

Terry O. Brown P.E.

Candelaria / University Project
(Candelaria Rd. / University Blvd.)

Traffic Impact Study / Access Study

Draft – November 4, 2007
Final – January 30, 2009

Presented to:

New Mexico Department of Transportation, Dist. 3
&
City of Albuquerque, Transp. Development Section

Prepared for:

Titan Development Co.
6300 Riverside Plaza Lane NW #200
Albuquerque, NM 87120



A handwritten signature in blue ink that reads "Terry O. Brown".

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

Traffic Impact Study
Candelaria / University Project – (Candelaria Rd. / University Blvd.)

Contents

STUDY PURPOSE	1
GENERAL.....	1
PROPOSED DEVELOPMENT	1
STUDY PROCEDURES.....	2
TRIP GENERATION WORKSHEET	3
BACKGROUND TRAFFIC GROWTH.....	3
PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2010 BUILDOUT	4
TRIP DISTRIBUTION	4
Commercial Land Use	4
RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES.....	5
#1 – Candelaria Rd. / University Blvd. - Pages A-63 thru A-70	5
#2 – Candelaria Rd. / I-25 SB Frntg. Rd. - Pages A-71 thru A-76.....	7
#3 - Menaul Blvd. / University Blvd. - Pages A-77 thru A-82	9
#4 – Menaul Blvd. / I-25 NB Frntg. Rd. - Pages A-83 thru A-88.....	11
RESULTS OF UNSIGNALIZED INTERSECTION CAPACITY ANALYSES.....	14
#5 - Claremont Ave (Driveway 'C') / University Blvd. - Pages A-89 thru A-96	14
#7 - Candelaria Rd. / Driveway 'A' - Pages A-97 thru A-98.....	15
#8 – Candelaria Rd. / Driveway 'B' – Pages A-99 thru A-100	15
#9 - Driveway 'D' / University Blvd. – Pages A-101 thru A-108	15
ACCESS STUDY	16
STUDY PROCEDURES.....	16
RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES.....	17
#1 – Candelaria Rd. / University Blvd. - Pages A-63 thru A-70	17
#5 - Claremont Ave (Driveway 'C') / University Blvd. - Pages A-89 thru A-96	17
#9 - Driveway 'D' / University Blvd. – Pages A-101 thru A-108	18
CONCLUSIONS.....	18
RECOMMENDATIONS	19
Appendix.....	20

Traffic Impact Study
Candelaria / University Project – (Candelaria Rd. / University Blvd.)

STUDY PURPOSE

The purpose of this study is to identify the development's impact on the adjacent transportation system. The study is being conducted in conjunction with a request for approval of a proposed plan for a commercial development located along the I-25 East Frontage Rd. between Candelaria Rd. and Menaul Blvd. in Albuquerque, New Mexico. This study is presented to satisfy the requirements of the New Mexico Department of Transportation as well as the City of Albuquerque. Additionally, this study will evaluate the access to the proposed project to determine viable access onto University Blvd. and onto Candelaria Rd.

GENERAL

The proposed development is located along the east side of the I-25 East Frontage Road between Candelaria Rd. and Menaul Blvd. (see Appendix Page A-1 - Vicinity Map). The existing intersections of Candelaria Rd. / University Blvd., Candelaria Rd. / I-25 Southbound Frontage Rd., Menaul Blvd. / University Blvd., and Menaul Blvd. / I-25 Northbound Frontage Rd. are currently signalized intersections. The intersection of Claremont Ave / University Blvd. is unsignalized and will be analyzed in this study.

Currently, properties in the area are commercial/office in nature.

PROPOSED DEVELOPMENT

The proposed plan for this site consists of a 6,500 SF restaurant and two motels. The phasing of construction is unknown at this time. This study will analyze only the full development of the project.

The anticipated implementation year for this site is the year 2010.

STUDY PROCEDURES

A scoping meeting was held in October of 2007 with City of Albuquerque Transportation Development staff (Tony Loyd and Steele Nowak) to discuss scope and methodology to be utilized within the report. Specific items included format, intersections to be studied, intersection analysis procedures, existing traffic counts, trip distribution methodology, and implementation year definition. The same was discussed with New Mexico Department of Transportation, District 3 staff (Tony Abbo).

The basic procedure followed for this traffic impact study is outlined as follows:

- ◆ Calculate the generated trips for this proposed commercial / office development as defined on Page A-2 of the Appendix of this report and more specifically defined in the Trip Generation Table on Page A-5 of the Appendix of this report. The trips generated for the implementation year analyses (2010) will assume that 100% of the development has occurred.
- ◆ Calculate trip distribution for the newly generated trips by this development. The new trips will be distributed based on a two-mile radius distribution of population, Appendix Pages A-10 thru A-12.
- ◆ Determine Trip Assignments for the newly generated trips based on the results of the Trip Distribution Analysis and logical routing to and from the new site, Appendix Pages A-14 thru A-16.
- ◆ Obtain AM Peak Hour and PM Peak Hour Turning Movement Volumes Traffic Counts for the intersections of Candelaria Rd. / University Blvd., Candelaria Rd. / I-25 Southbound Frontage Rd., Menaul Blvd. / University Blvd., Menaul Blvd. / I-25 Northbound Frontage Rd., and Claremont Ave / University Blvd, Appendix Pages A-109 thru A-116.
- ◆ Determine Historic Growth Rates for background traffic volumes based on an analysis of the growth trend of recent AWDT Volumes obtained from 2002 thru 2006 MRCOG Traffic Flow Maps, Appendix Pages A-19 thru A-26.
- ◆ Determine the 2010 NO BUILD Volumes for each intersection to be analyzed by growing the background traffic growth from the year of the counts to 2010, Appendix Pages A-27 thru A-45.
- ◆ Add data from Trip Assignments Maps and Tables to the 2010 NO BUILD Volumes to obtain the 2010 BUILD Volumes for this project, Appendix Pages A-27 thru A-45.
- ◆ Provide signalized and unsignalized intersection analyses for the following intersections:

INTERSECTION	TYPE CONTROL	NO BUILD ANALYSIS	BUILD ANALYSIS
Candelaria Rd. / University Blvd.	Traffic Signal	2010	2010
Candelaria Rd. / I-25 SB Fmtg. Rd.	Traffic Signal	2010	2010
Menaul Blvd. / University Blvd.	Traffic Signal	2010	2010
Menaul Blvd. / I-25 NB Fmtg. Rd.	Traffic Signal	2010	2010
Claremont Ave / University Blvd.	Stop Sign	2010	2010
Candelaria Rd. / Driveway 'A'	Stop Sign	N/A	2010
Candelaria Rd. / Driveway 'B'	Stop Sign	N/A	2010
Driveway 'D' / University Blvd	Stop Sign	N/A	2010

- ♦ Complete an Access Study to determine the effect of utilizing four driveways (Case "Y") versus one driveway (Case "N") on the adjacent transportation system.

TRIP GENERATION WORKSHEET

Projected trips were calculated from the ITE trip generation data for motel and high turnover (sit-down) restaurant. Trips for the development were determined based on land use defined on the Conceptual Site Development Plan on Page A-2 in the Appendix of this report. The following table summarized the trip generation rate for the project:

Candelaria / University Commercial Development **Trip Generation Data**

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet		Units				
Motel (320)	70.00	621	16	29	23	20
Motel (320)	70.00	621	16	29	23	20
High Turnover (Sit-Down) Restaurant (932)	6.50	826	39	36	43	28
Subtotal		2,068	71	94	89	68

See Appendix Page A-5 thru A-8 for the Trip Generation Summary Table and Worksheets for this project.

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 2002, 2003, 2004, 2005 and 2006 Traffic Flow maps prepared by the Mid-Region Council of Governments. Most 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 annual growth rate for each approach if that calculated rate appeared feasible. However, there were some instances where the rate indicated a negative growth trend or appeared to be unreasonably high or low. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was used, a shorter time span was used to determine the growth rate, or the growth rate was considered to be 1% or a generic 3% if appropriate. Due to the limited potential for growth in the area, it was believed that a 3% growth rate was inappropriate for this study. Therefore, a growth rate of 1.00% was used if the linear regression analysis showed the growth rate to be negative. 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-19 through A-26. Additionally, 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-30 through A-45).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2010 BUILDOUT

The calculated growth rates were applied to the most recent peak hour traffic counts to derive the 2010 AM and PM Peak Hour NO BUILD Volumes. To these volumes, the generated trips based on implementation of the proposed Site Development Plan (100% development) were added to obtain BUILD volumes for the intersection analyses. See Appendix Pages A-109 thru A-116 for further information regarding the turning movement counts. Turning Movement Volumes Maps for the 2010 NO BUILD Conditions, Trips Generated, and 2010 BUILD Conditions are shown on Pages A-46 thru A-47 in the Appendix of this report.

