30a	6:34a	6:38a	6:45a	6:49a	7:01a	4:52a
5:43a	5:57a	6:13a	6:25a	6:29a	6:33a	6:40a	6:44a	6:56a	4:47a
5:37a	5:51a	6:07a	6:19a	6:23a	6:27a	6:34a	6:38a	6:50a	4:41a
5:26a	5:40a	5:56a	6:08a	6:12a	6:16a	6:23a	6:27a	6:39a	4:30a
5:16a	5:30a	5:46a	5:58a	6:02a	6:06a	6:13a	6:17a	6:29a	4:20a

AREA 4	BUILDING 800	G STREET D.O.E. BLDG.	GIBSON & SAN MATEO	GIBSON & YALE	COORS & SEQUOIA	COORS & MONTANO	COORS & IRVING	NORTHWEST TRANSIT CENTER PAR	SOUTHERN & UNSER
J	I	H	G	F	E	D	C	B	A
3:51p	3:58p	4:02p	4:09p	4:16p	4:33p	4:39p	4:45p	4:56p	5:12p
4:02p	4:09p	4:13p	4:20p	4:27p	4:44p	4:50p	4:56p	5:07p	5:23p
4:19p	4:28p	4:32p	4:40p	4:46p	5:03p	5:09p	5:16p	5:27p	5:43p
4:35p	4:44p	4:48p	4:55p	5:02p	5:19p	5:25p	5:32p	5:43p	5:59p
5:15p	5:24p	5:28p	5:35p	5:42p	5:59p	6:05p	6:12p	6:23p	6:39p

Route / Ruta 155 Coors Blvd.

Effective: 5/17/2014



Route partially funded by



Route 155 - Weekday - Southbound

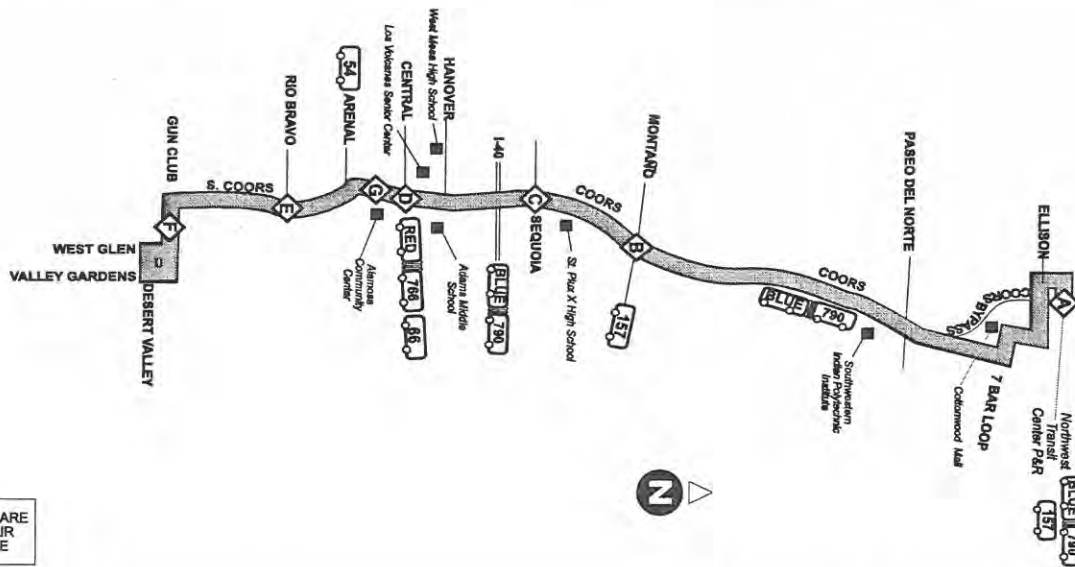
SOUTHERN & UNSER	NORTHWEST TRANSIT CENTER P & R	COORS & MONTANO	COORS & SEQUOIA	COORS & CENTRAL	COORS & RIO BRAVO	COORS & GUN CLUB
A	B	C	D	E	F	G
5:36a	5:50a	6:09a	6:14a	6:23a	6:33a	6:40a
6:10a	6:24a	6:43a	6:50a	7:01a	7:11a	7:18a
6:41a	6:55a	7:14a	7:21a	7:32a	7:42a	7:49a
7:15a	7:29a	7:48a	7:53a	8:04a	8:14a	8:21a
7:49a	8:03a	8:22a	8:27a	8:38a	8:48a	8:55a
.....	8:36a	8:53a	8:58a	9:08a	9:18a	9:25a
.....	9:06a	9:23a	9:28a	9:38a	9:48a	9:55a
.....	9:36a	9:53a	9:58a	10:08a	10:18a	10:25a
.....	10:04a	10:22a	10:27a	10:38a	10:48a	10:55a
.....	10:34a	10:52a	10:57a	11:08a	11:18a	11:25a
.....	11:04a	11:22a	11:27a	11:38a	11:48a	11:55a
.....	11:34a	11:52a	11:57a	12:08p	12:18p	12:25p
.....	12:05p	12:23p	12:28p	12:39p	12:50p	12:57p
.....	12:35p	12:53p	12:58p	1:09p	1:20p	1:27p
.....	1:05p	1:23p	1:28p	1:39p	1:50p	1:57p
.....	1:34p	1:52p	1:57p	2:09p	2:21p	2:28p
.....	2:05p	2:23p	2:28p	2:40p	2:52p	2:59p
.....	2:35p	2:53p	2:58p	3:10p	3:22p	3:29p
.....	3:03p	3:22p	3:28p	3:40p	3:52p	3:59p
.....	3:34p	3:53p	3:59p	4:11p	4:23p	4:30p
.....	4:03p	4:22p	4:28p	4:40p	4:52p	4:59p
.....	4:36p	4:55p	5:01p	5:12p	5:23p	5:30p
4:51p	5:05p	5:24p	5:30p	5:42p	5:53p	6:00p
5:21p	5:35p	5:54p	6:00p	6:11p	6:22p	6:29p
5:52p	6:06p	6:25p	6:31p	6:42p	6:53p	7:00p
.....	6:39p	6:56p	7:01p	7:10p	7:19p	7:26p
.....	7:18p	7:35p	7:40p	7:49p	7:58p	8:05p
.....	8:02p	8:19p	8:24p	8:33p	8:42p	8:49p
.....	8:40p	8:57p	9:02p	9:11p	9:20p	9:27p
.....	9:38p	9:55p	10:00p	10:09p	10:18p	10:25p

Route 155 - Weekday - Northbound

SOUTHERN & UNSER	NORTHWEST TRANSIT CENTER P & R	COORS & MONTANO	COORS & SEQUOIA	COORS & CENTRAL	COORS & RIO BRAVO	COORS & GUN CLUB
A	B	C	D	E	F	G
7:36a	7:21a	7:07a	7:01a	6:52a	6:39a	6:35a
.....	7:51a	7:37a	7:31a	7:22a	7:09a	7:05a
.....	8:22a	8:08a	8:02a	7:53a	7:40a	7:36a
.....	8:55a	8:41a	8:35a	8:26a	8:13a	8:09a
.....	9:25a	9:11a	9:05a	8:56a	8:43a	8:39a
.....	9:55a	9:41a	9:35a	9:26a	9:13a	9:09a
.....	10:25a	10:11a	10:05a	9:55a	9:42a	9:38a
.....	10:54a	10:40a	10:34a	10:24a	10:11a	10:07a
.....	11:24a	11:10a	11:04a	10:54a	10:41a	10:37a
.....	11:54a	11:40a	11:34a	11:24a	11:11a	11:07a
.....	12:24p	12:10p	12:04p	11:54a	11:41a	11:37a
.....	12:54p	12:40p	12:34p	12:24p	12:11p	12:07p
.....	1:25p	1:11p	1:05p	12:55p	12:42p	12:38p
.....	1:55p	1:41p	1:35p	1:25p	1:12p	1:08p
.....	2:25p	2:11p	2:05p	1:55p	1:42p	1:38p
.....	2:56p	2:42p	2:36p	2:26p	2:12p	2:08p
.....	3:26p	3:12p	3:06p	2:56p	2:42p	2:38p
.....	4:00p	3:45p	3:38p	3:27p	3:13p	3:09p
4:30p	4:15p	4:08p	3:58p	3:44p	3:40p	3:40p
4:46p	4:30p	4:15p	4:08p	3:58p	3:44p	3:40p
5:16p	5:00p	4:45p	4:38p	4:28p	4:14p	4:10p
5:47p	5:31p	5:16p	5:09p	4:58p	4:45p	4:41p
6:18p	6:02p	5:47p	5:40p	5:29p	5:16p	5:12p
.....	6:32p	6:17p	6:10p	5:59p	5:46p	5:42p
.....	7:02p	6:47p	6:40p	6:29p	6:16p	6:12p
.....	7:29p	7:15p	7:09p	6:59p	6:48p	6:44p
.....	7:56p	7:42p	7:36p	7:26p	7:15p	7:11p
.....	8:33p	8:19p	8:13p	8:04p	7:53p	7:49p
.....	9:18p	9:04p	8:58p	8:49p	8:38p	8:34p
.....	10:24p	10:10p	10:04p	9:55p	9:44p	9:40p

Route / Ruta 155 Coors Blvd.

Effective: 8/10/2013



Route 155 - Saturday Southbound

COORS & GUN CLUB	COORS & RIO BRAVO	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
F	E	D	C	B	A
7:41a	7:34a	7:25a	7:17a	7:12a	6:57a
8:26a	8:19a	8:10a	8:02a	7:57a	7:42a
9:11a	9:04a	8:55a	8:47a	8:42a	8:27a
9:56a	9:49a	9:40a	9:31a	9:26a	9:11a
10:42a	10:35a	10:25a	10:16a	10:11a	9:56a
11:28a	11:21a	11:10a	11:03a	10:57a	10:42a
12:13p	12:06p	11:55a	11:48a	11:42a	11:27a
12:57p	12:50p	12:40p	12:32p	12:26p	12:11p
1:42p	1:35p	1:25p	1:17p	1:12p	12:56p
2:27p	2:20p	2:10p	2:02p	1:57p	1:41p
3:13p	3:06p	2:56p	2:45p	2:40p	2:24p
3:58p	3:51p	3:41p	3:30p	3:25p	3:09p
4:43p	4:36p	4:26p	4:15p	4:10p	3:54p
5:28p	5:21p	5:11p	5:00p	4:55p	4:39p
6:12p	6:05p	5:56p	5:45p	5:40p	5:24p
6:55p	6:48p	6:40p	6:32p	6:28p	6:13p
7:40p	7:33p	7:25p	7:17p	7:13p	6:58p
8:25p	8:18p	8:10p	8:02p	7:58p	7:43p
9:19p	9:12p	9:03p	8:55p	8:47p	8:28p
10:10p	10:03p	9:55p	9:47p	9:43p	9:28p

Route 155 - Saturday Northbound

COORS & GUN CLUB	COORS & RIO BRAVO	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
F	E	D	C	B	A
8:31a	8:16a	8:10a	8:00a	7:51a	7:47a
9:26a	9:11a	9:05a	8:55a	8:46a	8:42a
10:11a	9:56a	9:50a	9:40a	9:31a	9:27a
10:55a	10:40a	10:34a	10:25a	10:16a	10:12a
11:39a	11:24a	11:18a	11:10a	11:00a	10:56a
12:24p	12:09p	12:03p	11:55a	11:45a	11:40a
1:13p	12:57p	12:50p	12:40p	12:32p	12:27p
1:58p	1:42p	1:35p	1:25p	1:17p	1:12p
2:43p	2:27p	2:20p	2:10p	2:02p	1:57p
3:28p	3:12p	3:05p	2:55p	2:47p	2:42p
4:13p	3:57p	3:50p	3:40p	3:32p	3:27p
4:57p	4:41p	4:36p	4:25p	4:15p	4:10p
5:42p	5:26p	5:21p	5:10p	5:00p	4:55p
6:27p	6:11p	6:06p	5:55p	5:45p	5:40p
7:08p	6:53p	6:48p	6:40p	6:31p	6:27p
7:53p	7:38p	7:33p	7:25p	7:16p	7:12p
8:38p	8:23p	8:18p	8:10p	8:01p	7:57p

Route 155 - Sunday Southbound

ALAMOSA COMMUNITY CTR.	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
G	D	C	B	A
10:41a	10:39a	10:30a	10:24a	10:09a
11:26a	11:24a	11:15a	11:09a	10:54a
12:11p	12:09p	12:00p	11:54a	11:39a
12:56p	12:54p	12:45p	12:39p	12:24p
1:41p	1:39p	1:30p	1:24p	1:09p
2:26p	2:24p	2:15p	2:09p	1:54p
3:11p	3:09p	3:00p	2:54p	2:39p
3:56p	3:54p	3:45p	3:39p	3:24p
4:41p	4:39p	4:30p	4:24p	4:09p

Route 155 - Sunday Northbound

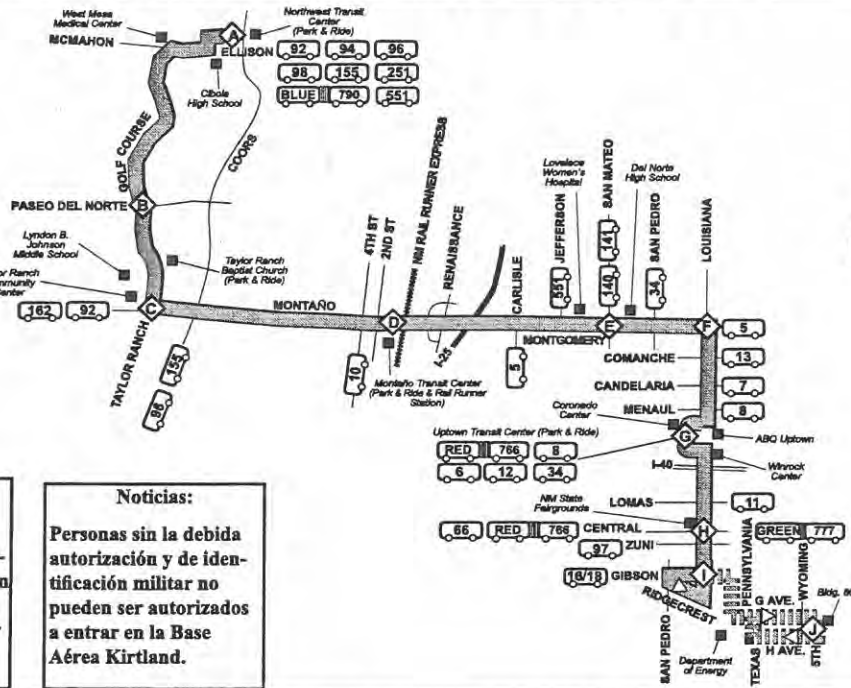
ALAMOSA COMMUNITY CTR.	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
G	D	C	B	A
10:33a	10:30a	10:24a	10:18a	10:00a
11:18a	11:13a	11:06a	10:56a	10:45a
12:03p	11:48a	11:41a	11:32a	11:30a
12:48p	12:33p	12:26p	12:17p	12:15p
1:33p	1:18p	1:11p	1:02p	1:00p
2:18p	2:03p	1:56p	1:47p	1:45p
3:03p	2:48p	2:41p	2:32p	2:30p
3:48p	3:33p	3:26p	3:17p	3:15p
4:33p	4:18p	4:11p	4:02p	4:00p

NO SERVICE TO GUN CLUB OR RIO BRAVO ON SUNDAYS
NO HAY SERVICIO A GUN CLUB O RIO BRAVO LOS DOMINGOS

Route / Ruta 157

Louisiana / Uptown / Montañó / NWTC

Effective: 1/11/2014



NOTE:

People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

Noticias:

Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.