TRIP DISTRIBUTION

Primary and Diverted Linked Trips:

Commercial Land Use

Primary and diverted linked trips for the commercial land use development were distributed proportionally to the 2010 projected population of Data Analysis Subzones within a two-mile radius of the proposed development. Population data for the years 2004 and 2030 were taken from the 2030 Socioeconomic Forecasts by Data Analysis Subzones for the MRCOG Region, S-07-01, 2007, Appendix B and Appendix C, supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2004 and 2030 was interpolated linearly to obtain 2010 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 subareas and data analysis subzones is shown on Appendix Pages A-9 thru A-15.

RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES

#1 – Candelaria Rd. / University Blvd. - Pages A-63 thru A-70

The results of the implementation year analysis of the signalized intersection of Candelaria Rd. / University Blvd. are summarized in the following table:

Candelaria Rd. / University Blvd.	No Build		BUILD		
	2010	A.M.	P.M.	A.M.	P.M.
Existing Geometry		B – 18.1	C – 20.6	B – 19.4	C – 23.2

The implementation year analysis of the intersection of Candelaria Rd. / University Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. The implementation year analysis shows that the proposed development increases the delays at the intersection by only 2.5 – 3.8 seconds. Therefore, this study concludes that the development presents no significant impact to the calculated delays at the intersection of Candelaria Rd. / University Blvd.

Geometry used for this analysis of Candelaria Rd. / University Blvd. is demonstrated in the following table:

Existing Geometry (Candelaria Rd. / University Blvd.)					
Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Candelaria Rd.	1	0	2	0	1
WB Candelaria Rd.	1	0	3	0	1
NB University Blvd.	1	0	1	1	0
SB University Blvd.	2	0	1	1	0

The following table summarizes the results of the queuing analysis for the auxiliary lanes at the intersection:

Queueing Analysis Summary Sheet

Project:
Intersection:

Candelaria / University Project
Candelaria Rd. / University Blvd.

2010

Approach				Left Turns			Thru Movements			Right Turns		
Eastbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	237	300	2	636	Cont	1	237	275
AM NO BUILD Queue				1	244	275	2	655	375	1	244	275
AM BUILD Queue				1	249	275	2	655	375	1	244	275
Existing Lane Length				1	125	300	2	478	Cont	1	136	275
PM NO BUILD Queue				1	129	200	2	492	375	1	140	225
PM BUILD Queue				1	133	225	2	492	375	1	140	225
Westbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	192	150	3	523	Cont	1	155	450
AM NO BUILD Queue				1	198	250	3	539	250	1	160	200
AM BUILD Queue				1	202	250	3	540	250	1	160	200
Existing Lane Length				1	155	150	3	657	Cont	1	213	450
PM NO BUILD Queue				1	160	250	3	677	375	1	219	325
PM BUILD Queue				1	164	250	3	678	375	1	219	325
Northbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				1	103	100	2	356	Cont	0	82	Cont
AM NO BUILD Queue				1	106	150	2	367	250	0	84	125
AM BUILD Queue				1	106	150	2	390	250	0	90	125
Existing Lane Length				1	121	100	2	569	Cont	0	140	Cont
PM NO BUILD Queue				1	125	200	2	586	450	0	144	225
PM BUILD Queue				1	125	200	2	603	450	0	148	225
Southbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length				2	29	225	2	1	Cont	0	9	250
AM NO BUILD Queue				2	30	50	2	1	0	0	9	25
AM BUILD Queue				2	30	50	2	20	25	0	14	50
Existing Lane Length				2	78	225	2	9	Cont	0	8	250
PM NO BUILD Queue				2	80	100	2	9	25	0	8	25
PM BUILD Queue				2	80	100	2	33	50	0	14	50

Cycle Length: **AM** **PM**
 100 130

NOTE: Queue lengths are in feet.

* - Queue Length of 1,001 indicates that the calculated queue > 1

The recommendations based on the queuing analysis for the auxiliary lanes at the intersection are summarized in the following table:

Lane Description	Existing Length (Ft)	NO BUILD Length (Ft)	BUILD Length (Ft)	Lengthen Existing Auxiliary Lane to:
Eastbound Left Turn:	300	275	275	No Recommendation
Eastbound Right Turn:*	275	140	140	No Recommendation
Westbound Left Turn:	150	250	250	250' plus transition.
Westbound Right Turn:*	450	160	160	No Recommendation
Northbound Left Turn:	100	200	200	200' plus transition.
Northbound Right Turn:*	Cont	110	110	No Recommendation
Southbound Left Turn:	225	100	100	No Recommendation
Southbound Right Turn:*	250	10	30	No Recommendation

* - Calculated right turn queue lengths have been reduced by 50% to account for right-turns-on red and overlap phases.

Extending the northbound left turn lane on University Blvd. at Candelaria is possible by reducing the length of the southbound left turn lane on University Blvd. at Claremont Ave. Since the projected southbound left turn volume and queue length on University at Claremont Ave is low, then the length of the southbound left turn lane at Claremont Ave need only be a minimum of 50 feet.

The westbound left turn lane on Candelaria Rd. at University Blvd. cannot be extended without blocking the eastbound left turns off of Candelaria into the existing Motel 1. The spillover from the westbound left turn lane should not be a major problem since there are three westbound thru lanes on Candelaria with plenty of capacity. If the inside thru lane is blocked, there is still sufficient capacity at the intersection.

#2 – Candelaria Rd. / I-25 SB Frntg. Rd. - Pages A-71 thru A-76

The results of the implementation year analysis of the signalized intersection of Candelaria Rd. / I-25 Southbound Frontage Rd. are summarized in the following table:

Candelaria Rd. / I-25 SB Frntg. Rd.		No Build		BUILD	
2010		A.M.	P.M.	A.M.	P.M.
Existing Geometry		C – 23.9	B – 17.0	C – 23.9	B – 17.1

The implementation year analysis of the intersection of Candelaria Rd. / I-25 Southbound Frontage Rd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM peak hour NO BUILD and BUILD conditions. The implementation year analysis shows that the proposed development increases the delays at the intersection by only 1 tenth of a second. Therefore, this study concludes that the development presents no significant impact to the calculated delays at the intersection of Candelaria Rd. / I-25 Southbound Frontage Rd.

Geometry used for this analysis of Candelaria Rd. / I-25 Southbound Frontage Rd. is demonstrated in the following table:

Existing Geometry (Candelaria Rd. / I-25 SB Frntg. Rd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Candelaria Rd.	0	0	2	0	1
WB Candelaria Rd.	2	0	3	0	0
SB I-25 SB Frntg. Rd.	1	1	1	0	1

The following table summarizes the results of the queuing analysis for the auxiliary lanes at the intersection:

Queueing Analysis Summary Sheet

Project: Candelaria / University Project
Intersection: Candelaria Rd. / I-25 SB Frntg. Rd.

2010											
Approach		Left Turns			Thru Movements			Right Turns			
Eastbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	
<i>Existing Lane Length</i>		0	0	0	2	799	Cont	1	142	Cont.	
AM NO BUILD Queue		0	0	0	2	823	475	1	146	200	
AM BUILD Queue		0	0	0	2	824	475	1	146	200	
<i>Existing Lane Length</i>		0	0	0	2	614	Cont	1	75	Cont.	
PM NO BUILD Queue		0	0	0	2	632	375	1	77	125	
PM BUILD Queue		0	0	0	2	634	375	1	77	125	
Westbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	
<i>Existing Lane Length</i>		2	115	175	3	484	Cont	0	0	0	
AM NO BUILD Queue		2	118	100	3	499	225	0	0	0	
AM BUILD Queue		2	118	100	3	501	225	0	0	0	
<i>Existing Lane Length</i>		2	124	175	3	681	Cont	0	0	0	
PM NO BUILD Queue		2	128	100	3	701	300	0	0	0	
PM BUILD Queue		2	128	100	3	702	300	0	0	0	
Northbound		# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	
<i>Existing Lane Length</i>		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	
<i>Existing Lane Length</i>		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	
<i>Existing Lane Length</i>		1	199	350	2	520	Cont	1	136	250	
AM NO BUILD Queue		1	205	250	2	536	325	1	140	175	
AM BUILD Queue		1	227	275	2	536	325	1	140	175	
<i>Existing Lane Length</i>		1	174	350	2	446	Cont	1	131	250	
PM NO BUILD Queue		1	179	225	2	459	300	1	135	175	
PM BUILD Queue		1	206	250	2	459	300	1	135	175	

Cycle Length: **AM** 100 **PM** 100

NOTE: Queue lengths are in feet.

* - Queue Length of 1,001 indicates that the calculated queue > 1

The recommendations based on the queuing analysis for the auxiliary lanes at the intersection are summarized in the following table:

Lane Description	Existing Length (Ft)	NO BUILD Length (Ft)	BUILD Length (Ft)	Lengthen Existing Auxiliary Lane to:
Eastbound Left Turn:	0	0	0	No Recommendation
Eastbound Right Turn:*	Cont.	100	100	No Recommendation
Westbound Left Turn:	175	100	100	No Recommendation
Westbound Right Turn:*	0	0	0	No Recommendation
Northbound Left Turn:	0	0	0	No Recommendation
Northbound Right Turn:*	0	0	0	No Recommendation
Southbound Left Turn:	350	250	275	No Recommendation
Southbound Right Turn:*	250	90	90	No Recommendation

* - Calculated right turn queue lengths have been reduced by 50% to account for right-turns-on red and overlap phases.

#3 - Menaul Blvd. / University Blvd. - Pages A-77 thru A-82

The results of the implementation year analysis of the signalized intersection of Menaul Blvd. / University Blvd. are summarized in the following table:

Menaul Blvd. / University Blvd.	No Build		BUILD		
	2010	A.M.	P.M.	A.M.	P.M.
Existing Geometry		C - 29.6	C - 28.6	C - 30.6	C - 29.1

The implementation year analysis of the intersection of Menaul Blvd. / University Blvd. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. The implementation year analysis shows that the proposed development increases the delays at the intersection by only 0.5 - 1 seconds. Therefore, this study concludes that the development presents no significant impact to the calculated delays at the intersection of Menaul Blvd. / University Blvd.

Geometry used for this analysis of Menaul Blvd. / University Blvd. is demonstrated in the following table:

Existing Geometry (Menaul Blvd. / University Blvd.)					
Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Menaul Blvd.	1	0	2	1	0
WB Menaul Blvd.	1	0	2	1	0
NB University Blvd.	1	0	1	1	0
SB University Blvd.	1	0	2	1	0

The following table summarizes the results of the queuing analysis for the auxiliary lanes at the intersection:

Queueing Analysis Summary Sheet

Project:
Intersection:

Candelaria / University Project
Menaul Blvd. / University Blvd.

2010

Approach				Left Turns			Thru Movements			Right Turns		
Eastbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	93	75	3	726	Cont	0	314	Cont.
AM NO BUILD Queue				1	96	150	3	748	325	0	323	350
AM BUILD Queue				1	108	150	3	748	325	0	323	350
<i>Existing Lane Length</i>				1	78	75	3	697	Cont	0	185	Cont.
PM NO BUILD Queue				1	80	125	3	718	300	0	191	225
PM BUILD Queue				1	95	150	3	718	300	0	191	225
Westbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	306	75	3	630	Cont	0	80	Cont.
AM NO BUILD Queue				1	315	350	3	649	275	0	82	125
AM BUILD Queue				1	315	350	3	649	275	0	83	125
<i>Existing Lane Length</i>				1	229	75	3	670	Cont	0	70	Cont.
PM NO BUILD Queue				1	236	275	3	690	300	0	72	125
PM BUILD Queue				1	236	275	3	690	300	0	73	125
Northbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	185	100	2	383	Cont	0	135	Cont.
AM NO BUILD Queue				1	191	225	2	394	250	0	139	175
AM BUILD Queue				1	191	225	2	425	275	0	139	175
<i>Existing Lane Length</i>				1	182	100	2	767	Cont	0	196	Cont.
PM NO BUILD Queue				1	187	225	2	790	450	0	202	250
PM BUILD Queue				1	187	225	2	829	475	0	202	250
Southbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	93	125	3	726	Cont	0	314	Cont.
AM NO BUILD Queue				1	96	150	3	748	325	0	323	350
AM BUILD Queue				1	97	150	3	789	325	0	339	375
<i>Existing Lane Length</i>				1	56	125	3	228	Cont	0	33	Cont.
PM NO BUILD Queue				1	58	100	3	235	125	0	34	75
PM BUILD Queue				1	59	100	3	264	150	0	46	75

Cycle Length: AM 100 PM 100

NOTE: Queue lengths are in feet.

* - Queue Length of 1,001 indicates that the calculated queue > 1

Geometry used for this analysis of Menaul Blvd. / I-25 Northbound Frontage Rd. is demonstrated in the following table:

Existing Geometry (Menaul Blvd. / I-25 NB Frntg. Rd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Menaul Blvd.	1	0	3	0	0
WB Menaul Blvd.	0	0	2	0	1
NB I-25 NB Frntg. Rd.	1	0	2	0	1

The following table summarizes the results of the queuing analysis for the auxiliary lanes at the intersection:

Queueing Analysis Summary Sheet

Project:
Intersection:

Candelaria / University Project
Menaul Blvd. / I-25 NB Fmtg. Rd.

2010

Approach				Left Turns			Thru Movements			Right Turns		
Eastbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	138	225	3	994	Cont	0	0	0
AM NO BUILD Queue				1	142	175	3	1,024	425	0	0	0
AM BUILD Queue				1	142	175	3	1,025	425	0	0	0
<i>Existing Lane Length</i>				1	178	225	3	909	Cont	0	0	0
PM NO BUILD Queue				1	183	225	3	936	375	0	0	0
PM BUILD Queue				1	183	225	3	937	375	0	0	0
Westbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				0	0	0	2	817	Cont	1	65	Cont.
AM NO BUILD Queue				0	0	0	2	842	475	1	67	100
AM BUILD Queue				0	0	0	2	858	475	1	67	100
<i>Existing Lane Length</i>				0	0	0	2	1,046	Cont	1	109	Cont.
PM NO BUILD Queue				0	0	0	2	1,077	575	1	112	150
PM BUILD Queue				0	0	0	2	1,089	600	1	112	150
Northbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	118	Cont.	2	270	Cont	1	132	Cont.
AM NO BUILD Queue				1	122	175	2	278	200	1	136	175
AM BUILD Queue				1	122	175	2	278	200	1	147	200
<i>Existing Lane Length</i>				1	58	Cont.	2	545	Cont	1	131	Cont.
PM NO BUILD Queue				1	60	100	2	561	350	1	135	175
PM BUILD Queue				1	60	100	2	561	350	1	148	200
Southbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				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
<i>Existing Lane Length</i>				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

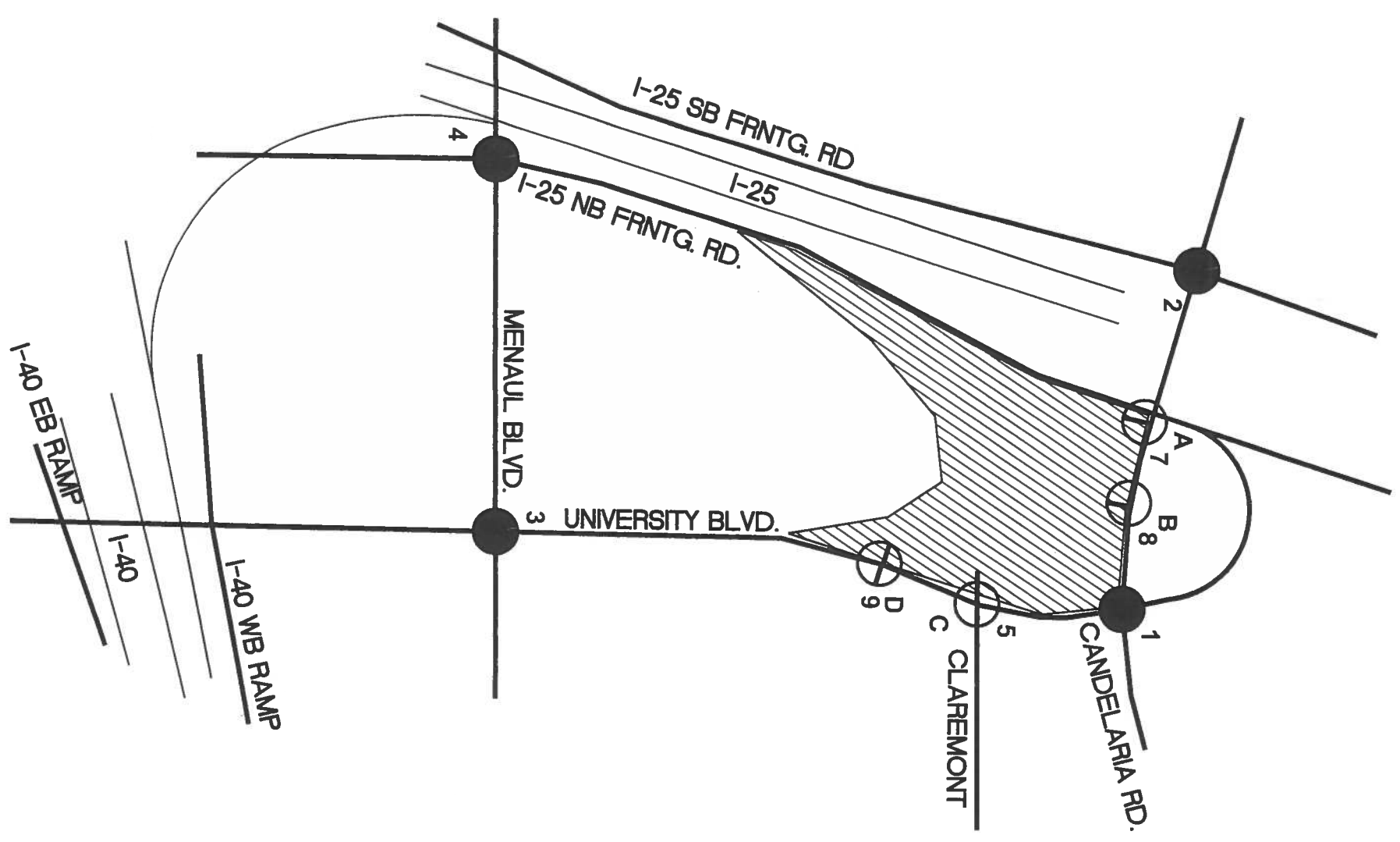
Cycle Length: **AM** **PM**
 100 100

NOTE: Queue lengths are in feet.