Route 157 - Weekday South / Eastbound

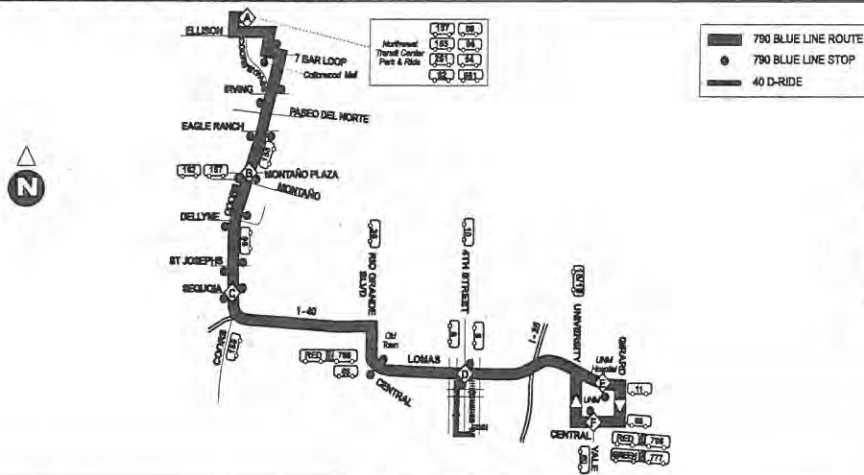
A	B	C	D	E	F	G	H	I	J
5:24a	5:33a	5:38a	5:47a	5:55a	5:59a	6:06a	6:14a	6:18a	6:27a
5:57a	6:07a	6:12a	6:22a	6:31a	6:35a	6:42a	6:51a	6:55a	7:04a
6:14a	6:25a	6:30a	6:40a	6:49a	6:53a	7:01a	7:10a	7:14a	7:23a
6:29a	6:40a	6:45a	6:55a	7:04a	7:08a	7:16a	7:25a	7:29a	7:38a
6:51a	7:02a	7:07a	7:17a	7:26a	7:30a	7:38a	7:47a	7:51a	8:00a
7:05a	7:16a	7:21a	7:31a	7:40a	7:44a	7:52a	8:01a	8:05a	8:14a
7:25a	7:36a	7:41a	7:51a	8:00a	8:04a	8:12a	8:21a	8:25a	8:34a
7:51a	8:01a	8:06a	8:16a	8:25a	8:29a	8:37a	8:46a	8:50a	9:00a
8:15a	8:25a	8:30a	8:40a	8:49a	8:53a	9:01a	9:10a	9:14a	9:23a
8:34a	8:44a	8:49a	8:59a	9:08a	9:12a	9:20a	9:29a	9:33a	9:42a
8:55a	9:05a	9:10a	9:19a	9:28a	9:32a	9:40a	9:49a	9:53a	10:02a
9:13a	9:23a	9:28a	9:37a	9:46a	9:50a	9:58a	10:07a	10:11a	10:20a
9:32a	9:42a	9:47a	9:56a	10:05a	10:09a	10:17a	10:26a	10:30a	10:39a
9:52a	10:02a	10:07a	10:17a	10:26a	10:30a	10:38a	10:47a	10:51a	11:00a
10:12a	10:22a	10:27a	10:37a	10:46a	10:50a	10:58a	11:07a	11:11a	11:20a
10:32a	10:42a	10:47a	10:57a	11:06a	11:10a	11:18a	11:27a	11:31a	11:40a
10:52a	11:02a	11:07a	11:17a	11:26a	11:30a	11:38a	11:47a	11:51a	12:00a
11:12a	11:22a	11:27a	11:37a	11:46a	11:50a	11:58a	12:07a	12:11a	12:20a
11:31a	11:41a	11:46a	11:56a	12:05a	12:09a	12:17a	12:26a	12:30a	12:39a
11:48a	11:58a	12:03a	12:13a	12:22a	12:26a	12:34a	12:43a	12:47a	12:56a
12:10p	12:20p	12:25p	12:35p	12:44p	12:48p	12:56p	13:05p	13:09p	13:18p
12:30p	12:40p	12:45p	12:55p	13:04p	13:08p	13:16p	13:25p	13:29p	13:38p
12:49p	1:00p	1:05p	1:15p	1:24p	1:28p	1:36p	1:45p	1:49p	1:58p
1:09p	1:20p	1:25p	1:35p	1:44p	1:48p	1:56p	2:05p	2:09p	2:18p
1:27p	1:37p	1:42p	1:51p	2:00p	2:04p	2:12p	2:21p	2:25p	2:34p
1:47p	1:57p	2:02p	2:11p	2:20p	2:24p	2:32p	2:41p	2:45p	2:54p
2:08p	2:18p	2:23p	2:32p	2:41p	2:45p	2:53p	3:02p	3:06p	3:15p
2:29p	2:39p	2:44p	2:53p	3:02p	3:06p	3:14p	3:23p	3:27p	3:36p
2:49p	2:59p	3:04p	3:13p	3:22p	3:26p	3:34p	3:43p	3:47p	3:56p
3:09p	3:19p	3:24p	3:33p	3:42p	3:46p	3:54p	4:03p	4:07p	4:16p
3:29p	3:40p	3:45p	3:54p	4:03p	4:07p	4:15p	4:24p	4:28p	4:37p
3:50p	4:01p	4:06p	4:15p	4:24p	4:28p	4:36p	4:45p	4:49p	4:58p
4:13p	4:24p	4:29p	4:38p	4:47p	4:51p	4:59p	5:08p	5:12p	5:21p
4:33p	4:44p	4:49p	4:58p	5:07p	5:11p	5:19p	5:28p	5:32p	5:41p
4:59p	5:10p	5:15p	5:24p	5:33p	5:37p	5:45p	5:54p	5:58p	6:07p
5:21p	5:32p	5:37p	5:46p	5:55p	6:00p	6:08p	6:17p	6:21p	6:30p
5:44p	5:55p	6:00p	6:09p	6:18p	6:23p	6:31p	6:40p	6:44p	6:53p
6:05p	6:16p	6:21p	6:30p	6:39p	6:44p	6:52p	7:01p	7:05p	7:14p
6:37p	6:47p	6:52p	7:01p	7:10p	7:14p	7:22p	7:31p	7:35p	7:44p
7:20p	7:30p	7:35p	7:44p	7:53p	7:57p	8:05p	8:14p	8:18p	8:27p
8:02p	8:12p	8:17p	8:26p	8:35p	8:39p	8:47p	8:56p	9:00p	9:09p
8:55p	9:05p	9:10p	9:19p	9:28p	9:32p	9:40p	9:49p	9:53p	10:02p
.....									

Route 157 - Weekday West / Northbound

J	I	H	G	F	E	D	C	B	A
.....	5:43a	5:48a	5:56a	6:05a	6:09a	6:19a	6:31a	6:35a	6:45a
6:17a	6:22a	6:30a	6:39a	6:43a	6:53a	7:05a	7:16a	7:28a	7:39a
6:31a	6:37a	6:42a	6:50a	7:00a	7:05a	7:16a	7:28a	7:32a	7:42a
6:52a	6:58a	7:03a	7:11a	7:21a	7:26a	7:37a	7:49a	7:53a	8:03a
7:10a	7:16a	7:22a	7:30a	7:40a	7:45a	7:56a	8:08a	8:12a	8:22a
7:30a	7:36a	7:42a	7:50a	8:00a	8:05a	8:16a	8:28a	8:32a	8:42a
7:48a	7:54a	8:00a	8:08a	8:18a	8:22a	8:33a	8:45a	8:49a	8:59a
8:10a	8:16a	8:22a	8:30a	8:40a	8:44a	8:55a	9:07a	9:11a	9:21a
8:30a	8:36a	8:42a	8:50a	9:00a	9:04a	9:15a	9:27a	9:31a	9:41a
8:50a	8:56a	9:02a	9:10a	9:20a	9:24a	9:35a	9:47a	9:51a	10:01a
9:16a	9:22a	9:30a	9:40a	9:44a	9:55a	10:07a	10:19a	10:23a	10:33a
9:36a	9:42a	9:50a	10:00a	10:04a	10:15a	10:27a	10:39a	10:43a	10:53a
9:56a	10:02a	10:10a	10:20a	10:24a	10:35a	10:47a	10:59a	11:03a	11:13a
10:16a	10:22a	10:30a	10:40a	10:44a	10:55a	11:07a	11:19a	11:23a	11:33a
10:36a	10:42a	10:50a	11:00a	11:04a	11:15a	11:27a	11:39a	11:43a	11:53a
10:56a	11:02a	11:10a	11:20a	11:24a	11:35a	11:47a	11:59a	12:03a	12:13a
11:16a	11:22a	11:30a	11:40a	11:44a	11:55a	12:07a	12:19a	12:23a	12:33a
11:36a	11:42a	11:50a	12:00a	12:04a	12:15a	12:27a	12:39a	12:43a	12:53a
11:56a	12:02a	12:10a	12:20a	12:24a	12:35a	12:47a	12:59a	13:03a	13:13a
12:14p	12:20p	12:28p	12:38p	12:42p	12:53p	13:05p	13:17p	13:21p	13:31p
12:34p	12:40p	12:48p	12:58p	13:02p	13:13p	13:25p	13:37p	13:41p	13:51p
12:55p	13:01p	13:09p	13:19p	13:23p	13:34p	13:46p	13:58p	14:02p	14:12p
1:09p	1:15p	1:21p	1:29p	1:40p	1:44p	1:55p	2:07p	2:11p	2:21p
1:35p	1:41p	1:49p	2:00p	2:04p	2:15p	2:27p	2:39p	2:43p	2:53p
1:55p	2:01p	2:09p	2:20p	2:24p	2:35p	2:47p	2:59p	3:03p	3:13p
2:12p	2:18p	2:26p	2:38p	2:43p	2:54p	3:06p	3:18p	3:22p	3:32p
2:33p	2:39p	2:47p	2:59p	3:04p	3:15p	3:27p	3:39p	3:43p	3:53p
2:47p	2:53p	3:01p	3:13p	3:18p	3:29p	3:41p	3:53p	3:57p	4:07p
3:07p	3:13p	3:21p	3:33p	3:38p	3:49p	3:61p	3:73p	3:77p	3:87p
3:28p	3:35p	3:41p	3:50p	4:01p	4:06p	4:17p	4:29p	4:33p	4:43p
3:49p	3:56p	4:02p	4:11p	4:22p	4:27p	4:38p	4:50p	4:54p	5:04p
4:08p	4:15p	4:21p	4:30p	4:41p	4:46p	4:57p	5:09p	5:13p	5:23p
4:33p	4:40p	4:46p	4:55p	5:06p	5:11p	5:22p	5:34p	5:38p	5:48p
4:55p	5:02p	5:08p	5:17p	5:28p	5:33p	5:44p	5:56p	6:00p	6:10p
5:13p	5:20p	5:26p	5:35p	5:46p	5:51p	6:02p	6:14p	6:18p	6:28p
5:36p	5:42p	5:48p	5:57p	6:08p	6:13p	6:24p	6:36p	6:40p	6:50p
5:56p	6:02p	6:08p	6:17p	6:28p	6:33p	6:44p	6:56p	7:00p	7:10p
6:25p	6:30p	6:38p	6:47p	6:51p	7:01p	7:13p	7:25p	7:29p	7:39p
6:47p	6:52p	7:00p	7:09p	7:13p	7:23p	7:35p	7:47p	7:51p	8:01p
7:22p	7:27p	7:35p	7:44p	7:48p	7:58p	8:09p	8:21p	8:25p	8:35p
7:49p	7:54p	8:02p	8:11p	8:15p	8:25p	8:36p	8:48p	8:52p	9:02p
8:34p	8:39p	8:47p	8:56p	9:00p	9:10p	9:21p	9:33p	9:37p	9:47p
9:21p	9:26p	9:34p	9:43p	9:47p	9:57p	10:08p	10:20p	10:24p	10:34p

Route/Ruta 790 Rapid Ride Blue Line

Effective: 8/9/2014



Route 790 - Weekday

SOUTH & EASTBOUND

Center Par	Northwest	Coors & Montano	Coors & Sequoia	Lomas & 4th Street	Lomas & Hospital	Central & Yale
A	B	C	D	E	F	
5:19a	5:31a	5:37a	5:48a	5:55a	6:00a	
5:54a	6:06a	6:12a	6:23a	6:30a	6:35a	
6:19a	6:31a	6:37a	6:48a	6:55a	7:00a	
6:36a	6:49a	6:55a	7:07a	7:15a	7:20a	
6:47a	7:00a	7:07a	7:21a	7:29a	7:35a	
6:54a	7:07a	7:14a	7:28a	7:36a	7:42a	
*7:01a	7:14a	7:22a	7:36a	7:44a	7:50a	M, T, W, Th, F
7:08a	7:21a	7:29a	7:43a	7:51a	7:57a	
7:18a	7:31a	7:41a	7:57a	8:05a	8:11a	
7:33a	7:46a	7:56a	8:12a	8:20a	8:26a	
*7:44a	7:57a	8:05a	8:20a	8:28a	8:33a	M, W, F
7:51a	8:04a	8:12a	8:27a	8:35a	8:40a	
7:58a	8:11a	8:18a	8:33a	8:41a	8:46a	
8:13a	8:26a	8:33a	8:48a	8:56a	9:01a	
*8:23a	8:36a	8:43a	8:58a	9:06a	9:11a	T, Th
8:31a	8:44a	8:51a	9:03a	9:11a	9:16a	
8:51a	9:04a	9:11a	9:23a	9:31a	9:36a	
9:01a	9:14a	9:21a	9:33a	9:41a	9:46a	
9:21a	9:34a	9:41a	9:53a	10:01a	10:06a	
9:43a	9:56a	10:03a	10:15a	10:23a	10:28a	
9:59a	10:12a	10:19a	10:31a	10:39a	10:44a	
10:07a	10:20a	10:27a	10:39a	10:47a	10:52a	
10:34a	10:47a	10:53a	11:05a	11:13a	11:18a	
11:04a	11:17a	11:23a	11:35a	11:43a	11:48a	
11:23a	11:36a	11:43a	11:55a	12:03p	12:08p	
11:43a	11:56a	12:03p	12:15p	12:23p	12:28p	
12:03p	12:16p	12:23p	12:35p	12:43p	12:48p	
12:23p	12:36p	12:43p	12:55p	1:03p	1:08p	
12:41p	12:54p	1:01p	1:15p	1:23p	1:28p	
1:01p	1:14p	1:21p	1:35p	1:43p	1:48p	
1:21p	1:34p	1:41p	1:55p	2:03p	2:08p	
1:43p	1:56p	2:03p	2:15p	2:23p	2:28p	
2:02p	2:15p	2:22p	2:34p	2:42p	2:47p	
2:20p	2:33p	2:40p	2:52p	3:00p	3:05p	
.....	.....	.....	.....	3:08p	3:13p	
*.....	.....	.....	.....	3:17p	3:22p	M, T, W, Th, F
2:46p	2:59p	3:06p	3:18p	3:26p	3:31p	
3:07p	3:20p	3:27p	3:39p	3:47p	3:52p	
3:22p	3:35p	3:42p	3:54p	4:02p	4:07p	
3:42p	3:55p	4:02p	4:14p	4:22p	4:27p	
.....	.....	.....	.....	4:39p	4:44p	
4:05p	4:19p	4:26p	4:39p	4:47p	4:52p	
4:17p	4:31p	4:38p	4:51p	4:59p	5:04p	
4:32p	4:46p	4:53p	5:07p	5:15p	5:20p	
4:53p	5:07p	5:14p	5:28p	5:36p	5:41p	
5:15p	5:29p	5:36p	5:50p	5:58p	6:03p	
5:46p	5:59p	6:06p	6:18p	6:25p	6:30p	
6:22p	6:35p	6:42p	6:54p	7:00p	7:05p	
6:57p	7:10p	7:17p	7:29p	7:35p	7:40p	
7:20p	7:33p	7:40p	7:52p	7:58p	8:03p	
7:53p	8:06p	8:12p	8:24p	8:30p	8:35p	
8:28p	8:41p	8:47p	8:59p	9:05p	9:10p	

* Designated trips that operate only when U.N.M. is in session.

M, T, W, Th, F = All weekday service

M, W, F = Only Monday, Wednesday & Friday Service

T, Th = Only Tuesday & Thursday Service

WEST & NORTHBOUND

Center Par	Northwest	Coors & Montano	Coors & Sequoia	Lomas & 4th Street	Lomas & Hospital	Central & Yale
F	D	C	B	A		
6:02a	6:08a	6:18a	6:25a	6:39a		
6:37a	6:43a	6:53a	7:00a	7:14a		
7:02a	7:08a	7:19a	7:26a	7:40a		
7:37a	7:44a	7:55a	8:01a	8:15a		
7:59a	8:06a	8:17a	8:23a	8:37a		
8:13a	8:20a	8:31a	8:37a	8:51a		
8:28a	8:35a	8:46a	8:52a	9:06a		
8:42a	8:49a	9:00a	9:06a	9:20a		
8:48a	8:55a	9:06a	9:12a	9:26a		
9:18a	9:25a	9:36a	9:42a	9:56a		
9:48a	9:55a	10:06a	10:12a	10:26a		
10:08a	10:15a	10:26a	10:32a	10:46a		
10:30a	10:37a	10:48a	10:54a	11:08a		
10:46a	10:53a	11:04a	11:10a	11:24a		
10:54a	11:01a	11:12a	11:18a	11:32a		
11:20a	11:27a	11:38a	11:44a	11:58a		
11:50a	11:57a	12:08p	12:14p	12:28p		
12:10p	12:17p	12:29p	12:35p	12:50p		
12:30p	12:37p	12:49p	12:55p	1:10p		
12:50p	12:57p	1:09p	1:15p	1:30p		
1:10p	1:17p	1:29p	1:35p	1:50p		
1:30p	1:37p	1:49p	1:55p	2:10p		
1:50p	1:57p	2:09p	2:15p	2:30p		
2:10p	2:17p	2:29p	2:35p	2:51p		
2:30p	2:37p	2:49p	2:55p	3:11p		
2:49p	2:56p	3:10p	3:17p	3:33p		
3:07p	3:14p	3:29p	3:36p	3:53p		
3:13p	3:20p	3:35p	3:42p	3:59p		
*3:23p	3:30p	3:45p	3:52p	4:09p		M, T, W, Th, F
3:33p	3:40p	3:55p	4:02p	4:19p		
3:54p	4:01p	4:15p	4:22p	4:39p		
4:09p	4:16p	4:30p	4:37p	4:54p		
4:29p	4:36p	4:50p	4:57p	5:14p		
4:44p	4:51p	5:05p	5:12p	5:29p		
4:54p	5:01p	5:17p	5:24p	5:42p		
5:06p	5:13p	5:29p	5:36p	5:54p		
5:22p	5:29p	5:45p	5:52p	6:10p		
5:43p	5:50p	6:03p	6:10p	6:26p		
6:05p	6:11p	6:24p	6:30p	6:46p		
6:31p	6:37p	6:48p	6:54p	7:08p		
7:06p	7:12p	7:23p	7:29p	7:43p		
7:41p	7:47p	7:58p	8:04p	8:18p		
8:04p	8:10p	8:20p	8:26p	8:39p		
8:36p	8:42p	8:52p	8:58p	9:11p		
9:11p	9:17p	9:27p	9:33p	9:46p		

* Designado viajes que operan sólo cuando U.N.M. se encuentra en periodo de sesiones.