* - Queue Length of 1,001 indicates that the calculated queue > 1

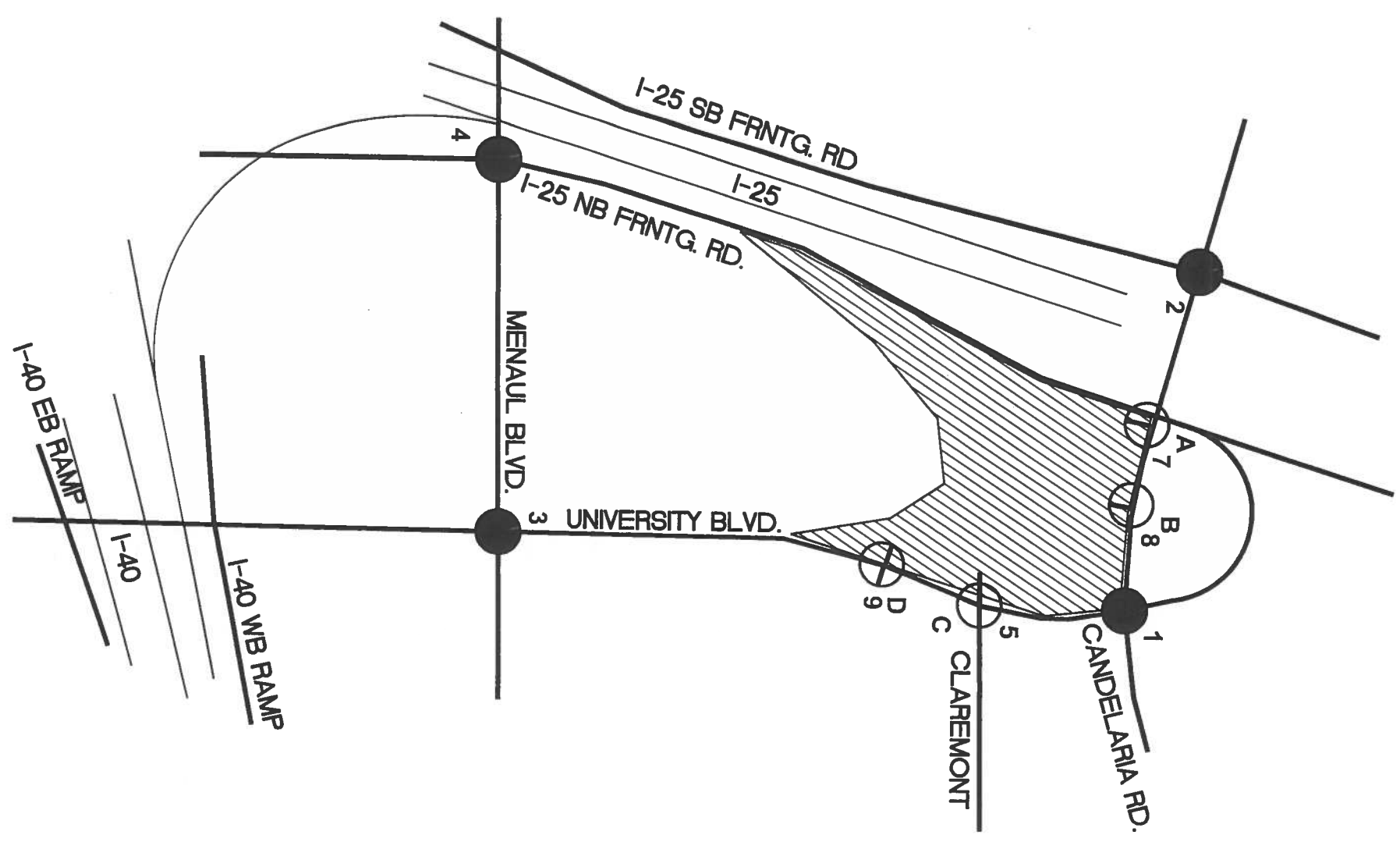
RECOMMENDATIONS

- Design of the site should maintain adequate sight distances for traffic approaching, entering, and exiting the site from the proposed driveways.
- All driveways should be constructed utilizing 25 feet minimum radius curb returns or larger if needed to accommodate delivery trucks. The new development should be implemented utilizing four driveways for access. Driveway 'A' (from Candelaria Rd.) should be a full access, Driveway 'B' (from Candelaria Rd.) should be a right-in, right-out, and Driveways 'C' and 'D' (from University Blvd.) should be a full access. The driveways should be unsignalized and should be constructed with one entering lane and one exiting lane.
- Candelaria Rd. / University Blvd. – Lengthen the westbound left turn lane to 250 feet plus transition.
- Menaul Blvd. / University Blvd. – Lengthen the eastbound left turn lane to 150 feet plus transition and the westbound left turn lane to 200 feet plus transition.
- The findings of this study indicated that three access breaks are favorable to the adjacent transportation system and, there, request is made to the New Mexico Department of Transportation to grant approval for the three additional access breaks (two on Candelaria Rd. and one on University Blvd. at Claremont Ave) to provide access to this project.





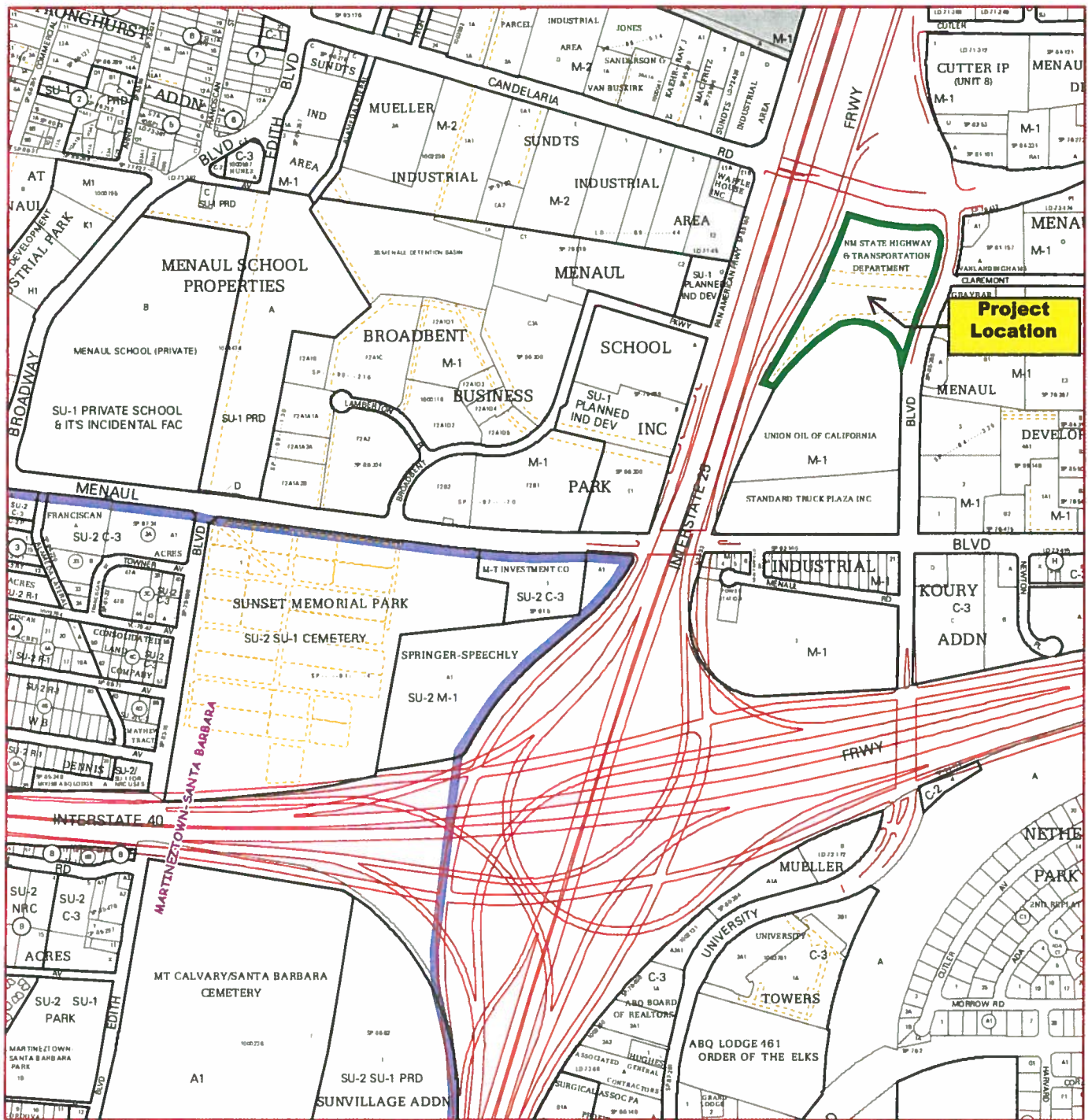
NTS



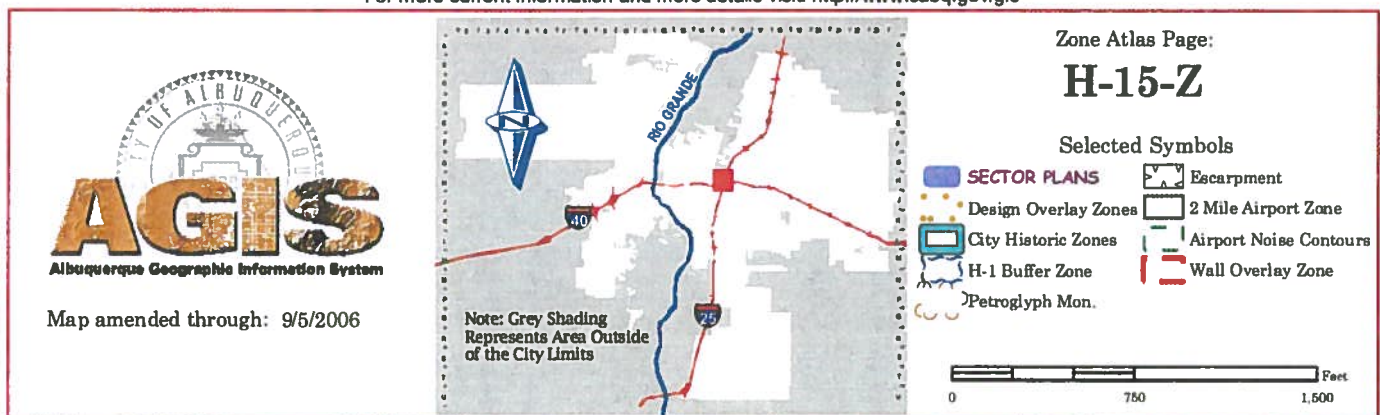
Appendix

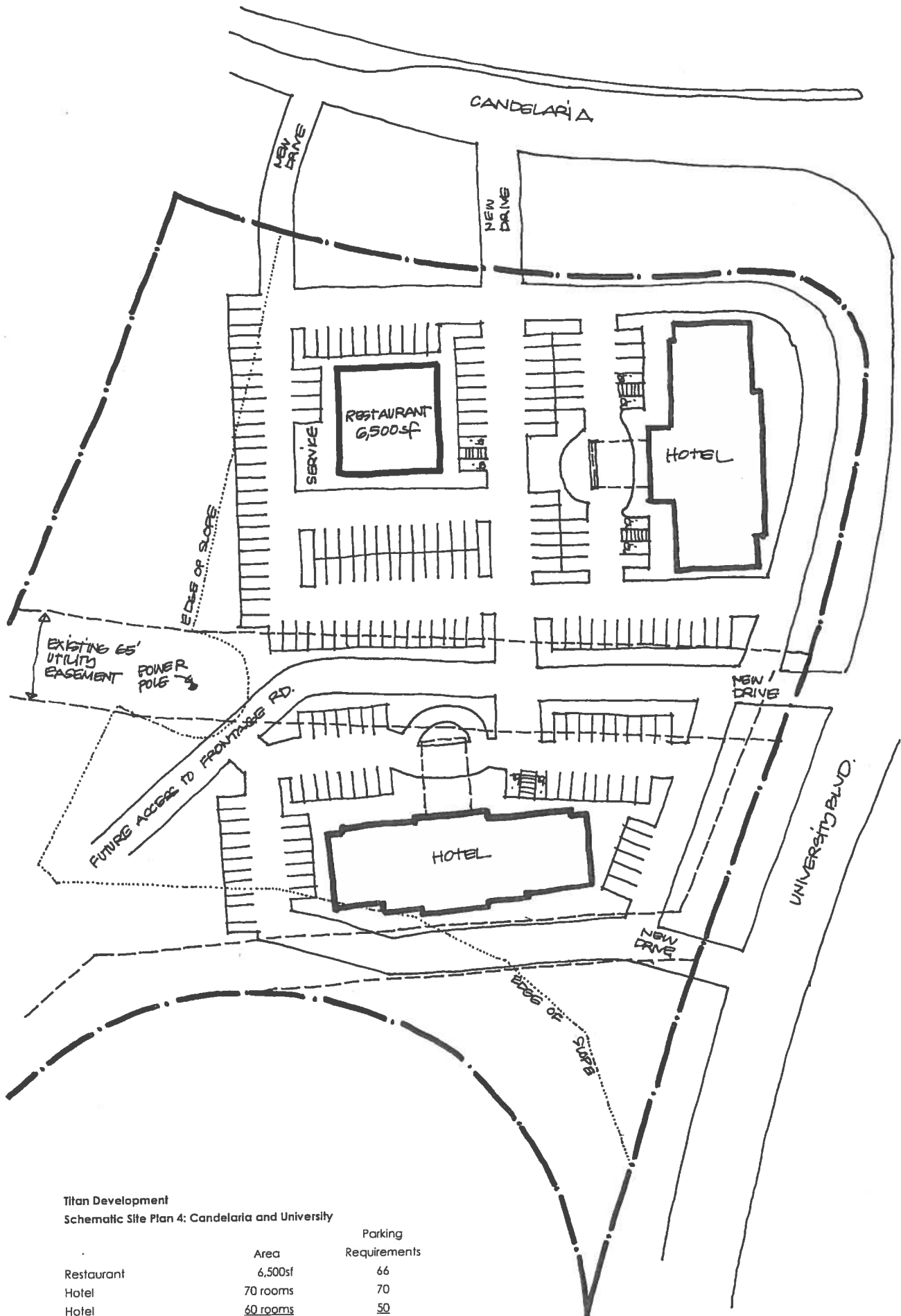
<u>SITE INFORMATION</u>	
Vicinity Map	A-1
Proposed Site Plan	A-2
Long Range System Roadway Map (from MRCOG)	A-3
2006 Traffic Flow Map (from MRCOG)	A-4
<u>TRIP GENERATION</u>	
Trip Generation Worksheet	A-5 thru A-8
<u>TRIP DISTRIBUTION AND TRIP ASSIGNMENTS</u>	
Data Analysis Subzone (DASZ) Map	A-9
Trip Distribution Tables	A-10 thru A-12
Trip Distribution Map (%)	A-13
Trip Assignments Map (% Entering)	A-14
Trip Assignments Map (% Exiting)	A-15
Trip Distribution Map (%) – Case “N”	A-16
Trip Assignments Map (% Entering) – Case “N”	A-17
Trip Assignments Map (% Exiting) – Case “N”	A-18
<u>GROWTH RATE</u>	
Growth Rate Charts	A-19 thru A-26
<u>TURNING MOVEMENT VOLUMES</u>	
2010 Turning Movement Volumes Summary Table	A-27 thru A-29
2010 Turning Movement Volumes Intersection Worksheets	A-30 thru A-45
Map – 2010 NO BUILD, Trips Generated, and BUILD Volumes	A-46 thru A-47
2010 Turning Movement Volumes Summary Table – Case “N”	A-48 thru A-50
2010 Turning Movement Volumes Intersection Worksheets – Case “N”	A – 51 thru A-62
<u>SIGNALIZED INTERSECTION ANALYSES</u>	
Signalized Intersection Analysis (#1 - Candelaria Rd. / University Blvd.)	A-63 thru A-70
Signalized Intersection Analysis (#2 - Candelaria Rd. / I-25 SB Fmtg. Rd.)	A-71 thru A-76
Signalized Intersection Analysis (#3 - Menaul Blvd. / University Blvd.)	A-77 thru A-82
Signalized Intersection Analysis (#4 - Menaul Blvd. / I-25 NB Fmtg. Rd.)	A-83 thru A-88
<u>UNSIGNALIZED INTERSECTION ANALYSES</u>	
Unsignalized Intersection Analysis (#5 - Claremont Ave / University Blvd.)	A-89 thru A-96
Unsignalized Intersection Analysis (#7 - Candelaria Rd. / Driveway 'A')	A-97 thru A-98
Unsignalized Intersection Analysis (#8 - Candelaria Rd. / Driveway 'B')	A-99 thru A-100
Unsignalized Intersection Analysis (#9 - Driveway 'D' / University Blvd.)	A-101 thru A-108
<u>TRAFFIC DATA</u>	
Traffic Count Data Sheets	A-109 thru A-116
Intersection Data Sheets	A-117 thru A-122