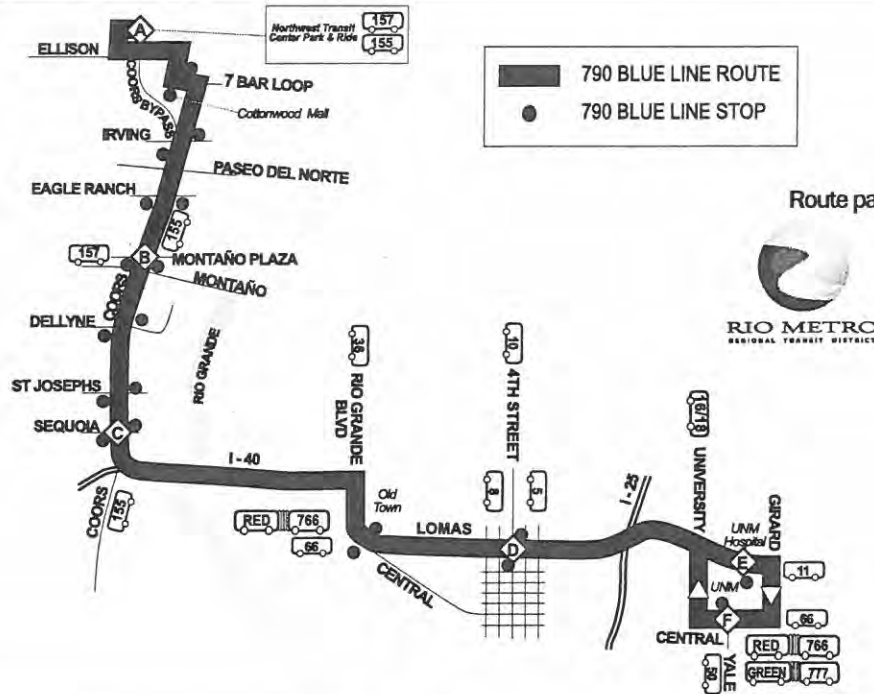
M, T, W, Th, F = Servicio los lunes, martes, miércoles, jueves y viernes.

M, W, F = Servicio sólo los lunes, miércoles y viernes.

T, Th = Servicio sólo los martes y jueves.

Route/Ruta 790 Rapid Ride Blue Line

Effective: 5/17/2014



Route 790 - Saturday

SOUTH & EASTBOUND

NORTHWEST TRANSIT CENTER P&R	COORS & MONTANO	COORS & SEQUOIA	LOMAS & 4TH STREET	LOMAS @ UNM HOSPITAL	CENTRAL & YALE
A	B	C	D	E	F
6:53a	7:08a	7:13a	7:23a	7:29a	7:34a
7:39a	7:54a	7:59a	8:09a	8:15a	8:20a
8:25a	8:40a	8:45a	8:55a	9:01a	9:06a
9:11a	9:26a	9:31a	9:41a	9:47a	9:52a
9:57a	10:12a	10:17a	10:27a	10:33a	10:38a
10:43a	10:58a	11:03a	11:13a	11:19a	11:24a
11:29a	11:44a	11:49a	11:59a	12:05p	12:10p
12:15p	12:30p	12:35p	12:45p	12:51p	12:56p
1:01p	1:16p	1:21p	1:31p	1:37p	1:42p
1:47p	2:02p	2:07p	2:17p	2:23p	2:28p
2:33p	2:48p	2:53p	3:03p	3:09p	3:14p
3:19p	3:34p	3:39p	3:49p	3:55p	4:00p
4:05p	4:20p	4:25p	4:35p	4:41p	4:46p
4:51p	5:06p	5:11p	5:21p	5:27p	5:32p
5:37p	5:52p	5:57p	6:07p	6:13p	6:18p
6:23p	6:38p	6:43p	6:53p	6:59p	7:04p
7:09p	7:24p	7:29p	7:39p	7:45p	7:50p

WEST & NORTHBOUND

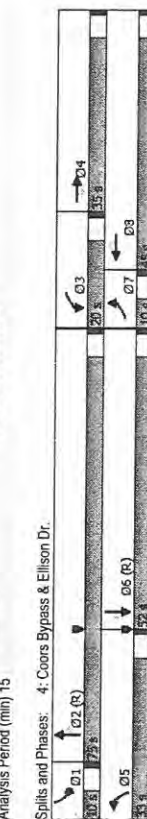
NORTHWEST TRANSIT CENTER P&R	COORS & MONTANO	COORS & SEQUOIA	LOMAS & 4TH STREET	CENTRAL & YALE
A	B	C	D	F
8:15a	8:00a	7:55a	7:42a	7:36a
9:01a	8:46a	8:41a	8:28a	8:22a
9:47a	9:32a	9:27a	9:14a	9:08a
10:33a	10:18a	10:13a	10:00a	9:54a
11:19a	11:04a	10:59a	10:46a	10:40a
12:05p	11:50a	11:45a	11:32a	11:26a
12:51p	12:36p	12:31p	12:18p	12:12p
1:37p	1:22p	1:17p	1:04p	12:58p
2:23p	2:08p	2:03p	1:50p	1:44p
3:09p	2:54p	2:49p	2:36p	2:30p
3:55p	3:40p	3:35p	3:22p	3:16p
4:41p	4:26p	4:21p	4:08p	4:02p
5:27p	5:12p	5:07p	4:54p	4:48p
6:13p	5:58p	5:53p	5:40p	5:34p
6:59p	6:44p	6:39p	6:26p	6:20p
7:45p	7:30p	7:25p	7:12p	7:06p
8:31p	8:16p	8:11p	7:58p	7:52p

Timings 4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	156	607	368	375	1025	120	757	2655	198	125	1187	122
Traffic Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Future Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Spill (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Spill (s)	10.0	35.0	35.0	20.0	45.0	45.0	33.0	75.0	75.0	10.0	52.0	52.0
Total Spill (%)	7.1%	25.0%	25.0%	14.3%	32.1%	32.1%	23.6%	53.6%	53.6%	7.1%	37.1%	37.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	5.0	30.0	30.0	15.0	40.0	40.0	28.0	70.0	70.0	5.0	47.0	47.0
Act Effct Green (s)	0.04	0.21	0.21	0.11	0.29	0.29	0.20	0.50	0.50	0.04	0.34	0.34
Actuated g/c Ratio	0.86	1.08	0.84	1.37	1.37	1.37	0.30	1.48	1.41	0.31	1.38	0.94
v/c Ratio	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS	F	F	C	F	F	F	B	F	F	A	F	E
Approach Delay	70.4	E	E	198.8	F	F	214.1	F	F	69.9	E	E
Approach LOS	E	E	E	F	F	F	F	F	F	E	E	E

Intersection Summary
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: (32 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 164.1
 Intersection Capacity Utilization: 104.6%
 Analysis Period (min): 15
 Intersection LOS: F
 ICU Level of Service: G



2020 PM Peak NOBUILD Conditions
 Existing Geometry
 Synchro 9 Report
 2020PNX.syn

Timings 4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	156	607	368	375	1025	120	757	2655	198	125	1187	122
Traffic Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Future Volume (vph)	156	607	368	375	1025	120	757	2655	198	125	1187	122
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Spill (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Spill (s)	10.0	35.0	35.0	20.0	45.0	45.0	33.0	75.0	75.0	10.0	52.0	52.0
Total Spill (%)	7.1%	25.0%	25.0%	14.3%	32.1%	32.1%	23.6%	53.6%	53.6%	7.1%	37.1%	37.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	5.0	30.0	30.0	15.0	40.0	40.0	28.0	70.0	70.0	5.0	47.0	47.0
Act Effct Green (s)	0.04	0.21	0.21	0.11	0.29	0.29	0.20	0.50	0.50	0.04	0.34	0.34
Actuated g/c Ratio	0.86	1.08	0.84	1.37	1.37	1.37	0.30	1.48	1.41	0.31	1.38	0.94
v/c Ratio	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	113.9	93.7	22.8	229.6	209.6	209.6	10.9	264.2	215.1	9.9	261.3	56.4
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS	F	F	C	F	F	F	B	F	F	A	F	E
Approach Delay	70.4	E	E	198.8	F	F	214.1	F	F	69.9	E	E
Approach LOS	E	E	E	F	F	F	F	F	F	E	E	E

Intersection Summary
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: (32 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 164.1
 Intersection Capacity Utilization: 104.6%
 Analysis Period (min): 15
 Intersection LOS: F
 ICU Level of Service: G

2020 PM Peak NOBUILD Conditions
 Existing Geometry
 Synchro 9 Report
 2020PNX.syn

Lanes, Volumes, Timings
5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	EBR	SBT
Lane Configurations	1	12	17	109	103	1	1
Traffic Volume (vph)	1	12	17	109	103	1	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.875					0.999	
Flt Protected	0.996					0.993	
Satd. Flow (prot)	1608	0	0	1832	1843	0	
Flt Permitted	0.996					0.993	
Satd. Flow (perm)	1608	0	0	1832	1843	0	
Link Speed (mph)	30					25	
Link Distance (ft)	315					388	
Travel Time (s)	7.2					10.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1	13	18	116	110	1	1
Shared Lane Traffic (%)							
Lane Group Flow (vph)	14	0	0	134	111	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width (ft)	12					12	
Link Offset (ft)	0					0	
Crosswalk Width (ft)	16					16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Sign Control	Stop			Free	Free		
Intersection Summary							
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	23.3%						
Analysis Period (min)	15						
ICU Level of Service	A						

2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX syn

HCM 2010 TWSC
5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

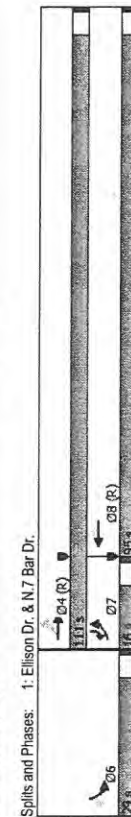
Intersection	EBL	EBR	NBL	NBT	SBT	EBR	SBT
Int Delay, s/veh	1						
Movement	W						
Lane Configurations	1	12	17	109	103	1	1
Traffic Vol. veh/h	1	12	17	109	103	1	1
Future Vol. veh/h	1	12	17	109	103	1	1
Conflicting Peds. #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	-	-	-
Grade, %	0	-	-	-	-	-	-
Peak Hour Factor	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	1	13	18	116	110	1	1
Major/Minor	Minor2	Major1	Major1	Major2	Major2	Major1	Minor2
Conflicting Flow All	262	110	111	0	0	0	0
Stage 1	110	-	-	-	-	-	-
Stage 2	152	-	-	-	-	-	-
Critical Hwy	6.43	6.23	4.13	-	-	-	-
Critical Hwy Sig 1	5.43	-	-	-	-	-	-
Critical Hwy Sig 2	5.43	-	-	-	-	-	-
Follow-up Hwy	3.527	3.327	2.227	-	-	-	-
Pl Cap-1 Maneuver	763	941	1473	-	-	-	-
Stage 1	912	-	-	-	-	-	-
Stage 2	902	-	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	753	941	1473	-	-	-	-
Mov Cap-2 Maneuver	753	-	-	-	-	-	-
Stage 1	912	-	-	-	-	-	-
Stage 2	890	-	-	-	-	-	-
Approach	EB	NB	SB	SB	SB	EB	SB
HCM Control Delay, s	9	1	1	0	0	0	0
HCM LOS	A						
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBR	SBT	SBT	SBT
Capacity (veh/h)	1473	-	923	-	-	-	-
HCM Lane V/C Ratio	0.012	-	0.015	-	-	-	-
HCM Control Delay (s)	7.5	0	9	-	-	-	-
HCM Lane LOS	A	A	A	-	-	-	-
HCM 95th %ile Q(veh)	0	-	0	-	-	-	-

2020 PM Peak NOBUILD Conditions
Existing Geometry

Synchro 9 Report
2020PNX syn

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	1155	1438	201	134	98
Traffic Volume (vph)	84	1155	1438	201	134	98
Future Volume (vph)	84	1155	1438	201	134	98
Turn Type	pm+pt	NA	NA	Perm	Prot	pm+ov
Protected Phases	7	4	8	8	6	7
Permitted Phases	4	4	8	8	6	7
Detector Phase	7	4	8	8	6	7
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	21.0	21.0	21.0	10.0
Minimum Split (s)	16.0	111.0	95.0	95.0	29.0	16.0
Total Split (s)	11.4%	79.3%	67.9%	67.9%	20.7%	11.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	Lag	Lag	Lead	Lead
Lead/Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	C-Min	Min	Min
Act Effct Green (s)	113.3	113.3	101.3	101.3	16.7	28.7
Actuated g/c Ratio	0.81	0.81	0.72	0.72	0.12	0.20
W/C Ratio	0.35	0.43	0.80	0.18	0.89	0.29
Control Delay	6.9	4.8	2.8	0.2	75.2	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	4.8	2.8	0.2	75.2	27.6
LOS	A	A	A	A	E	C
Approach Delay	4.9	2.5	A	A	55.2	E
Approach LOS	A	A	A	A	E	E

Intersection Summary
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 133 (95%), Referenced to phase 4 EBL and 8 WBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum W/C Ratio: 0.69
 Intersection Signal Delay: 7.4
 Intersection Capacity Utilization: 64.3%
 Analysis Period (min): 15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	84	1155	1438	201	134	98
Traffic Volume (veh/h)	84	1155	1438	201	134	98
Future Volume (veh/h)	84	1155	1438	201	134	98
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj (A _{pbt})	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
Adj Sat Flow, veh/h/m	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	89	1229	1530	214	143	104
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	321	2911	2660	1190	172	210
Arrive On Green	0.04	0.83	1.00	1.00	0.10	0.10
Sat Flow, veh/h	1757	3597	3597	1568	1757	1568
Grp Volume (v), veh/h	89	1229	1530	214	143	104
Grp Sat Flow (s), veh/h/m	1757	1752	1752	1568	1757	1568
Q Served (g, s), s	1.4	12.8	0.0	0.0	11.2	8.6
Cycle Q Clear (g, c), s	1.4	12.8	0.0	0.0	11.2	8.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap (c), veh/h	321	2911	2660	1190	172	210
V/C Ratio (X)	0.28	0.42	0.58	0.18	0.83	0.50
Avail Cap (c, a), veh/h	396	2911	2660	1190	301	325
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter (l)	1.00	1.00	0.38	0.38	1.00	1.00
Uniform Delay (d), s/veh	2.7	3.1	0.0	0.0	62.0	56.2
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.1	9.7	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back (Q/50%), veh/h	0.7	6.3	0.1	0.0	5.9	7.6
LnGrp Delay (d), s/veh	3.2	3.6	0.3	0.1	71.7	58.1
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	1318	1744			247	
Approach Delay, s/veh	3.5	0.3			66.0	
Approach LOS	A	A			E	
Timer	1	2	3	4	5	6
Assigned Phs				4	6	7
Phs Duration (G+Y+Rc), s				121.3	18.7	10.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				106.0	24.0	11.0
Max Q Clear Time (g, c+1), s				14.8	13.2	3.4
Green Ext Time (p, c), s				55.5	0.6	0.1
Intersection Summary				6.5		
HCM 2010 Ctrl Delay				A		
HCM 2010 LOS						

Timings 2: W.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBT
Lane Configurations	209	1080	49	27	1499	49	44	9	27	7
Traffic Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Future Volume (veh/h)	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA
Turn Type	7	4	5	3	8	1	5	2	1	6
Protected Phases	4	4	8	8	2	2	6	6	6	6
Permitted Phases	7	4	5	3	8	1	5	2	1	6
Detector Phase										
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	26.0	95.0	10.0	10.0	79.0	10.0	25.0	10.0	25.0	25.0
Total Split (%)	18.6%	67.9%	7.1%	7.1%	56.4%	7.1%	17.9%	7.1%	17.9%	17.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimizer?										
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	C-Min
Act Effct Green (s)	97.5	86.4	96.6	78.2	72.1	83.6	28.1	21.0	26.8	20.3
Actuated g/c Ratio	0.70	0.62	0.70	0.56	0.52	0.60	0.20	0.15	0.19	0.14
vic Ratio	0.72	0.53	0.03	0.10	0.88	0.05	0.32	0.15	0.11	0.56
Control Delay	52.3	13.7	0.5	5.0	19.4	0.4	52.7	26.0	47.1	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	13.7	0.5	5.0	19.4	0.4	52.7	26.0	47.1	14.5
LOS	D	B	A	A	B	A	D	C	D	B
Approach Delay										
Approach LOS										

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 45 (32%), Referenced to phase 2:NBT and 6:SBTL Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

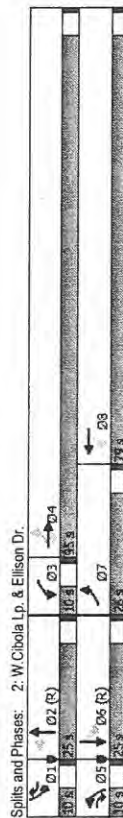
Intersection Signal Delay: 19.4

Intersection Capacity Utilization 87.4%

Analysis Period (min) 15

Intersection LOS: B

ICU Level of Service E



2020 PM Peak BUILD Conditions

Existing Geometry

Synchro 9 Report

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HCM 2010 Signalized Intersection Summary 2: W.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBT
Lane Configurations	209	1080	37	27	1499	49	44	9	27	7
Traffic Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Future Volume (veh/h)	209	1080	37	27	1499	49	44	9	27	7
Number	7	4	14	3	8	18	5	2	12	1
Initial Q (Ob), veh	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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	222	1149	39	29	1595	52	47	10	30	29
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	281	1841	880	251	1690	812	263	106	318	440
Arrive On Green	0.08	0.53	0.53	0.07	0.96	0.96	0.04	0.26	0.04	0.26
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	407	1222	1757
Grp Volume(v), veh/h	222	1149	39	29	1595	52	47	0	40	29
Grp Sat Flow(s), veh/h	1757	1752	1568	1757	1752	1568	1757	0	1629	1757
Q Serve(g, s)	8.6	32.4	1.6	1.1	25.1	0.2	2.7	0.0	2.6	1.7
Cycle Q Clear(g, s)	8.6	32.4	1.6	1.1	25.1	0.2	2.7	0.0	2.6	1.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	281	1841	880	251	1690	812	263	0	424	440
VIC Ratio(X)	0.78	0.62	0.04	0.12	0.94	0.06	0.18	0.00	0.09	0.07
Avail Cap(c-a), veh/h	406	2253	1064	251	1853	885	263	0	424	440
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(1)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	23.5	13.8	18.5	1.7	1.1	36.9	0.0	39.3	35.3
Incr Delay (d2), s/veh	5.9	0.3	0.0	0.2	10.0	0.0	0.3	0.0	0.4	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
%ile BackOfQ(50%), veh/h	4.7	15.7	0.7	0.5	9.9	0.1	1.3	0.0	1.2	0.8
LnGrp Delay(d), s/veh	28.9	23.8	13.8	18.7	11.7	1.1	37.2	0.0	39.7	35.4
LnGrp LOS	C	C	B	B	B	A	D	D	D	D
Approach Vol, veh/h	1410	1676	1676	1676	1676	1676	1676	1676	1676	1676
Approach Delay, s/veh	24.3	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Approach LOS	C	C	B	B	B	B	D	D	D	D
Timer	1	2	3	4	5	6	7	8	9	10
Assigned Phs	1	2	3	4	5	6	7	8	9	10
Phs Duration (G+Y+Rc), s	10.0	41.4	10.0	78.6	10.0	41.4	16.0	72.5	10.0	41.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	90.0	5.0	20.0	21.0	74.0	5.0	20.0
Max Q Clear Time (g, c+1), s	3.7	4.8	3.1	34.4	4.7	20.1	10.6	27.1	3.7	4.8
Green Ext Time (p, c), s	0.0	1.6	0.0	39.1	0.0	0.0	0.4	34.7	0.0	1.6
Intersection Summary										
HCM 2010 Ctrl Delay										
HCM 2010 LOS										

2020 PM Peak BUILD Conditions

Existing Geometry

Synchro 9 Report

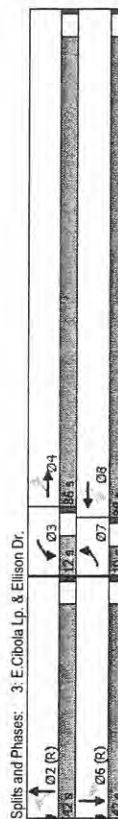
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Timings
3: E Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	246	122	12	296
Traffic Volume (vph)	23	880	70	1754	246	122	12	296
Future Volume (vph)	23	880	70	1754	246	122	12	296
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4	8	8	8	2	2	6	6
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	10.0	86.0	12.0	88.0	42.0	42.0	42.0	42.0
Total Split (s)	7.1%	61.4%	8.6%	62.9%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Ad Eff Green (s)	86.1	81.1	89.9	83.0	37.0	37.0	37.0	37.0
Actuated g/c Ratio	0.82	0.58	0.64	0.59	0.26	0.26	0.26	0.26
v/c Ratio	0.13	0.64	0.41	1.13	0.32	0.62	0.14	1.14
Control Delay	11.9	18.5	4.7	67.1	0.1	56.9	14.9	137.3
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	11.9	18.5	4.7	67.3	0.1	56.9	14.9	137.3
LOS	B	B	A	E	A	E	B	F
Approach Delay	B	B	A	E	A	E	B	F
Approach LOS	B	B	A	E	A	E	B	F

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2-NBTL and 6-SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 51.8
Intersection Capacity Utilization 89.9%
Analysis Period (min) 15



2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

HCM 2010 Signalized Intersection Summary
3: E Cibola Lp. & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	246	122	12	296
Traffic Volume (veh/h)	23	880	70	1754	246	122	12	296
Future Volume (veh/h)	23	880	70	1754	246	122	12	296
Number	7	4	3	8	2	2	6	6
Initial Q (Ob.) veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Adj Sat Flow veh/h	1845	1845	1845	1845	1845	1845	1845	1845
Adj Sat Flow veh/h	15	1173	119	93	2339	328	163	16
Adj Flow Rate, veh/h	1	2	0	1	2	1	1	0
Adj No. of Lanes	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Peak Hour Factor	3	3	3	3	3	3	3	3
Percent Heavy Veh, %	166	1719	174	344	1883	842	334	122
Cap. veh/h	0.07	1.00	1.00	0.08	1.00	1.00	0.32	0.32
Arrive On Green	1757	3214	325	1757	3505	1568	1194	382
Sat Flow, veh/h	15	639	653	93	2339	328	163	0
Grp Volume(v), veh/h	1757	1752	1787	1752	1568	1194	0	1625
Grp Sat Flow(s), veh/h	0.5	0.0	0.0	3.4	0.0	16.9	0.0	4.2
Q Served(s), s	0.5	0.0	0.0	3.4	0.0	28.6	0.0	4.2
Cycle Q Clear(g_c), s	1.00	0.18	1.00	1.00	1.00	1.00	0.76	1.00
Prop In Lane	166	937	956	344	1883	842	334	0
Lane Grp Cap(c), veh/h	0.09	0.68	0.68	0.27	1.24	0.39	0.49	0.0
V/C Ratio(X)	166	1014	1034	364	2078	930	334	0
Avail Cap(c_a), veh/h	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00
HCN Platoon Ratio	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00
Upstream Delay (d), s/veh	12.8	0.0	0.0	13.0	0.0	47.2	0.0	33.8
Uniform Delay (d), s/veh	0.2	1.7	1.7	0.0	109.4	0.0	5.0	28.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.3	0.4	0.5	1.6	28.6	0.0	6.0	0.0
%ile BackOfQ(d3), veh/h	13.1	1.7	1.7	13.0	109.4	0.0	52.3	0.0
LnGrp Delay(d), s/veh	13.1	1.7	1.7	13.0	109.4	0.0	52.3	0.0
LnGrp LOS	B	A	A	B	F	A	C	E
Approach Vol, veh/h	1307	1.8	2760	93.1	231	47.0	589	86.4
Approach Delay, s/veh	1.8	A	F	F	D	D	E	E
Approach LOS	A	A	F	F	D	D	E	E
Assigned Phs	2	3	4	5	6	7	8	8
Phs Duration (G+Y+Rc), s	50.3	10.4	79.3	50.3	10.0	79.7	50.3	10.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	37.0	7.0	81.0	37.0	5.0	83.0	37.0	5.0
Max Q Clear Time (g_c+I), s	30.6	5.4	2.0	46.8	2.5	2.0	46.8	2.5
Green Ext Time (p_c), s	2.1	0.0	70.6	0.0	0.0	72.2	0.0	0.0
Intersection Summary	633	E						
HCN 2010 Ctrl Delay	633	E						
HCN 2010 LOS	E							

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Timings 3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	122	12	296	58
Traffic Volume (vph)	23	880	70	1754	122	12	296	58
Future Volume (vph)	23	880	70	1754	122	12	296	58
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4	8	3	8	2	2	6	6
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0
Minimum Split (s)	10.0	74.0	15.0	79.0	51.0	51.0	51.0	51.0
Total Split (s)	7.1%	52.9%	10.7%	56.4%	36.4%	36.4%	36.4%	36.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimizer?	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	77.5	72.3	84.0	75.6	44.3	44.3	44.3	44.3
Actuated g/c Ratio	0.55	0.52	0.60	0.54	0.32	0.32	0.32	0.32
v/c Ratio	0.13	0.72	0.45	0.99	0.49	0.12	0.95	0.31
Control Delay	15.7	23.8	14.0	10.9	44.1	12.4	79.9	26.9
Queue Delay	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0
Total Delay	15.7	23.8	14.0	25.0	44.1	12.4	79.9	26.9
LOS	B	C	B	C	D	B	E	C
Approach Delay	23.7	25.6	C	C	C	C	63.7	E
Approach LOS	C	C	C	C	C	C	E	E

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 138 (99%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

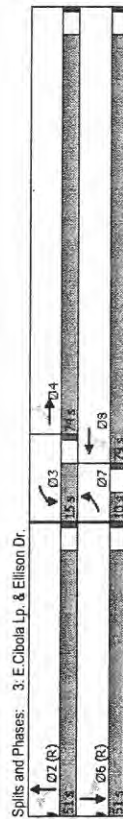
Intersection Signal Delay: 30.0

Intersection Capacity Utilization: 80.8%

Analysis Period (min): 15

Intersection LOS: C

ICU Level of Service: D



2020 PM Peak BUILD Conditions Mit

Mitigated Geometry

Synchro 9 Report

2020PBX_MIT.syn

HCM 2010 Signalized Intersection Summary 3: E.Cibola Lp. & Ellison Dr. Terry O. Brown, P.E. 8/19/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	23	880	70	1754	122	12	296	58
Traffic Volume (veh/h)	23	880	70	1754	122	12	296	58
Future Volume (veh/h)	23	880	70	1754	122	12	296	58
Number	7	4	14	3	8	5	2	12
Initial Q (Ob.) veh	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
Adj Sat Flow (veh/h)	1845	1845	1900	1845	1845	1845	1845	1900
Adj Flow Rate (veh/h)	15	1173	119	93	2339	328	163	16
Adj No. of Lanes	1	2	0	1	3	0	1	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh. %	3	3	3	3	3	3	3	3
Cap. veh/h	114	1687	171	342	2370	322	351	128
Arrive On Green	0.07	1.00	1.00	0.06	1.00	0.33	0.33	0.33
Sat Flow (veh/h)	1757	3214	325	1757	4484	610	1194	382
Grp Volume (V), veh/h	15	639	93	1733	934	163	0	68
Grp Sat Flow (S), veh/h	1757	1752	1787	1757	1737	1194	0	1625
Q Serve (s), s	0.5	0.0	0.0	3.5	0.0	74.0	16.6	0.0
Cycle Q Clear (g_c), s	0.5	0.0	0.0	3.5	0.0	74.0	27.4	0.0
Prop In Lane	1.00	0.18	1.00	1.00	0.35	1.00	0.76	1.00
Lane Grp Cap (c), veh/h	114	920	938	342	1775	918	351	0
V/C Ratio (X)	0.13	0.69	0.70	0.27	0.88	1.02	0.46	0.00
Avail Cap (c-a), veh/h	114	920	938	398	1775	918	351	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter (l)	1.00	1.00	1.00	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	0.0	13.5	0.0	45.5	0.0	32.9
Incr Delay (d2), s/veh	0.5	2.3	2.3	0.0	2.9	13.7	4.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ (50%), veh/h	0.3	0.6	0.6	1.6	0.7	3.5	5.9	0.0
LnGrp Delay (d), s/veh	32.2	2.3	2.3	13.5	2.9	49.8	0.0	33.4
LnGrp LOS	C	A	A	B	A	F	D	C
Approach Vol, veh/h	1307	26	2760	69	231	450	569	60.8
Approach Delay, s/veh	2.6	A	A	A	D	D	E	E
Approach LOS	A	A	A	A	D	D	E	E
Assigned Phs	2	3	4	5	6	7	8	8
Phs Duration (G+Y+Rc), s	51.0	10.5	78.5	51.0	10.0	79.0	51.0	5.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	46.0	10.0	69.0	46.0	5.0	74.0	46.0	5.0
Max Q Clear Time (g_c+H), s	29.4	5.5	2.0	46.0	2.5	76.0	2.5	2.0
Green Ext Time (p_c), s	3.4	0.1	60.5	0.0	0.0	0.0	0.0	0.0
Intersection Summary	13.9							
HCM 2010 Ctrl Delay	B							
HCM 2010 LOS	B							

2020 PM Peak BUILD Conditions Mit

Mitigated Geometry

Synchro 9 Report

2020PBX_MIT.syn

Timings
4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Series Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	189	650	439	375	1074	120	837	2655	198	125	1187	159
Traffic Volume (vph)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Future Volume (vph)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	10.0	36.0	36.0	19.0	45.0	45.0	35.0	75.0	75.0	10.0	50.0	50.0
Total Split (%)	7.1%	25.7%	13.6%	32.1%	32.1%	32.1%	25.0%	53.6%	53.6%	7.1%	35.7%	35.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimizer?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	5.0	31.0	31.0	14.0	40.0	40.0	30.0	70.0	70.0	5.0	45.0	45.0
Actuated g/c Ratio	0.04	0.22	0.22	0.10	0.29	0.29	0.21	0.50	0.50	0.04	0.32	0.32
v/c Ratio	1.04	1.12	0.95	1.47	1.43	1.43	0.30	1.53	1.41	0.31	1.38	0.98
Control Delay	138.6	116.0	47.0	269.4	236.6	236.6	10.9	283.7	215.1	9.9	261.3	64.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	138.6	116.0	47.0	269.4	236.7	236.7	10.9	284.5	215.1	9.9	261.3	64.7
LOS	F	F	D	F	F	F	B	F	F	A	F	B
Approach Delay												
Approach LOS												

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 122 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.53
Intersection Signal Delay: 175.4
Intersection Capacity Utilization 106.0%
Analysis Period (min) 15

Intersection LOS: F
ICU Level of Service G

Splits and Phases: 4: Coors Bypass & Ellison Dr.



HCM 2010 Signalized Intersection Summary
4: Coors Bypass & Ellison Dr.

Terry O. Brown, P.E.
8/19/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	189	650	439	375	1074	120	837	2655	198	125	1187	159
Traffic Volume (veh/h)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Future Volume (veh/h)	189	650	439	375	1074	120	837	2655	198	125	1187	159
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (Ob.) 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	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
Adj Sat Flow, veh/h	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	126	867	0	500	1432	0	1116	3540	0	167	1583	0
Adj No. of Lanes	2	2	1	2	2	2	1	2	3	1	2	3
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
Arrive On Green	0.07	0.44	0.00	0.10	0.29	0.00	0.21	0.50	0.00	0.04	0.32	0.00
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grip Volume(v), veh/h	126	867	0	500	1432	0	1116	3540	0	167	1583	0
Grip Sat Flow(s), veh/h	1704	1752	1704	1752	1752	1704	1752	1752	1704	1752	1752	1704
Q Serve(g, s)	5.0	31.0	0.0	14.0	40.0	0.0	30.0	70.0	0.0	5.0	43.6	0.0
Cycle Q Clear(g, s)	5.0	31.0	0.0	14.0	40.0	0.0	30.0	70.0	0.0	5.0	43.6	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
VIC Ratio(X)	1.04	1.12	0.37	1.47	1.43	1.43	0.30	1.53	1.41	0.31	1.38	0.98
Avail Cap(c), veh/h	122	776	347	1001	1001	1001	448	730	2518	784	122	1619
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.56	0.56	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	65.0	39.0	0.0	63.0	50.0	0.0	55.0	35.0	0.0	67.5	47.0	0.0
Incr Delay (d2), s/veh	70.8	63.2	0.0	225.6	199.3	0.0	244.6	185.1	0.0	210.7	17.0	0.0
Initial Q Delay(d3), s/veh	0.5	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/h	3.5	21.7	0.0	17.3	47.1	0.0	38.9	75.3	0.0	5.9	22.9	0.0
LnGrp Delay(d), s/veh	135.3	102.2	0.0	288.6	249.3	0.0	299.6	220.1	0.0	278.2	64.7	0.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h	963	106.5	0	1932	259.5	0	239.1	239.1	0	85.1	85.1	0
Approach Delay, s/veh	106.5	106.5	0	259.5	259.5	0	239.1	239.1	0	85.1	85.1	0
Approach LOS	F	F	F	F	F	F	F	F	F	F	F	F
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	75.0	19.0	36.0	35.0	50.0	10.0	45.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	70.0	14.0	31.0	30.0	45.0	5.0	40.0				
Max Q Clear Time (g_c+1), s	7.0	72.0	16.0	33.0	32.0	45.6	7.0	42.0				
Green Ext Time (p, s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Lanes, Volumes, Timings

5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	6	12	153	5	13	17	109	134	15	103	1
Traffic Volume (vph)	1	6	12	153	5	13	17	109	134	15	103	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.912	0.998	0.957	0.990	0.957	0.997	0.930	0.994	0.994	0.994	0.994	0.994
Flt Protected	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Satd. Flow (prot)	0.998	0.957	0.957	0.990	0.957	0.997	0.930	0.994	0.994	0.994	0.994	0.994
Flt Permitted	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Satd. Flow (perm)	0	1679	0	0	1748	0	0	1710	0	0	1832	0
Link Speed (mph)	30	30	30	30	30	30	25	25	25	25	25	25
Link Distance (ft)	315	315	265	265	265	265	388	388	388	388	388	388
Travel Time (s)	7.2	7.2	6.0	6.0	6.0	6.0	10.6	10.6	10.6	10.6	10.6	10.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1	6	13	163	5	14	18	116	143	16	110	1
Shared Lane Traffic (%)	0	20	0	0	182	0	0	277	0	0	127	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	0	0	0	0	0	0	12	12	0	12	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	9	15	15	9	15	15	9	15	15	9
Turning Speed (mph)	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 40.1%
Analysis Period (min) 15
ICU Level of Service A

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX syn

HCM 2010 TWSC

5: W. Cibola Lp. & Mill Rd.