APPENDIX



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





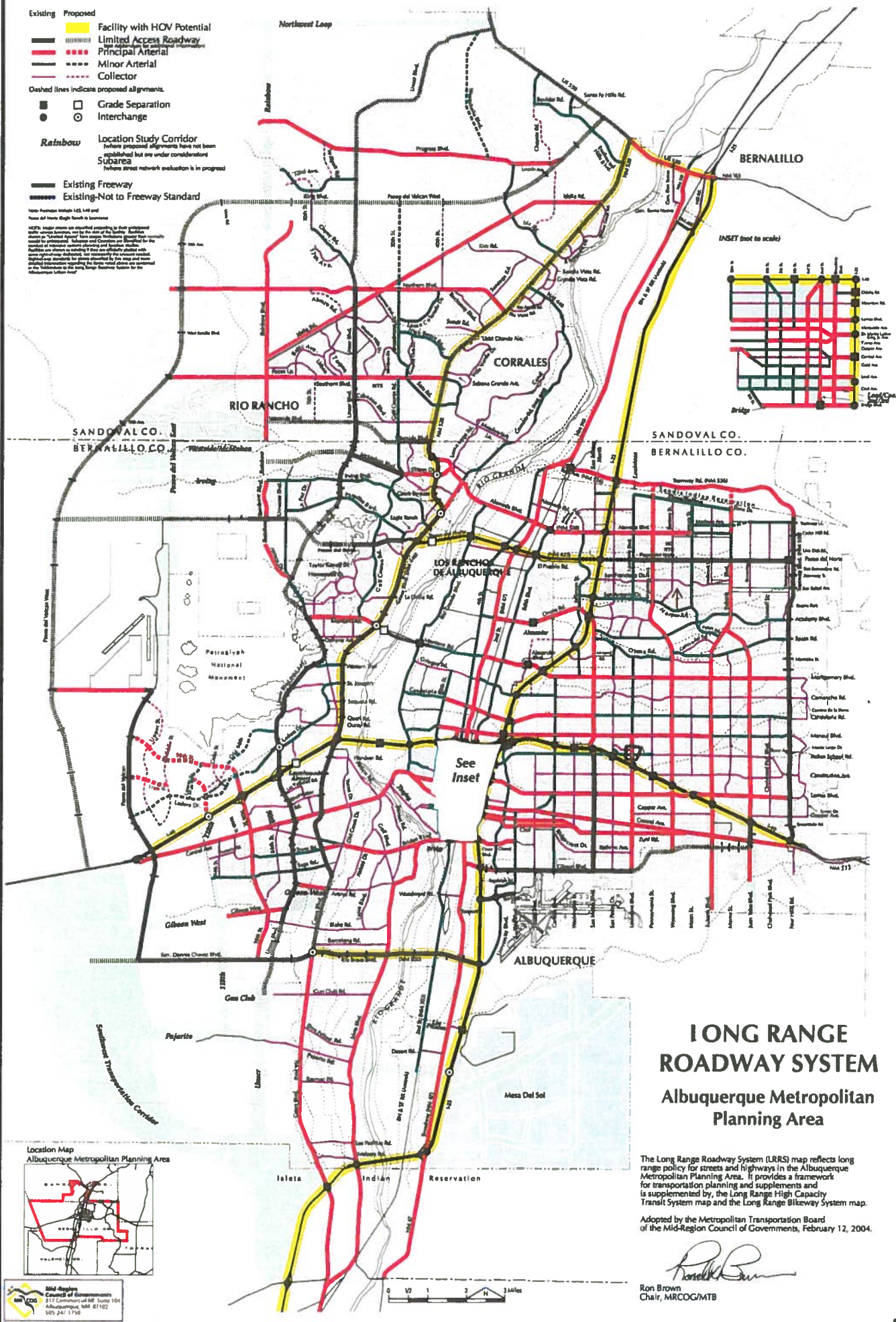
Titan Development
Schematic Site Plan 4: Candelaria and University

	Area	Parking Requirements
Restaurant	6,500sf	66
Hotel	70 rooms	70
Hotel	60 rooms	50
Total Building Area	6,500sf excluding hotels	
Parking Required		186
Parking Provided		198

- Existing Proposed
- Facility with HOV Potential
 - Limited Access Roadway
 - Principal Arterial
 - Minor Arterial
 - Collector
- Dashed lines indicate proposed alignments.
- Grade Separation
 - Interchange
- Rainbow** Location Study Corridor
 Future proposed alignments have not been established but are under consideration
 Subarea
 Future street network evaluation is in progress
- Existing Freeway
 Existing-Not to Freeway Standard

Note: Portions within 1/2 mile of
 future proposed alignments are shown in yellow.

NOTE: Major streets are classified according to their functional use and are shown in the following colors: Principal Arterial (red), Minor Arterial (orange), Collector (yellow), and Local (green). The color of the street indicates its functional use, not its physical location. The color of the street also indicates its functional use, not its physical location. The color of the street also indicates its functional use, not its physical location.



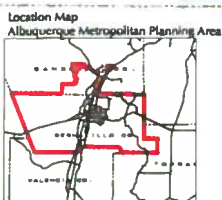
LONG RANGE ROADWAY SYSTEM

Albuquerque Metropolitan Planning Area

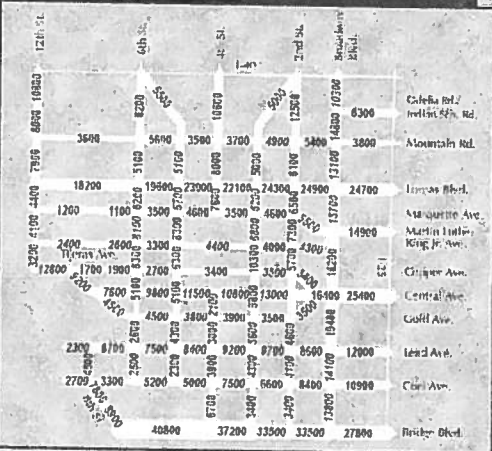
The Long Range Roadway System (LRRS) map reflects long range policy for streets and highways in the Albuquerque Metropolitan Planning Area. It provides a framework for transportation planning and supplements and is supplemented by the Long Range High Capacity Transit System map and the Long Range Bikeway System map.

Adopted by the Metropolitan Transportation Board of the Mid-Region Council of Governments, February 12, 2004.

Ron Brown
 Ron Brown
 Chair, MRCOG/MTB



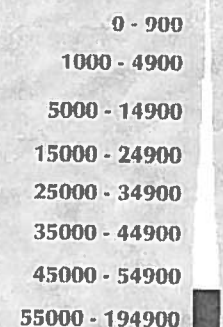
Inset for Downtown



Inset for Uptown

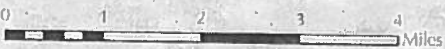


Average Weekday Traffic Flows

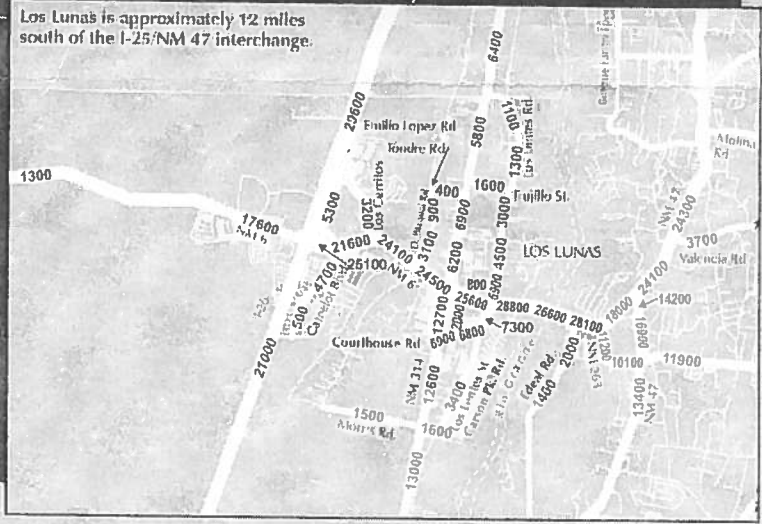


Standard Data 9500 Link Volume is based on traffic count data accepted by the NM Department of Transportation Traffic Monitoring System (TMS) as standard in accordance with the New Mexico State Traffic Monitoring Standards (NMSTMS).

on-Standard Data 9500 Link Volume is based either on traffic count data not in compliance with the NMSTMS or on professional judgement. NMOT recommends that nonstandard data be used with caution.