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Int Delay, s/vch	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	6	12	153	5	13	17	109	134	15	103	1
Traffic Vol. veh/h	1	6	12	153	5	13	17	109	134	15	103	1
Future Vol. veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds. #/hr	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Sign Control	-	-	-	-	-	-	-	-	-	-	-	-
RT Channelized	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-	-	-	-	-	-	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	6	13	163	5	14	18	116	143	16	110	1
Major/Minor	Minor2	Minor2	Minor2	Minor2	Minor2	Minor2	Major1	Major1	Major1	Major2	Major2	Major2
Conflicting Flow All	375	437	110	375	366	187	111	0	0	259	0	0
Stage 1	142	142	-	223	223	-	-	-	-	-	-	-
Stage 2	233	295	-	152	143	-	-	-	-	-	-	-
Critical Hwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hwy Sig 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hwy Sig 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	614	528	941	614	592	900	1473	-	-	1308	-	-
Stage 1	859	777	-	814	734	-	-	-	-	-	-	-
Stage 2	804	680	-	848	777	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	1	-	-
Mov Cap-1 Maneuver	588	513	941	587	566	900	1473	-	-	1308	-	-
Mov Cap-2 Maneuver	588	513	-	587	566	-	-	-	-	-	-	-
Stage 1	846	767	-	802	723	-	-	-	-	-	-	-
Stage 2	774	670	-	819	767	-	-	-	-	-	-	-
Approach	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
HCM Control Delay, s	10.1	10.1	10.1	13.5	13.5	13.5	0.5	0.5	0.5	1	1	1
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR
Capacity (veh/h)	1473	-	-	727	602	1308	-	-	-	-	-	-
HCM Lane V/C Ratio	0.012	-	-	0.028	0.302	0.012	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	10.1	13.5	7.8	0	-	-	-	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-	-	-	-
HCM 95th %ile Q(veh)	0	-	-	0.1	1.3	0	-	-	-	-	-	-

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX syn

Lanes, Volumes, Timings

6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	165	1064	1431	169	0	143
Future Volume (vph)	165	1064	1431	169	0	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	0	0	0	0	325
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	0.95	0.95	1.00	1.00	0.865
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.865
Fr						
Flt Protected	0.950					
Satd. Flow (prot)	1752	3505	3505	1568	0	1596
Flt Permitted	0.950					
Satd. Flow (perm)	1752	3505	3505	1568	0	1596
Link Speed (mph)	40	40	40	30	30	30
Link Distance (ft)	450	816	816	232	232	232
Travel Time (s)	7.7	13.9	13.9	5.3	5.3	5.3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	176	1132	1522	180	0	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	176	1132	1522	180	0	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	0	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	15	9	9
Sign Control	Free	Free	Free	Stop	Stop	Stop

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 55.4%
Analysis Period (min) 15
ICU Level of Service B

HCM 2010 TWSC

6: Ellison Dr. & "A"

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	1.4					
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol. veh/h	165	1064	1431	169	0	143
Future Vol. veh/h	165	1064	1431	169	0	143
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	500	-	-	0	-	-
Veh in Median Storage, #	-	0	-	0	-	-
Grade, %	-	0	-	0	-	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	176	1132	1522	180	0	152
Major/Minor	Major1	Major1	Major2	Minor2		
Conflicting Flow All	1522	0	-	0	-	761
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	-	-	3.33
Pot Cap-1 Maneuver	727	-	-	-	0	486
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-	-	1
Mov Cap-1 Maneuver	727	-	-	-	-	486
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EB	WB	WB	SB	SB
HCM Control Delay, s	1.5				15.7	C
HCM LOS						C

Minor Lane/Minor Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	727	-	-	-	-	486
HCM Lane V/C Ratio	0.241	-	-	-	-	0.313
HCM Control Delay (s)	11.5	-	-	-	-	15.7
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %ile Q(veh)	0.9	-	-	-	-	1.3

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

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Synchro 9 Report
2020PBX.syn

Lanes, Volumes, Timings
7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	17	183	49	232	245	19
Traffic Volume (vph)	17	183	49	232	245	19
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.877			0.991		
Flt Protected	0.996			0.991		
Satd. Flow (prot)	1611	0	0	1828	1826	0
Flt Permitted	0.996			0.991		
Satd. Flow (perm)	1611	0	0	1828	1826	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	197			442	149	
Travel Time (s)	4.5			12.1	4.1	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	23	244	65	309	327	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	267	0	0	374	352	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12			12	12	
Link Offset (ft)	0			0	0	
Crosswalk Width (ft)	16			18	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	51.2%					
Analysis Period (mn)	15					
ICU Level of Service A						

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

HCM 2010 TWSC
7: E.Cibola Lp. & "B"

Terry O. Brown, P.E.
8/19/2016

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/vch	4.4					
Lane Configurations	17	183	49	232	245	19
Traffic Vol. veh/h	17	183	49	232	245	19
Future Vol. veh/h	17	183	49	232	245	19
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	-	-	-	-	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	23	244	65	309	327	25
Major/Minor	Minor2	Major1	Major1	Major2	Minor2	Major2
Conflicting Flow All	779	339	352	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Plat Cap-1 Maneuver	369	701	1201	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	345	701	1201	-	-	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	EB	EB	NB	SB	SB	SB
HCM Control Delay, s	14.5	14.5	1.4	-	-	0
HCM LOS	B	B	-	-	-	-
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	1201	-	644	-	-	-
HCM Lane V/C Ratio	0.054	-	0.414	-	-	-
HCM Control Delay (s)	8.2	0	14.5	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	2	-	-	-

2020 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2020PBX.syn

Data Entry Sheet
Determination of Warrants for Deceleration Lanes
NM DOT State Access Management Manual Criteria
Driveway "A" / Ellison Dr.

Project Information:

Project Name: Cibola Loop Community Center
 Project Location: Ellison Dr. / Cibola Loop
 Implementation Year: 2020
 Project Environment: Urban Multi-Lane

Street Information:

Major Street Name: Ellison Dr.
 Minor Street Name: Driveway "A"

Intersection Information:

	Orientation	Prevailing Speed	No. Lanes Each Direction
Driveway "A"	Southbound	25	N/A
Ellison Dr.	East-West	40	2

Determine Case:

Case

- 1 Urban Two-Lane Highway - Use Table 17.B.1
- 2 Urban Multi-Lane Highway - Use Table 17.B-2
- 3 Rural Two Lane Highway - Use Table 17.B-3 and 17.B-5
- 4 Rural Multi-Lane Highway - Use Table 17.B-4 and 17.B-6

Ellison Dr. is Case **2**
 Speed Category **35 to 40**

WB Right Turn Volumes

2020 AM Pk. Hr. NO BUILD	0
2020 AM Pk. Hr. BUILD	67
2020 PM Pk. Hr. NO BUILD	0
2020 PM Pk. Hr. BUILD	166

WB Thru Volumes

441
441
1370
1370

EB Leftt Turn Volumes

2020 AM Pk. Hr. NO BUILD	0
2020 AM Pk. Hr. BUILD	54
2020 PM Pk. Hr. NO BUILD	0
2020 PM Pk. Hr. BUILD	132

EB Thru Volumes

737
806
943
1091

Determination of Warrants for Auxiliary Lanes

Project Name: **Cibola Loop Community Center**
 Name of Highway: **Ellison Dr.**
 Name of Cross Street: **Driveway "A"**

Determination of Warrants for: **Southbound Driveway**

Implementation Year Volumes - **2020** Posted Speed Limit: **40**

Right Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Right Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ If Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	2020	-	-	221		N/A		-	N/A	N/A
AM Peak Hour BUILD	2020	67	1	221	✓	325	1.00	-	325	10.5:1
PM Peak Hour NO BUILD	2020	-	-	685		N/A		-	N/A	N/A
PM Peak Hour BUILD	2020	166	1	685	✓	325	1.00	-	325	10.5:1

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

Left Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Left Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ If Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	2020	-	-	369		N/A		N/A	N/A	N/A
AM Peak Hour BUILD	2020	54	1	403	✓	325	1.00	75	400	10.5:1
PM Peak Hour NO BUILD	2020	-	-	472		N/A		N/A	N/A	N/A
PM Peak Hour BUILD	2020	132	1	546	✓	325	1.00	175	500	10.5:1

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

* Lane Length Requirements based on Table 18.K-1 (Deceleration and Acceleration Lengths)

** Enter Grade Adjustment Factor from Table 18.K-2 or other criteria.

*** Lane Storage Length is Based on a calculated 3-minute queue based on average arrival rate per minute.

= Volume/Hr. divided by 60 times three (rounded) times 25 feet per vehicle.

Lane Storage Length for right turn decel lanes is zero unless there is a stop condition.

Notes and Comments:

1. This warrant sheet is for the southbound Driveway "A" at 100% Development of the Project

Table 17.B-2
Criteria For Deceleration Lanes On
URBAN MULTI-LANE HIGHWAYS

Turning Volume ¹ (vph)	LEFT-TURN DECELERATION LANE			RIGHT-TURN DECELERATION LANE		
	Minimum Volume in Adjacent Through Lane (vphpl) ²			Minimum Volume in Adjacent Through Lane (vphpl) ²		
	≤30 mph	35 to 40 mph	45 to 55 mph	≤30 mph	35 to 40 mph	45 to 55 mph
<5	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
5	Not Required	490	420	1,200	730	450
10	420	370	300	820	490	320
15	360	290	220	600	350	240
20	310	230	160	460	260	180
25	270	190	130	360	230	150
30	240	160	110	290	200	130
35	210	130	100	260	180	120
40	180	120	Required	240	170	110
45	160	110	Required	220	160	Required
50	140	Required	Required	200	Required	Required
55	120	Required	Required	190	Required	Required
≥56	Required	Required	Required	Required	Required	Required
	<i>Left-turn Deceleration Lanes are Required on Urban Multi-lane Highways for the following Left-turn Volumes:</i> • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 36 vph or more			<i>Right-turn Deceleration Lanes are Required on Urban Multi-lane Highways for the following Right-turn Volumes:</i> • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 41 vph or more		
Notes: 1. Use linear interpolation for turning volumes between 5 and 55 vph. 2. The volume in the adjacent through lane includes through vehicles and turning vehicles.						

Table 18.K.K-1
Deceleration and Acceleration Lengths (feet)

Speed Change Lane Condition	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
Deceleration Distance										
Stop Condition	150	200	250	325	400	475	550	650	725	850
Slow to 15 MPH	130	175	230	300	370	450	525	620	700	820
Deceleration Taper										
Length for 12-foot Lane	50	75	100	125	150	175	200	225	250	250
Straight Line Ratios (L:W)	4:1	6:1	8:1	10.5:1	12.5:1	14.5:1	16.5:1	18.5:1	21:1	21:1
Acceleration Lane Length										
Acceleration Taper	N/A	190	270	380	550	760	960	1,170	1,380	1,590
Length of 12-foot Lane	N/A	100	120	150	170	180	230	270	300	300
Straight Line Ratios (L:W)	N/A	8:1	10:1	12.5:1	14:1	15:1	19:1	22.5:1	25:1	25:1

Traffic Count Data Sheet

Year Counts Taken: 2016 E-W Street: EllisonDr. 35 MPH
 N-S Street: 7 Bar Loop E. 35 MPH
 8/4/16

UNSIGNALIZED

Begin Time	End Time	Eastbound (EllisonDr.)			Westbound (EllisonDr.)			Northbound (7 Bar Loop E.)			Southbound (7 Bar Loop E.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	40	426	0	0	0	57	3	0	48	0	22	0
7:15 AM	7:30 AM	5	156	0	0	0	80	5	0	17	0	26	0
7:30 AM	7:45 AM	23	182	0	1	0	101	3	2	19	0	25	0
7:45 AM	8:00 AM	10	135	0	1	0	81	8	0	14	0	18	0
8:00 AM	8:15 AM	12	138	0	0	0	82	8	1	16	0	9	0
8:15 AM	8:30 AM	3	428	0	4	0	70	5	0	8	0	45	0
8:30 AM	8:45 AM	46	436	0	0	0	87	7	0	7	0	42	0
8:45 AM	9:00 AM	40	464	0	0	0	105	4	0	40	0	46	0
AM Peak Hour Volumes		50	611	0	2	0	344	24	3	66	0	78	0
% of Total Traffic		4.2%	51.9%	0.0%	0.0%	0.0%	29.2%	2.0%	0.0%	5.6%	0.0%	0.0%	0.0%
% Directional			56.1%				31.2%		0.0%		5.6%		0.0%
AM Peak Hour Factor			0.81				0.88		0.83				0.82
									Intersection				
									0.83				
Begin Time	End Time	Eastbound (EllisonDr.)			Westbound (EllisonDr.)			Northbound (7 Bar Loop E.)			Southbound (7 Bar Loop E.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	42	477	0	0	0	228	27	0	0	0	49	0
4:15 PM	4:30 PM	19	206	0	0	0	272	26	0	14	0	18	0
4:30 PM	4:45 PM	16	230	0	0	0	278	39	0	13	0	21	0
4:45 PM	5:00 PM	22	207	0	0	0	299	28	0	15	0	28	0
5:00 PM	5:15 PM	24	210	0	0	0	310	40	0	23	0	29	0
5:15 PM	5:30 PM	28	202	0	0	0	244	27	0	41	0	30	0
5:30 PM	5:45 PM	20	493	0	4	0	266	35	4	49	0	49	0
5:45 PM	6:00 PM	44	482	0	0	0	232	20	0	0	0	22	0
PM Peak Hour Volumes		81	853	0	0	0	1159	133	0	65	0	96	0
% of Total Traffic		3.4%	35.7%	0.0%	0.0%	0.0%	48.6%	5.6%	0.0%	2.7%	0.0%	4.0%	0.0%
% Directional			39.1%				54.1%		0.0%		6.7%		0.0%
PM Peak Hour Factor			0.95				0.92		0.94				0.77
									Intersection				
									0.94				

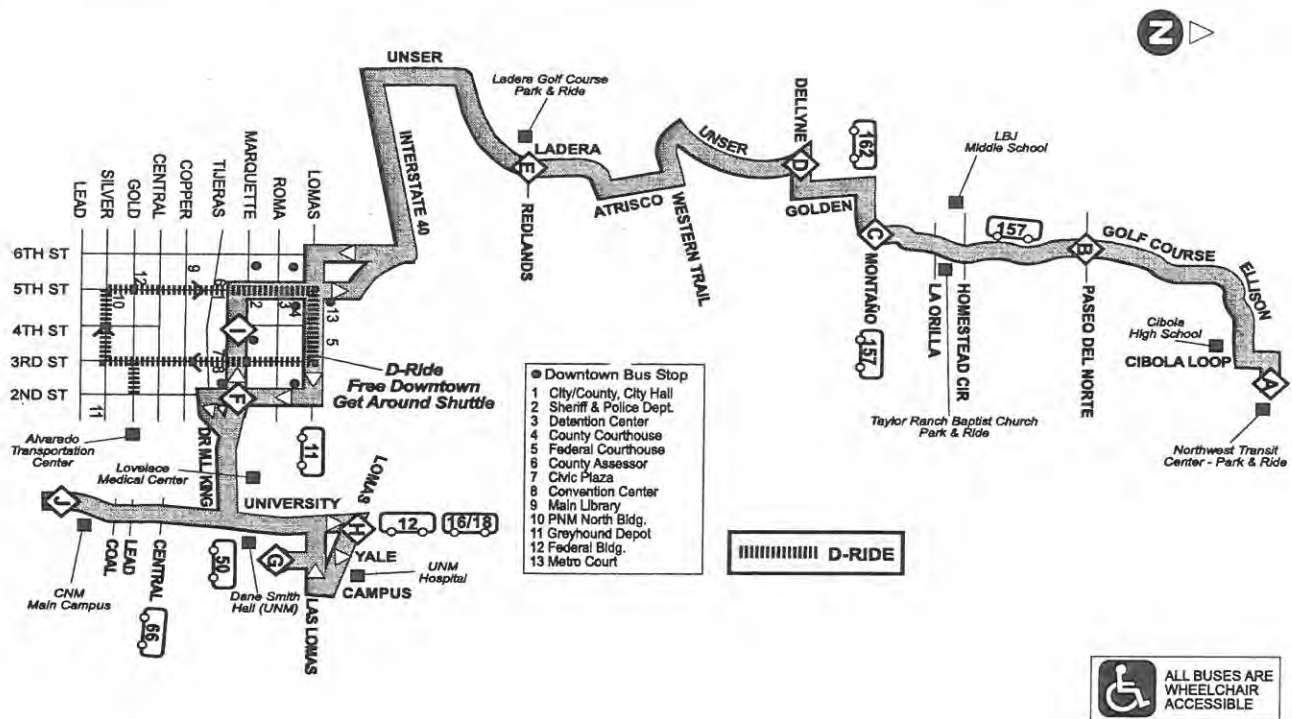
Speed Limit (Elisson Dr.)=	40	MPH
Speed Limit (Coors Bypass)=	45	MPH
	8/4/16	

SIGNALIZED

Elilson CBP CNT 2016.xlsx

Route / Ruta 92 Taylor Ranch Express

Effective: 8/10/2013



Route 92 - Weekday Southbound

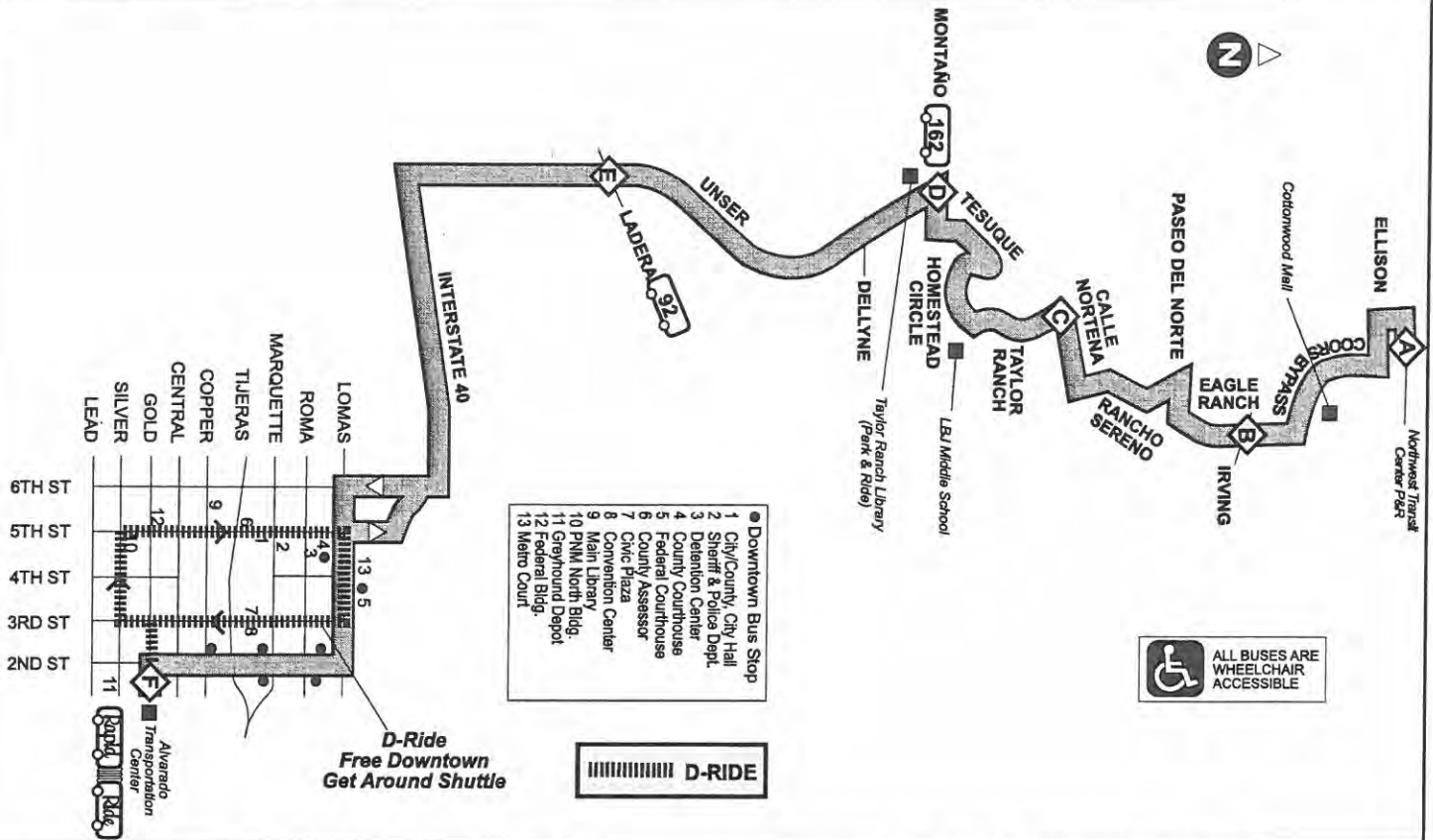
UNIVERSITY & BASEHART (CNM)	DANE SMITH HALL (UNM)	UNIVERSITY & LOMAS	2ND & MARQUETTE	LADERA & REDLANDS	DELTYNE & UNSER	MONTANO & TAYLOR RANCH	GOLF COURSE & PASEO DEL NORTE	NORTHWEST TRANSIT CENTER P&R
J	G	H	F	E	D	C	B	A
7:20a	7:11a	7:08a	7:01a	6:42a	6:36a	6:31a	6:26a	6:17a
7:48a	7:39a	7:35a	7:28a	7:08a	7:01a	6:56a	6:51a	6:41a

Route 92 - Weekday Northbound

NORTHWEST TRANSIT CENTER P&R	GOLF COURSE & PASEO DEL NORTE	MONTANO & TAYLOR RANCH	DELTYNE & UNSER	LADERA & REDLANDS	4TH & MARQUETTE	DANE SMITH HALL (UNM)	UNIVERSITY & LOMAS	UNIVERSITY & BASEHART (CNM)
A	B	C	D	E	I	G	H	J
5:30p	5:20p	5:16p	5:11p	5:05p	4:46p	4:37p	4:33p	4:27p
6:01p	5:51p	5:47p	5:42p	5:36p	5:16p	5:06p	5:02p	4:56p

Route 94 / Ruta 94 Unser Express

Effective: 8/10/2013



Route 94 - Weekday Southbound

ALVARADO TRANSPORTATION CENTER	UNSER & LADERA	UNSER & MONTANO	CALLE NORTENA & TAYLOR RANCH	EAGLE RANCH & IRVING	NORTHWEST TRANSIT CENTER PARK
F	E	D	C	B	A
6:43a	6:27a	6:20a	6:10a	6:02a	5:58a
7:46a	7:26a	7:15a	7:05a	6:56a	6:52a

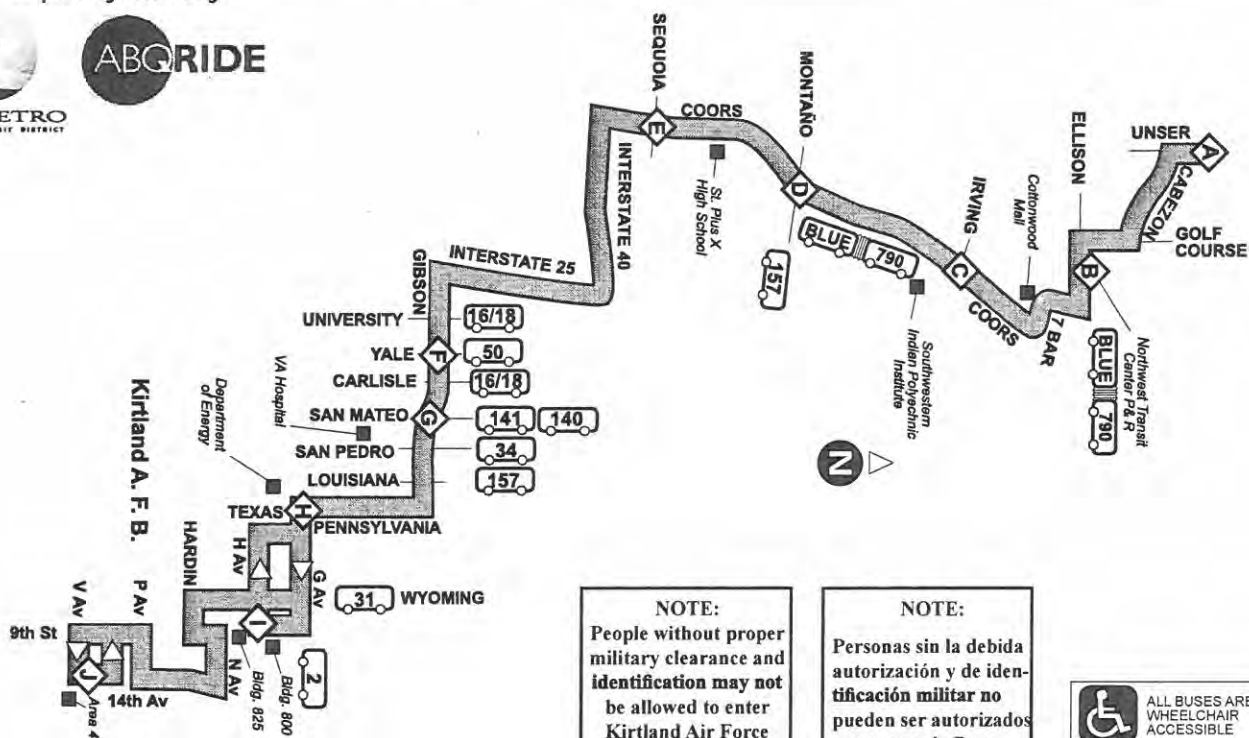
Route 94 - Weekday Northbound

ALVARADO TRANSPORTATION CENTER	UNSER & LADERA	UNSER & MONTANO	CALLE NORTENA & TAYLOR RANCH	EAGLE RANCH & IRVING	NORTHWEST TRANSIT CENTER PARK
F	E	D	C	B	A
5:11p	5:32p	5:40p	5:49p	5:57p	6:04p
4:41p	5:01p	5:09p	5:18p	5:27p	5:34p

Route / Ruta 96 Crosstown Commuter

Effective: 5/17/2014

Route partially funded by



NOTE:
People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

NOTE:
Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.



Route 96 - Weekday Southbound

Route 96 - Weekday Northbound

AREA 4	BUILDING 800	G STREET D.O.E. BLDG.	GIBSON & SAN MATEO	GIBSON & YALE	COORS & SEQUOIA	COORS & MONTANO	COORS & IRVING	NORTHWEST TRANSIT CENTER P&R	SOUTHERN & UNSER
J	I	H	G	F	E	D	C	B	A
6:27a	6:41a	6:57a	7:09a	7:11a	7:16a	7:23a	7:27a	7:39a	6:46a
6:15a	6:29a	6:45a	6:57a	7:09a	7:11a	7:16a	7:23a	7:27a	6:25a
6:11a	6:25a	6:41a	6:53a	7:05a	7:07a	7:12a	7:19a	7:23a	6:17a
6:04a	6:18a	6:34a	6:46a	6:58a	7:00a	7:05a	7:12a	7:16a	6:07a
6:00a	6:14a	6:30a	6:42a	6:54a	6:56a	7:01a	7:08a	7:12a	6:00a
5:48a	6:02a	6:18a	6:30a	6:42a	6:44a	6:49a	6:56a	7:00a	5:55a
5:43a	5:57a	6:13a	6:25a	6:37a	6:39a	6:44a	6:51a	6:55a	5:47a
5:37a	5:51a	6:07a	6:19a	6:31a	6:33a	6:38a	6:45a	6:49a	5:30a
5:26a	5:40a	5:56a	6:08a	6:20a	6:22a	6:27a	6:34a	6:38a	5:16a
5:16a	5:30a	5:46a	5:58a	6:10a	6:12a	6:17a	6:24a	6:28a	5:07a

AREA 4	BUILDING 800	G STREET D.O.E. BLDG.	GIBSON & SAN MATEO	GIBSON & YALE	COORS & SEQUOIA	COORS & MONTANO	COORS & IRVING	NORTHWEST TRANSIT CENTER P&R	SOUTHERN & UNSER
J	I	H	G	F	E	D	C	B	A
5:12p	5:23p	5:39p	5:51p	6:03p	6:15p	6:27p	6:39p	6:51p	5:15p
5:00p	5:11p	5:27p	5:39p	5:51p	6:03p	6:15p	6:27p	6:39p	4:56p
4:48p	5:00p	5:16p	5:28p	5:40p	5:52p	6:04p	6:16p	6:28p	4:42p
4:36p	4:48p	5:04p	5:16p	5:28p	5:40p	5:52p	6:04p	6:16p	4:30p
4:24p	4:36p	4:52p	5:04p	5:16p	5:28p	5:40p	5:52p	6:04p	4:18p
4:12p	4:24p	4:40p	4:52p	5:04p	5:16p	5:28p	5:40p	5:52p	4:06p
4:00p	4:12p	4:28p	4:40p	4:52p	5:04p	5:16p	5:28p	5:40p	3:54p
3:51p	4:03p	4:19p	4:31p	4:43p	4:55p	5:07p	5:19p	5:31p	3:43p

IMPORTANT:

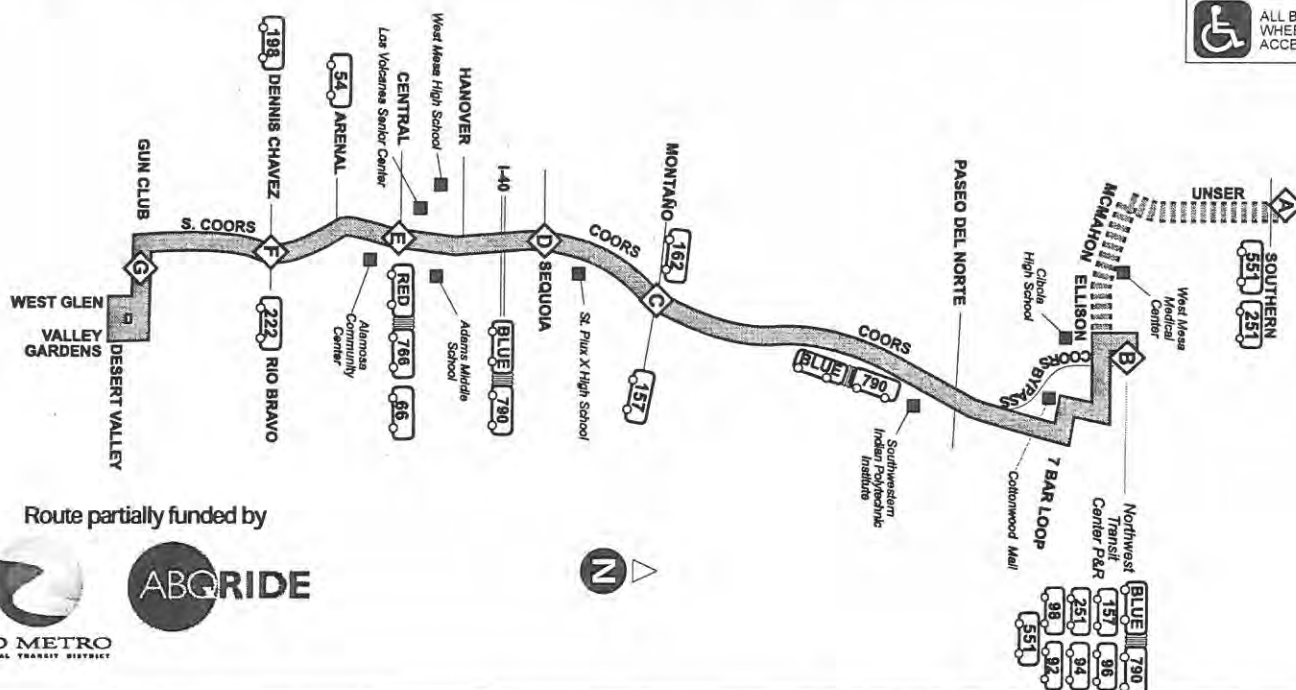
Due to varying military restrictions, access to Kirtland Air Force Base may be changed at any time. If you are traveling to KAFB please call 243-RIDE (243-7433) for current information.

IMPORTANTE:

Debido a diferentes restricciones militares, el acceso a La Base Aerea Kirtland puede cambiar en cualquier momento. Si usted viaja hacia KAFB en autobús, por favor llame al 243-RIDE (243-7433) para obtener información actualizada.

Route / Ruta 155 Coors Blvd.

Effective: 5/17/2014



Route partially funded by



Route 155 - Weekday - Southbound

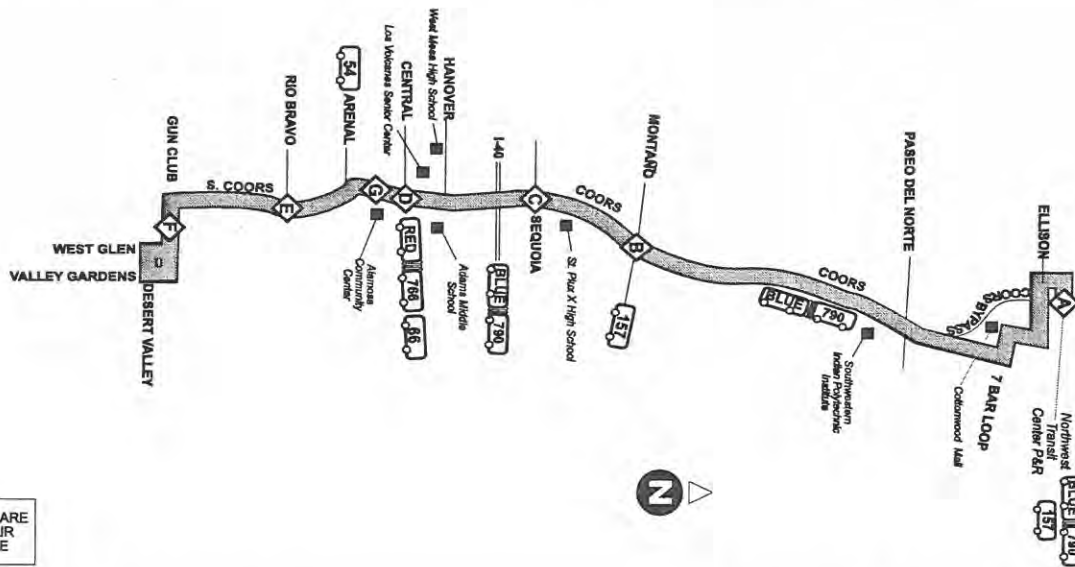
SOUTHERN & UNSER	NORTHWEST TRANSIT CENTER P & R	COORS & MONTANO	COORS & SEQUOIA	COORS & CENTRAL	COORS & RIO BRAVO	COORS & GUN CLUB
A	B	C	D	E	F	G
5:36a	5:50a	6:09a	6:14a	6:23a	6:33a	6:40a
6:10a	6:24a	6:43a	6:50a	7:01a	7:11a	7:18a
6:41a	6:55a	7:14a	7:21a	7:32a	7:42a	7:49a
7:15a	7:29a	7:48a	7:53a	8:04a	8:14a	8:21a
7:49a	8:03a	8:22a	8:27a	8:38a	8:48a	8:55a
.....	8:36a	8:53a	8:58a	9:08a	9:18a	9:25a
.....	9:06a	9:23a	9:28a	9:38a	9:48a	9:55a
.....	9:36a	9:53a	9:58a	10:08a	10:18a	10:25a
.....	10:04a	10:22a	10:27a	10:38a	10:48a	10:55a
.....	10:34a	10:52a	10:57a	11:08a	11:18a	11:25a
.....	11:04a	11:22a	11:27a	11:38a	11:48a	11:55a
.....	11:34a	11:52a	11:57a	12:08p	12:18p	12:25p
.....	12:05p	12:23p	12:28p	12:39p	12:50p	12:57p
.....	12:35p	12:53p	12:58p	1:09p	1:20p	1:27p
.....	1:05p	1:23p	1:28p	1:39p	1:50p	1:57p
.....	1:34p	1:52p	1:57p	2:09p	2:21p	2:28p
.....	2:05p	2:23p	2:28p	2:40p	2:52p	2:59p
.....	2:35p	2:53p	2:58p	3:10p	3:22p	3:29p
.....	3:03p	3:22p	3:28p	3:40p	3:52p	3:59p
.....	3:34p	3:53p	3:59p	4:11p	4:23p	4:30p
.....	4:03p	4:22p	4:28p	4:40p	4:52p	4:59p
.....	4:36p	4:55p	5:01p	5:12p	5:23p	5:30p
4:51p	5:05p	5:24p	5:30p	5:42p	5:53p	6:00p
5:21p	5:35p	5:54p	6:00p	6:11p	6:22p	6:29p
5:52p	6:06p	6:25p	6:31p	6:42p	6:53p	7:00p
.....	6:39p	6:56p	7:01p	7:10p	7:19p	7:26p
.....	7:18p	7:35p	7:40p	7:49p	7:58p	8:05p
.....	8:02p	8:19p	8:24p	8:33p	8:42p	8:49p
.....	8:40p	8:57p	9:02p	9:11p	9:20p	9:27p
.....	9:38p	9:55p	10:00p	10:09p	10:18p	10:25p