Inset for Los Lunas, Valencia County



2006 Traffic Flows for the Greater Albuquerque Area

Map prepared by the Mid-Region Council of Governments 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.

Candelaria / University Commercial Development

Trip Generation Data

USE (ITE CODE)	DESCRIPTION	24 HR VOL		A. M. PEAK HR.		P. M. PEAK HR.	
		GROSS		ENTER	EXIT	ENTER	EXIT
Summary Sheet		Units					
Motel (320)		70.00	621	16	29	23	20
Motel (320)		70.00	621	16	29	23	20
High Turnover (Sit-Down) Restaurant (932)		6.50	826	39	36	43	28
Subtotal			2,068	71	94	89	68

Candelaria / University Commercial Development

Trip Generation Data

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Units					
70.00		621	16	29	20
Occupied Rooms					

Motel (320)

Motel (320)

ITE Trip Generation Equations:

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

$$\ln(T) = 0.973 \ln(X) + 2.298$$

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)

$$\ln(T) = 0.897 \ln(X) + -0.013$$

36% Enter, 64% Exit

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

$$T = 0.532 (X) + 5.947$$

53% Enter, 47% Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition

Candelaria / University Commercial Development **Trip Generation Data**

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Units					
Motel (320)	621	16	29	23	20
Occupied Rooms					

ITE Trip Generation Equations:

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

$$\ln(T) = 0.973 \ln(X) + 2.298$$

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)

$$\ln(T) = 0.897 \ln(X) + -0.013$$

36% Enter, 64% Exit

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

$$T = 0.532 (X) + 5.947$$

53% Enter, 47% Exit

Comments:
 Tract No.

Based on ITE Trip Generation Manual - 7th Edition

Candelaria / University Commercial Development **Trip Generation Data**

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Units					
6.50					
1,000 S.F.					
		826	39	43	28

High Turnover (Sit-Down) Restaurant (932)

ITE Trip Generation Equations:

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

$$T = \frac{127.15 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

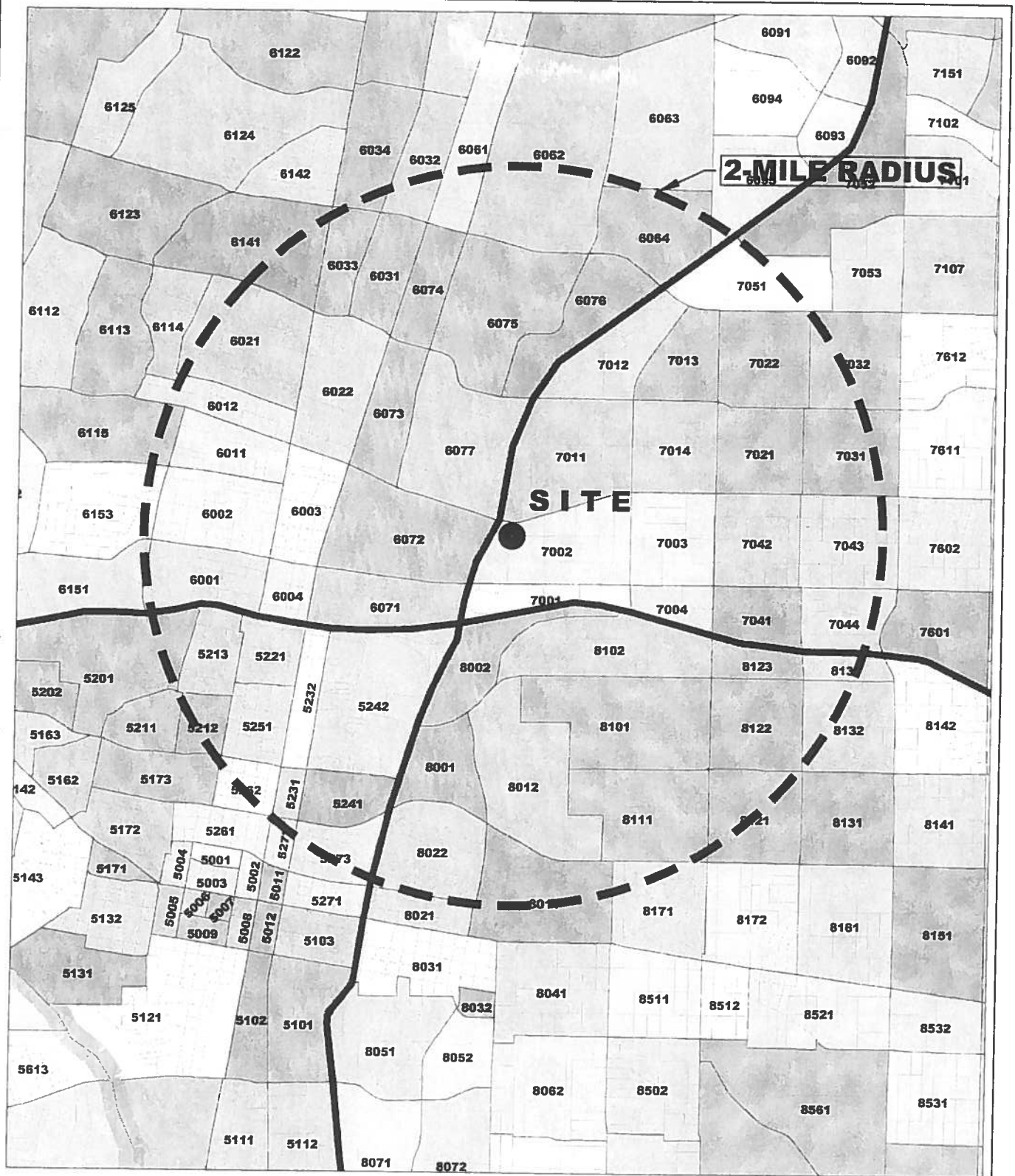
$$T = \frac{11.52 (X) + 0}{52\% \text{ Enter, } 48\% \text{ Exit}}$$

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

$$T = \frac{10.92 (X) + 0}{61\% \text{ Enter, } 39\% \text{ Exit}}$$

Comments:
 Tract No.

Based on ITE Trip Generation Manual - 7th Edition



DATA ANALYSIS SUBZONE (DASZ) MAP
Candelaria / University Project (Candelaria Rd. / University Blvd.)

Trip Distribution Table
Candelaria / University Project

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

2004 and 2030 Data Taken from Mid-Region Council of Governments' 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