Route 155 - Weekday - Northbound

SOUTHERN & UNSER	NORTHWEST TRANSIT CENTER P & R	COORS & MONTANO	COORS & SEQUOIA	COORS & CENTRAL	COORS & RIO BRAVO	COORS & GUN CLUB
A	B	C	D	E	F	G
7:36a	7:21a	7:07a	7:01a	6:52a	6:39a	6:35a
.....	7:51a	7:37a	7:31a	7:22a	7:09a	7:05a
.....	8:22a	8:08a	8:02a	7:53a	7:40a	7:36a
.....	8:55a	8:41a	8:35a	8:26a	8:13a	8:09a
.....	9:25a	9:11a	9:05a	8:56a	8:43a	8:39a
.....	9:55a	9:41a	9:35a	9:26a	9:13a	9:09a
.....	10:25a	10:11a	10:05a	9:55a	9:42a	9:38a
.....	10:54a	10:40a	10:34a	10:24a	10:11a	10:07a
.....	11:24a	11:10a	11:04a	10:54a	10:41a	10:37a
.....	11:54a	11:40a	11:34a	11:24a	11:11a	11:07a
.....	12:24p	12:10p	12:04p	11:54a	11:41a	11:37a
.....	12:54p	12:40p	12:34p	12:24p	12:11p	12:07p
.....	1:25p	1:11p	1:05p	12:55p	12:42p	12:38p
.....	1:55p	1:41p	1:35p	1:25p	1:12p	1:08p
.....	2:25p	2:11p	2:05p	1:55p	1:42p	1:38p
.....	2:56p	2:42p	2:36p	2:26p	2:12p	2:08p
.....	3:26p	3:12p	3:06p	2:56p	2:42p	2:38p
.....	4:00p	3:45p	3:38p	3:27p	3:13p	3:09p
4:30p	4:15p	4:08p	3:58p	3:44p	3:40p	3:40p
4:46p	4:30p	4:15p	4:08p	3:58p	3:44p	3:40p
5:16p	5:00p	4:45p	4:38p	4:28p	4:14p	4:10p
5:47p	5:31p	5:16p	5:09p	4:58p	4:45p	4:41p
6:18p	6:02p	5:47p	5:40p	5:29p	5:16p	5:12p
.....	6:32p	6:17p	6:10p	5:59p	5:46p	5:42p
.....	7:02p	6:47p	6:40p	6:29p	6:16p	6:12p
.....	7:29p	7:15p	7:09p	6:59p	6:48p	6:44p
.....	7:56p	7:42p	7:36p	7:26p	7:15p	7:11p
.....	8:33p	8:19p	8:13p	8:04p	7:53p	7:49p
.....	9:18p	9:04p	8:58p	8:49p	8:38p	8:34p
.....	10:24p	10:10p	10:04p	9:55p	9:44p	9:40p

Route / Ruta 155 Coors Blvd.

Effective: 8/10/2013



Route 155 - Saturday Southbound

COORS & GUN CLUB	COORS & RIO BRAVO	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
F	E	D	C	B	A
7:41a	7:34a	7:25a	7:17a	7:12a	6:57a
8:26a	8:19a	8:10a	8:02a	7:57a	7:42a
9:11a	9:04a	8:55a	8:47a	8:42a	8:27a
9:56a	9:49a	9:40a	9:31a	9:26a	9:11a
10:42a	10:35a	10:25a	10:16a	10:11a	9:56a
11:28a	11:21a	11:10a	11:03a	10:57a	10:42a
12:13p	12:06p	11:55a	11:48a	11:42a	11:27a
12:57p	12:50p	12:40p	12:32p	12:26p	12:11p
1:42p	1:35p	1:25p	1:17p	1:12p	12:56p
2:27p	2:20p	2:10p	2:02p	1:57p	1:41p
3:13p	3:06p	2:56p	2:45p	2:40p	2:24p
3:58p	3:51p	3:41p	3:30p	3:25p	3:09p
4:43p	4:36p	4:26p	4:15p	4:10p	3:54p
5:28p	5:21p	5:11p	5:00p	4:55p	4:39p
6:12p	6:05p	5:56p	5:45p	5:40p	5:24p
6:55p	6:48p	6:40p	6:32p	6:28p	6:13p
7:40p	7:33p	7:25p	7:17p	7:13p	6:58p
8:25p	8:18p	8:10p	8:02p	7:58p	7:43p
9:19p	9:12p	9:03p	8:55p	8:47p	8:28p
10:10p	10:03p	9:55p	9:47p	9:43p	9:28p

Route 155 - Saturday Northbound

COORS & GUN CLUB	COORS & RIO BRAVO	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
F	E	D	C	B	A
8:31a	8:16a	8:10a	8:00a	7:51a	7:47a
9:26a	9:11a	9:05a	8:55a	8:46a	8:42a
10:11a	9:56a	9:50a	9:40a	9:31a	9:27a
10:55a	10:40a	10:34a	10:25a	10:16a	10:12a
11:39a	11:24a	11:18a	11:10a	11:00a	10:56a
12:24p	12:09p	12:03p	11:55a	11:45a	11:40a
1:13p	12:57p	12:50p	12:40p	12:32p	12:27p
1:58p	1:42p	1:35p	1:25p	1:17p	1:12p
2:43p	2:27p	2:20p	2:10p	2:02p	1:57p
3:28p	3:12p	3:05p	2:55p	2:47p	2:42p
4:13p	3:57p	3:50p	3:40p	3:32p	3:27p
4:57p	4:41p	4:36p	4:25p	4:15p	4:10p
5:42p	5:26p	5:21p	5:10p	5:00p	4:55p
6:27p	6:11p	6:06p	5:55p	5:45p	5:40p
7:08p	6:53p	6:48p	6:40p	6:31p	6:27p
7:53p	7:38p	7:33p	7:25p	7:16p	7:12p
8:38p	8:23p	8:18p	8:10p	8:01p	7:57p

Route 155 - Sunday Southbound

ALAMOSA COMMUNITY CTR.	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
G	D	C	B	A
10:41a	10:39a	10:30a	10:24a	10:09a
11:26a	11:24a	11:15a	11:09a	10:54a
12:11p	12:09p	12:00p	11:54a	11:39a
12:56p	12:54p	12:45p	12:39p	12:24p
1:41p	1:39p	1:30p	1:24p	1:09p
2:26p	2:24p	2:15p	2:09p	1:54p
3:11p	3:09p	3:00p	2:54p	2:39p
3:56p	3:54p	3:45p	3:39p	3:24p
4:41p	4:39p	4:30p	4:24p	4:09p

Route 155 - Sunday Northbound

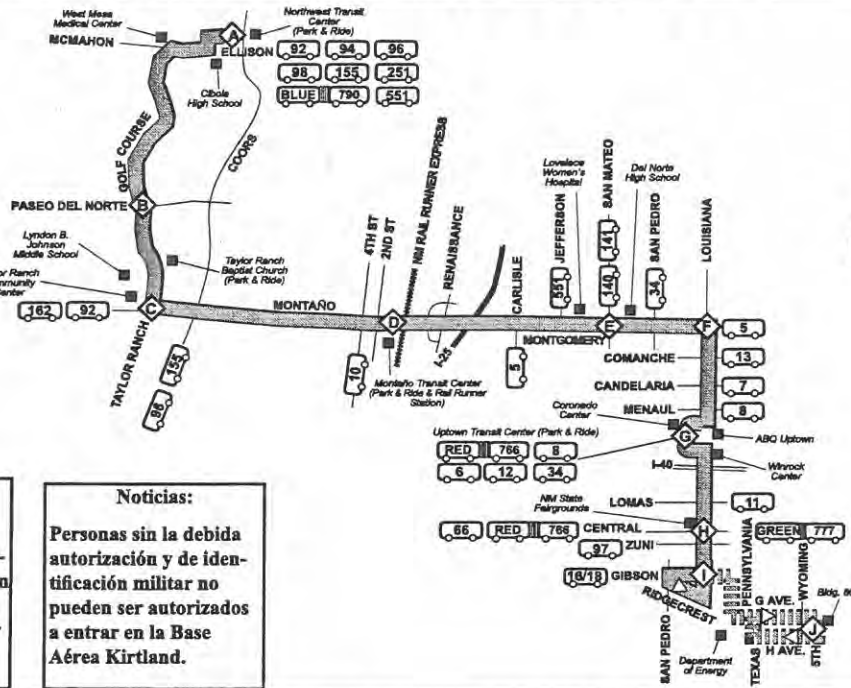
ALAMOSA COMMUNITY CTR.	COORS & CENTRAL	COORS & SEQUOIA	COORS & MONTANO	NORTHWEST TRANSIT CENTER P & R
G	D	C	B	A
10:33a	10:30a	10:24a	10:18a	10:00a
11:18a	11:13a	11:06a	10:56a	10:45a
12:03p	11:48a	11:41a	11:32a	11:30a
12:48p	12:33p	12:26p	12:17p	12:15p
1:33p	1:18p	1:11p	1:02p	1:00p
2:18p	2:03p	1:56p	1:47p	1:45p
3:03p	2:48p	2:41p	2:32p	2:30p
3:48p	3:33p	3:26p	3:17p	3:15p
4:33p	4:18p	4:11p	4:02p	4:00p

NO SERVICE TO GUN CLUB OR RIO BRAVO ON SUNDAYS
NO HAY SERVICIO A GUN CLUB O RIO BRAVO LOS DOMINGOS

Route / Ruta 157

Louisiana / Uptown / Montañó / NWTC

Effective: 1/11/2014



NOTE:

People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

Noticias:

Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.

Route 157 - Weekday South / Eastbound

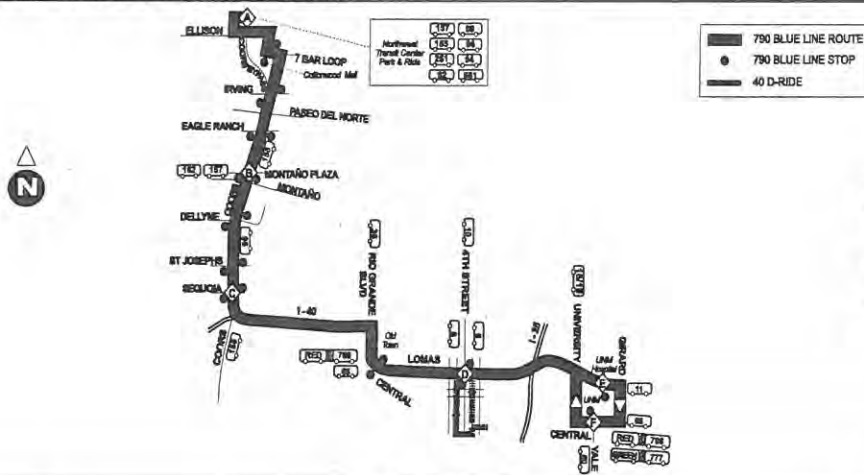
A	B	C	D	E	F	G	H	I	J
5:24a	5:33a	5:38a	5:47a	5:55a	5:59a	6:06a	6:14a	6:18a	6:27a
5:57a	6:07a	6:12a	6:22a	6:31a	6:35a	6:42a	6:51a	6:55a	7:04a
6:14a	6:25a	6:30a	6:40a	6:49a	6:53a	7:01a	7:10a	7:14a	7:23a
6:29a	6:40a	6:45a	6:55a	7:04a	7:08a	7:16a	7:25a	7:29a	7:38a
6:51a	7:02a	7:07a	7:17a	7:26a	7:30a	7:38a	7:47a	7:51a	8:00a
7:05a	7:16a	7:21a	7:31a	7:40a	7:44a	7:52a	8:01a	8:05a	8:14a
7:25a	7:36a	7:41a	7:51a	8:00a	8:04a	8:12a	8:21a	8:25a	8:34a
7:51a	8:01a	8:06a	8:16a	8:25a	8:29a	8:37a	8:46a	8:50a	9:00a
8:15a	8:25a	8:30a	8:40a	8:49a	8:53a	9:01a	9:10a	9:14a	9:23a
8:34a	8:44a	8:49a	8:59a	9:08a	9:12a	9:20a	9:29a	9:33a	9:42a
8:55a	9:05a	9:10a	9:19a	9:28a	9:32a	9:40a	9:49a	9:53a	10:02a
9:13a	9:23a	9:28a	9:37a	9:46a	9:50a	9:58a	10:07a	10:11a	10:20a
9:32a	9:42a	9:47a	9:56a	10:05a	10:09a	10:17a	10:26a	10:30a	10:39a
9:52a	10:02a	10:07a	10:17a	10:26a	10:30a	10:38a	10:47a	10:51a	11:00a
10:12a	10:22a	10:27a	10:37a	10:46a	10:50a	10:58a	11:07a	11:11a	11:20a
10:32a	10:42a	10:47a	10:57a	11:06a	11:10a	11:18a	11:27a	11:31a	11:40a
10:52a	11:02a	11:07a	11:17a	11:26a	11:30a	11:38a	11:47a	11:51a	12:00a
11:12a	11:22a	11:27a	11:37a	11:46a	11:50a	11:58a	12:07a	12:11a	12:20a
11:31a	11:41a	11:46a	11:56a	12:05a	12:09a	12:17a	12:26a	12:30a	12:39a
11:48a	11:58a	12:03a	12:13a	12:22a	12:26a	12:34a	12:43a	12:47a	12:56a
12:10p	12:20p	12:25p	12:35p	12:44p	12:48p	12:56p	13:05p	13:09p	13:18p
12:30p	12:40p	12:45p	12:55p	13:04p	13:08p	13:16p	13:25p	13:29p	13:38p
12:49p	1:00p	1:05p	1:15p	1:24p	1:28p	1:36p	1:45p	1:49p	1:58p
1:09p	1:20p	1:25p	1:35p	1:44p	1:48p	1:56p	2:05p	2:09p	2:18p
1:27p	1:37p	1:42p	1:51p	2:00p	2:04p	2:12p	2:21p	2:25p	2:34p
1:47p	1:57p	2:02p	2:11p	2:20p	2:24p	2:32p	2:41p	2:45p	2:54p
2:08p	2:18p	2:23p	2:32p	2:41p	2:45p	2:53p	3:02p	3:06p	3:15p
2:29p	2:39p	2:44p	2:53p	3:02p	3:06p	3:14p	3:23p	3:27p	3:36p
2:49p	2:59p	3:04p	3:13p	3:22p	3:26p	3:34p	3:43p	3:47p	3:56p
3:09p	3:19p	3:24p	3:33p	3:42p	3:46p	3:54p	4:03p	4:07p	4:16p
3:29p	3:40p	3:45p	3:54p	4:03p	4:07p	4:15p	4:24p	4:28p	4:37p
3:50p	4:01p	4:06p	4:15p	4:24p	4:28p	4:36p	4:45p	4:49p	4:58p
4:13p	4:24p	4:29p	4:38p	4:47p	4:51p	4:59p	5:08p	5:12p	5:21p
4:33p	4:44p	4:49p	4:58p	5:07p	5:11p	5:19p	5:28p	5:32p	5:41p
4:59p	5:10p	5:15p	5:24p	5:33p	5:37p	5:45p	5:54p	5:58p	6:07p
5:21p	5:32p	5:37p	5:46p	5:55p	6:00p	6:08p	6:17p	6:21p	6:30p
5:44p	5:55p	6:00p	6:09p	6:18p	6:22p	6:30p	6:39p	6:43p	6:52p
6:05p	6:16p	6:21p	6:30p	6:39p	6:43p	6:51p	7:00p	7:04p	7:13p
6:37p	6:47p	6:52p	7:01p	7:10p	7:14p	7:22p	7:31p	7:35p	7:44p
7:20p	7:30p	7:35p	7:44p	7:53p	7:57p	8:05p	8:14p	8:18p	8:27p
8:02p	8:12p	8:17p	8:26p	8:35p	8:39p	8:47p	8:56p	9:00p	9:09p
8:55p	9:05p	9:10p	9:19p	9:28p	9:32p	9:40p	9:49p	9:53p	10:02p
.....									

Route 157 - Weekday West / Northbound

J	I	H	G	F	E	D	C	B	A
.....	5:43a	5:48a	5:56a	6:05a	6:09a	6:19a	6:31a	6:35a	6:45a
6:17a	6:22a	6:30a	6:39a	6:43a	6:53a	7:05a	7:16a	7:28a	7:39a
6:31a	6:37a	6:42a	6:50a	7:00a	7:05a	7:16a	7:28a	7:32a	7:42a
6:52a	6:58a	7:03a	7:11a	7:21a	7:26a	7:37a	7:49a	7:53a	8:03a
7:10a	7:16a	7:22a	7:30a	7:40a	7:45a	7:56a	8:08a	8:12a	8:22a
7:30a	7:36a	7:42a	7:50a	8:00a	8:05a	8:16a	8:28a	8:32a	8:42a
7:48a	7:54a	8:00a	8:08a	8:18a	8:22a	8:33a	8:45a	8:49a	8:59a
8:10a	8:16a	8:22a	8:30a	8:40a	8:44a	8:55a	9:07a	9:11a	9:21a
8:30a	8:36a	8:42a	8:50a	9:00a	9:04a	9:15a	9:27a	9:31a	9:41a
8:50a	8:56a	9:02a	9:10a	9:20a	9:24a	9:35a	9:47a	9:51a	10:01a
9:16a	9:22a	9:30a	9:40a	9:44a	9:55a	10:07a	10:19a	10:23a	10:33a
9:36a	9:42a	9:50a	10:00a	10:04a	10:15a	10:27a	10:39a	10:43a	10:53a
9:56a	10:02a	10:10a	10:20a	10:24a	10:35a	10:47a	10:59a	11:03a	11:13a
10:16a	10:22a	10:30a	10:40a	10:44a	10:55a	11:07a	11:19a	11:23a	11:33a
10:36a	10:42a	10:50a	11:00a	11:04a	11:15a	11:27a	11:39a	11:43a	11:53a
10:56a	11:02a	11:10a	11:20a	11:24a	11:35a	11:47a	11:59a	12:03a	12:13a
11:16a	11:22a	11:30a	11:40a	11:44a	11:55a	12:07a	12:19a	12:23a	12:33a
11:36a	11:42a	11:50a	12:00a	12:04a	12:15a	12:27a	12:39a	12:43a	12:53a
11:56a	12:02a	12:10a	12:20a	12:24a	12:35a	12:47a	12:59a	13:03a	13:13a
12:14p	12:20p	12:28p	12:38p	12:42p	12:53p	13:05p	13:17p	13:21p	13:31p
12:34p	12:40p	12:48p	12:58p	13:02p	13:13p	13:25p	13:37p	13:41p	13:51p
12:55p	13:01p	13:09p	13:19p	13:23p	13:34p	13:46p	13:58p	14:02p	14:12p
1:09p	1:15p	1:21p	1:29p	1:40p	1:44p	1:55p	2:07p	2:11p	2:21p
1:35p	1:41p	1:49p	2:00p	2:04p	2:15p	2:27p	2:39p	2:43p	2:53p
1:55p	2:01p	2:09p	2:20p	2:24p	2:35p	2:47p	2:59p	3:03p	3:13p
2:12p	2:18p	2:26p	2:38p	2:43p	2:54p	3:06p	3:18p	3:22p	3:32p
2:33p	2:39p	2:47p	2:59p	3:04p	3:15p	3:27p	3:39p	3:43p	3:53p
2:47p	2:53p	3:01p	3:13p	3:18p	3:29p	3:41p	3:53p	3:57p	4:07p
3:07p	3:13p	3:21p	3:33p	3:38p	3:49p	3:61p	3:73p	3:77p	3:87p
3:28p	3:35p	3:41p	3:50p	4:01p	4:06p	4:17p	4:29p	4:33p	4:43p
3:49p	3:56p	4:02p	4:11p	4:22p	4:27p	4:38p	4:50p	4:54p	5:04p
4:08p	4:15p	4:21p	4:30p	4:41p	4:46p	4:57p	5:09p	5:13p	5:23p
4:33p	4:40p	4:46p	4:55p	5:06p	5:11p	5:22p	5:34p	5:38p	5:48p
4:55p	5:02p	5:08p	5:17p	5:28p	5:33p	5:44p	5:56p	6:00p	6:10p
5:13p	5:20p	5:26p	5:35p	5:46p	5:51p	6:02p	6:14p	6:18p	6:28p
5:36p	5:42p	5:48p	5:57p	6:08p	6:13p	6:24p	6:36p	6:40p	6:50p
5:56p	6:02p	6:08p	6:17p	6:28p	6:33p	6:44p	6:56p	7:00p	7:10p
6:25p	6:30p	6:38p	6:47p	6:51p	7:01p	7:13p	7:25p	7:29p	7:39p
6:47p	6:52p	7:00p	7:09p	7:13p	7:23p	7:35p	7:47p	7:51p	8:01p
7:22p	7:27p	7:35p	7:44p	7:48p	7:58p	8:09p	8:21p	8:25p	8:35p
7:49p	7:54p	8:02p	8:11p	8:15p	8:25p	8:36p	8:48p	8:52p	9:02p
8:34p	8:39p	8:47p	8:56p	9:00p	9:10p	9:21p	9:33p	9:37p	9:47p
9:21p	9:26p	9:34p	9:43p	9:47p	9:57p	10:08p	10:20p	10:24p	10:34p

Route/Ruta 790 Rapid Ride Blue Line

Effective: 8/9/2014



Route 790 - Weekday

SOUTH & EASTBOUND

Center Par	Northwest	Coors & Montano	Coors & Sequoia	Lomas & 4th Street	Lomas & Hospital	Central & Yale
A	B	C	D	E	F	
5:19a	5:31a	5:37a	5:48a	5:55a	6:00a	
5:54a	6:06a	6:12a	6:23a	6:30a	6:35a	
6:19a	6:31a	6:37a	6:48a	6:55a	7:00a	
6:36a	6:49a	6:55a	7:07a	7:15a	7:20a	
6:47a	7:00a	7:07a	7:21a	7:29a	7:35a	
6:54a	7:07a	7:14a	7:28a	7:36a	7:42a	
*7:01a	7:14a	7:22a	7:36a	7:44a	7:50a	M, T, W, Th, F
7:08a	7:21a	7:29a	7:43a	7:51a	7:57a	
7:18a	7:31a	7:41a	7:57a	8:05a	8:11a	
7:33a	7:46a	7:56a	8:12a	8:20a	8:26a	
*7:44a	7:57a	8:05a	8:20a	8:28a	8:33a	M, W, F
7:51a	8:04a	8:12a	8:27a	8:35a	8:40a	
7:58a	8:11a	8:18a	8:33a	8:41a	8:46a	
8:13a	8:26a	8:33a	8:48a	8:56a	9:01a	
*8:23a	8:36a	8:43a	8:58a	9:06a	9:11a	T, Th
8:31a	8:44a	8:51a	9:03a	9:11a	9:16a	
8:51a	9:04a	9:11a	9:23a	9:31a	9:36a	
9:01a	9:14a	9:21a	9:33a	9:41a	9:46a	
9:21a	9:34a	9:41a	9:53a	10:01a	10:06a	
9:43a	9:56a	10:03a	10:15a	10:23a	10:28a	
9:59a	10:12a	10:19a	10:31a	10:39a	10:44a	
10:07a	10:20a	10:27a	10:39a	10:47a	10:52a	
10:34a	10:47a	10:53a	11:05a	11:13a	11:18a	
11:04a	11:17a	11:23a	11:35a	11:43a	11:48a	
11:23a	11:36a	11:43a	11:55a	12:03p	12:08p	
11:43a	11:56a	12:03p	12:15p	12:23p	12:28p	
12:03p	12:16p	12:23p	12:35p	12:43p	12:48p	
12:23p	12:36p	12:43p	12:55p	1:03p	1:08p	
12:41p	12:54p	1:01p	1:15p	1:23p	1:28p	
1:01p	1:14p	1:21p	1:35p	1:43p	1:48p	
1:21p	1:34p	1:41p	1:55p	2:03p	2:08p	
1:43p	1:56p	2:03p	2:15p	2:23p	2:28p	
2:02p	2:15p	2:22p	2:34p	2:42p	2:47p	
2:20p	2:33p	2:40p	2:52p	3:00p	3:05p	
.....	.....	.....	.....	3:08p	3:13p	
*.....	.....	.....	.....	3:17p	3:22p	M, T, W, Th, F
2:46p	2:59p	3:06p	3:18p	3:26p	3:31p	
3:07p	3:20p	3:27p	3:39p	3:47p	3:52p	
3:22p	3:35p	3:42p	3:54p	4:02p	4:07p	
3:42p	3:55p	4:02p	4:14p	4:22p	4:27p	
.....	.....	.....	.....	4:39p	4:44p	
4:05p	4:19p	4:26p	4:39p	4:47p	4:52p	
4:17p	4:31p	4:38p	4:51p	4:59p	5:04p	
4:32p	4:46p	4:53p	5:07p	5:15p	5:20p	
4:53p	5:07p	5:14p	5:28p	5:36p	5:41p	
5:15p	5:29p	5:36p	5:50p	5:58p	6:03p	
5:46p	5:59p	6:06p	6:18p	6:25p	6:30p	
6:22p	6:35p	6:42p	6:54p	7:00p	7:05p	
6:57p	7:10p	7:17p	7:29p	7:35p	7:40p	
7:20p	7:33p	7:40p	7:52p	7:58p	8:03p	
7:53p	8:06p	8:12p	8:24p	8:30p	8:35p	
8:28p	8:41p	8:47p	8:59p	9:05p	9:10p	

* Designated trips that operate only when U.N.M. is in session.

M, T, W, Th, F = All weekday service

M, W, F = Only Monday, Wednesday & Friday Service

T, Th = Only Tuesday & Thursday Service

WEST & NORTHBOUND

Center Par	Northwest	Coors & Montano	Coors & Sequoia	Lomas & 4th Street	Lomas & Hospital	Central & Yale
F	D	C	B	A		
6:02a	6:08a	6:18a	6:25a	6:39a		
6:37a	6:43a	6:53a	7:00a	7:14a		
7:02a	7:08a	7:19a	7:26a	7:40a		
7:37a	7:44a	7:55a	8:01a	8:15a		
7:59a	8:06a	8:17a	8:23a	8:37a		
8:13a	8:20a	8:31a	8:37a	8:51a		
8:28a	8:35a	8:46a	8:52a	9:06a		
8:42a	8:49a	9:00a	9:06a	9:20a		
8:48a	8:55a	9:06a	9:12a	9:26a		
9:18a	9:25a	9:36a	9:42a	9:56a		
9:48a	9:55a	10:06a	10:12a	10:26a		
10:08a	10:15a	10:26a	10:32a	10:46a		
10:30a	10:37a	10:48a	10:54a	11:08a		
10:46a	10:53a	11:04a	11:10a	11:24a		
10:54a	11:01a	11:12a	11:18a	11:32a		
11:20a	11:27a	11:38a	11:44a	11:58a		
11:50a	11:57a	12:08p	12:14p	12:28p		
12:10p	12:17p	12:29p	12:35p	12:50p		
12:30p	12:37p	12:49p	12:55p	1:10p		
12:50p	12:57p	1:09p	1:15p	1:30p		
1:10p	1:17p	1:29p	1:35p	1:50p		
1:30p	1:37p	1:49p	1:55p	2:10p		
1:50p	1:57p	2:09p	2:15p	2:30p		
2:10p	2:17p	2:29p	2:35p	2:51p		
2:30p	2:37p	2:49p	2:55p	3:11p		
2:49p	2:56p	3:10p	3:17p	3:33p		
3:07p	3:14p	3:29p	3:36p	3:53p		
3:13p	3:20p	3:35p	3:42p	3:59p		
*3:23p	3:30p	3:45p	3:52p	4:09p		M, T, W, Th, F
3:33p	3:40p	3:55p	4:02p	4:19p		
3:54p	4:01p	4:15p	4:22p	4:39p		
4:09p	4:16p	4:30p	4:37p	4:54p		
4:29p	4:36p	4:50p	4:57p	5:14p		
4:44p	4:51p	5:05p	5:12p	5:29p		
4:54p	5:01p	5:17p	5:24p	5:42p		
5:06p	5:13p	5:29p	5:36p	5:54p		
5:22p	5:29p	5:45p	5:52p	6:10p		
5:43p	5:50p	6:03p	6:10p	6:26p		
6:05p	6:11p	6:24p	6:30p	6:46p		
6:31p	6:37p	6:48p	6:54p	7:08p		
7:06p	7:12p	7:23p	7:29p	7:43p		
7:41p	7:47p	7:58p	8:04p	8:18p		
8:04p	8:10p	8:20p	8:26p	8:39p		
8:36p	8:42p	8:52p	8:58p	9:11p		
9:11p	9:17p	9:27p	9:33p	9:46p		

* Designado viajes que operan sólo cuando U.N.M. se encuentra en periodo de sesiones.

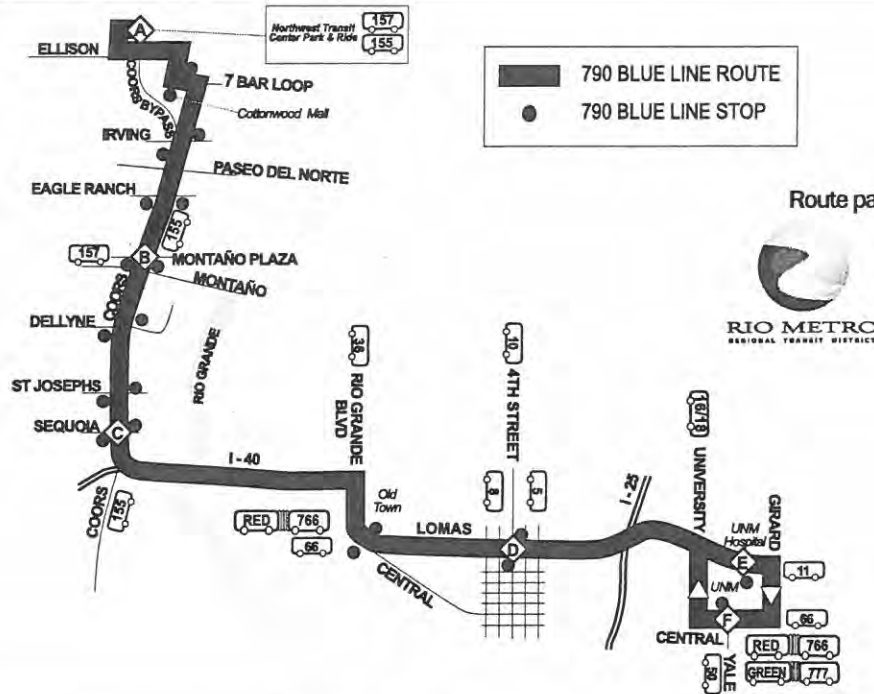
M, T, W, Th, F = Servicio los lunes, martes, miércoles, jueves y viernes.

M, W, F = Servicio sólo los lunes, miércoles y viernes.

T, Th = Servicio sólo los martes y jueves.

Route/Ruta 790 Rapid Ride Blue Line

Effective: 5/17/2014



Route 790 - Saturday

SOUTH & EASTBOUND

NORTHWEST TRANSIT CENTER P&R	COORS & MONTANO	COORS & SEQUOIA	LOMAS & 4TH STREET	LOMAS @ UNM HOSPITAL	CENTRAL & YALE
A	B	C	D	E	F
6:53a	7:08a	7:13a	7:23a	7:29a	7:34a
7:39a	7:54a	7:59a	8:09a	8:15a	8:20a
8:25a	8:40a	8:45a	8:55a	9:01a	9:06a
9:11a	9:26a	9:31a	9:41a	9:47a	9:52a
9:57a	10:12a	10:17a	10:27a	10:33a	10:38a
10:43a	10:58a	11:03a	11:13a	11:19a	11:24a
11:29a	11:44a	11:49a	11:59a	12:05p	12:10p
12:15p	12:30p	12:35p	12:45p	12:51p	12:56p
1:01p	1:16p	1:21p	1:31p	1:37p	1:42p
1:47p	2:02p	2:07p	2:17p	2:23p	2:28p
2:33p	2:48p	2:53p	3:03p	3:09p	3:14p
3:19p	3:34p	3:39p	3:49p	3:55p	4:00p
4:05p	4:20p	4:25p	4:35p	4:41p	4:46p
4:51p	5:06p	5:11p	5:21p	5:27p	5:32p
5:37p	5:52p	5:57p	6:07p	6:13p	6:18p
6:23p	6:38p	6:43p	6:53p	6:59p	7:04p
7:09p	7:24p	7:29p	7:39p	7:45p	7:50p

WEST & NORTHBOUND

NORTHWEST TRANSIT CENTER P&R	COORS & MONTANO	COORS & SEQUOIA	LOMAS & 4TH STREET	CENTRAL & YALE
A	B	C	D	F
8:15a	8:00a	7:55a	7:42a	7:36a
9:01a	8:46a	8:41a	8:28a	8:22a
9:47a	9:32a	9:27a	9:14a	9:08a
10:33a	10:18a	10:13a	10:00a	9:54a
11:19a	11:04a	10:59a	10:46a	10:40a
12:05p	11:50a	11:45a	11:32a	11:26a
12:51p	12:36p	12:31p	12:18p	12:12p
1:37p	1:22p	1:17p	1:04p	12:58p
2:23p	2:08p	2:03p	1:50p	1:44p
3:09p	2:54p	2:49p	2:36p	2:30p
3:55p	3:40p	3:35p	3:22p	3:16p
4:41p	4:26p	4:21p	4:08p	4:02p
5:27p	5:12p	5:07p	4:54p	4:48p
6:13p	5:58p	5:53p	5:40p	5:34p
6:59p	6:44p	6:39p	6:26p	6:20p
7:45p	7:30p	7:25p	7:12p	7:06p
8:31p	8:16p	8:11p	7:58p	7:52p