										(CW)				(25N)				(CLE)			
										Candelaria Rd. W.				I-25 SE Fring. Rd. N.				Claremont E.			
DASZ #	% Sub Area In Study	2004 Population	2030 Population	Interpolated Population for the Year 2010	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map																					
5201	10%	478	1248	656	66	0.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5212	60%	611	638	617	370	0.917%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5262	50%	99	93	98	49	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5272	10%	0	83	19	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5273	60%	418	434	422	253	0.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5213	100%	279	279	279	279	0.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5221	100%	4	3	4	4	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5251	100%	265	271	266	266	0.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5232	100%	33	32	33	33	0.09%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5231	100%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5242	100%	1274	1192	1255	1,255	3.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5241	100%	502	507	503	503	1.31%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8002	100%	422	524	446	446	1.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8001	100%	19	273	78	78	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8022	100%	1083	1423	1,161	1,161	3.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8102	100%	1462	1378	1,443	1,443	3.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8101	100%	2346	2176	2,307	2,307	6.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8012	100%	466	471	467	467	1.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8111	100%	1772	1643	1,742	1,742	4.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8011	60%	2027	1998	2,020	1,212	3.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8171	15%	1020	974	1,009	151	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8123	100%	471	435	463	463	1.21%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8122	100%	1241	1168	1,224	1,224	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8121	50%	1229	1136	1,208	604	1.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8133	70%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8132	30%	1162	1076	1,142	343	0.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7051	50%	2889	2687	2,842	1,421	3.71%	0%	0.00%	0	100%	0.00%	0	100%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7012	100%	454	420	446	446	1.17%	0%	0.00%	0	100%	1.17%	1,421	0%	0.00%	446	0%	0.00%	0	0%	0.00%	0
7013	100%	1084	1031	1,072	1,072	2.80%	0%	0.00%	0	100%	2.80%	1,072	0%	0.00%	1,072	0%	0.00%	0	0%	0.00%	0
7022	100%	1690	1570	1,662	1,662	4.34%	0%	0.00%	0	100%	4.34%	1,662	0%	0.00%	1,662	0%	0.00%	0	0%	0.00%	0
7032	40%	1648	1541	1,623	649	1.70%	0%	0.00%	0	100%	1.70%	649	0%	0.00%	649	0%	0.00%	0	0%	0.00%	0
7011	100%	13	12	13	13	0.03%	0%	0.00%	0	10%	0.00%	1	0%	0.00%	1	0%	0.00%	0	0%	0.00%	0
7014	100%	1946	1807	1,914	1,914	5.00%	0%	0.00%	0	10%	0.50%	191	0%	0.00%	191	0%	0.00%	0	0%	0.00%	0
7021	100%	1282	1185	1,260	1,260	3.29%	0%	0.00%	0	40%	1.32%	504	0%	0.00%	504	0%	0.00%	0	0%	0.00%	0
7031	80%	1956	1815	1,923	1,538	4.02%	0%	0.00%	0	50%	2.01%	769	0%	0.00%	769	0%	0.00%	0	0%	0.00%	0
7002	100%	5	0	4	4	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	10%	0.00%	0	0%	0.00%	0
7003	100%	87	79	85	85	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7042	100%	1110	1028	1,091	1,091	2.85%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7043	90%	1467	1360	1,442	1,298	3.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7001	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7004	100%	2	2	2	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7041	100%	182	166	178	178	0.47%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7044	90%	13	15	13	12	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6141	30%	2004	1951	1,992	598	1.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6021	90%	2191	2065	2,162	1,946	5.09%	0%	0.00%	0	50%	0.78%	299	0%	0.00%	299	0%	0.00%	0	0%	0.00%	0
6012	90%	916	902	913	822	2.15%	0%	0.00%	0	50%	1.07%	411	0%	0.00%	973	0%	0.00%	0	0%	0.00%	0
6011	100%	553	564	556	556	1.45%	10%	0.15%	561	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6115	5%	1105	1246	1,138	57	0.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6153	5%	1555	1497	1,542	77	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6002	100%	1395	1295	1,372	1,372	3.59%	10%	0.36%	137	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6001	100%	576	545	569	569	1.49%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6034	100%	561	531	554	554	1.45%	0%	0.00%	0	100%	1.45%	554	0%	0.00%	554	0%	0.00%	0	0%	0.00%	0
6033	5%	460	484	466	23	0.06%	0%	0.00%	0	100%	0.06%	23	0%	0.00%	23	0%	0.00%	0	0%	0.00%	0
6032	10%	661	671	663	66	0.17%	0%	0.00%	0	100%	0.17%	66	0%	0.00%	66	0%	0.00%	0	0%	0.00%	0
6031	100%	384	386	431	431	1.13%	0%	0.00%	0	100%	0.13%	431	0%	0.00%	431	0%	0.00%	0	0%	0.00%	0
6022	100%	1078	1105	1,084	1,084	2.83%	0%	0.00%	0	100%	1.13%	431	0%	0.00%	431	0%	0.00%	0	0%	0.00%	0
6003	100%	710	746	718	718	1.88%	45%	0.84%	323	0%	2.83%	1,084	0%	0.00%	1,084	0%	0.00%	0	0%	0.00%	0
6004	100%	113	123	123	123	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6061	20%	405	359	394	79	0.21%	0%	0.00%	0	100%	0.21%	79	0%	0.00%	79	0%	0.00%	0	0%	0.00%	0
6074	100%	52	40	49	49	0.13%	0%	0.00%	0	100%	0.13%	49	0%	0.00%	49	0%	0.00%	0	0%	0.00%	0
6073	100%	47	45	47	47	0.12%	0%	0.00%	0	100%	0.12%	47	0%	0.00%	47	0%	0.00%	0	0%	0.00%	0
6072	100%	231	660	330	330	0.86%	40%	0.34%	132	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6071	100%	398	369	391	391	1.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6077	100%	382	378	381	381	1.00%	10%	0.10%	38	90%	0.90%	343	0%	0.00%	343	0%	0.00%	0	0%	0.00%	0
6075	100%	1001	93	98	98	0.26%	0%	0.00%	0	100%	0.26%	98	0%	0.00%	98	0%	0.00%	0	0%	0.00%	0
6076	100%	3	0	2	2	0.01%	0%	0.00%	0	100%	0.01%	2	0%	0.00%	2	0%	0.00%	0	0%	0.00%	0
6062	40%	1338	1244	1,316	526	1.37%	0%	0.00%	0	100%	1.37%	526	0%	0.00%	526	0%	0.00%	0	0%	0.00%	0

Trip Distribution Table
Candelaria / University Project

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

2004 and 2030 Data Taken from Mid-Region Council of Governments' 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

						(CE)			(ME)			(40E)		
						Candelaria Rd. E.			Mainau Blvd. E.			I-40 WB Frntg. Rd. E.		
DASZ #	% Sub Area In Study	2004 Population	2030 Population	Interpolated Population for the Year 2010	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
Boundary Specified on DASZ Map														
5201	10%	478	1248	656	66	0.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5212	60%	611	638	617	370	0.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5262	50%	99	93	98	49	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5272	10%	0	83	19	2	0.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5273	60%	418	434	422	253	0.66%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5213	100%	279	279	279	279	0.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5221	100%	4	3	4	4	0.1%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5251	100%	265	271	266	266	0.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5232	100%	33	32	33	33	0.09%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5231	100%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5242	100%	1274	1192	1255	1255	3.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5241	100%	502	507	503	503	1.31%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8002	100%	422	524	446	446	1.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8001	100%	19	273	78	78	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8022	100%	1083	1423	1161	1161	3.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8102	100%	1462	1378	1443	1443	3.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8101	100%	2346	2176	2307	2307	6.03%	0%	0.00%	0	0%	0.00%	0	95%	3.73%
8012	100%	466	471	467	467	1.22%	0%	0.00%	0	0%	0.00%	0	30%	0.37%
8111	100%	1772	1643	1742	1742	4.55%	0%	0.00%	0	0%	0.00%	0	50%	2.28%
8011	60%	2027	1998	2020	1212	3.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
8171	15%	1020	974	1009	151	0.39%	0%	0.00%	0	0%	0.00%	0	50%	0.00%
8123	100%	471	435	463	463	1.21%	0%	0.00%	0	0%	0.00%	0	100%	1.21%
8122	100%	1241	1168	1224	1224	3.20%	0%	0.00%	0	0%	0.00%	0	100%	3.20%
8121	50%	1229	1136	1208	604	1.58%	0%	0.00%	0	0%	0.00%	0	100%	1.58%
8133	70%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	100%	0.90%
8132	30%	1162	1076	1142	343	0.90%	0%	0.00%	0	0%	0.00%	0	100%	0.90%
7051	50%	2889	2687	2842	1421	3.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7012	100%	454	420	446	446	1.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7013	100%	1084	1031	1072	1072	2.80%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7022	100%	1690	1570	1662	1662	4.34%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7032	40%	1648	1541	1623	649	1.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7011	100%	13	12	13	13	0.03%	0%	0.00%	12	0%	0.00%	0	0%	0.00%
7014	100%	1946	1807	1914	1914	5.00%	90%	4.50%	1,723	0%	0.00%	0	0%	0.00%
7021	100%	1282	1185	1260	1260	3.29%	20%	0.66%	292	0%	0.00%	0	40%	1.32%
7031	80%	1956	1815	1923	1,538	4.02%	0%	0.00%	0	0%	0.00%	0	50%	2.01%
7002	100%	5	0	4	4	0.01%	30%	0.00%	1	30%	0.00%	1	0%	0.00%
7003	100%	87	79	85	85	0.22%	0.07%	0.00%	26	0.07%	0.00%	26	40%	0.09%
7042	100%	1110	1028	1,091	1,091	2.85%	0.57%	0.57%	218	20%	0.57%	218	60%	1.71%
7043	90%	1467	1360	1,442	1,298	3.39%	10%	0.34%	130	10%	0.34%	130	80%	2.71%
7001	100%	0	0	0	0	0.00%	0%	0.00%	0	25%	0.00%	0	50%	0.00%
7004	100%	2	2	2	2	0.01%	0%	0.00%	0	20%	0.00%	0	60%	0.00%
7041	100%	182	166	178	178	0.47%	0%	0.00%	0	18%	0.05%	18	80%	0.37%
7044	90%	13	15	13	12	0.03%	0%	0.00%	0	0%	0.00%	0	100%	0.03%
6141	30%	2004	1951	1,992	598	1.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6021	90%	2191	2055	2,162	1,946	5.09%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6012	90%	916	902	913	822	2.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6011	100%	553	564	556	556	1.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6115	5%	1105	1246	1,138	57	0.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6153	5%	1555	1497	1,542	77	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6002	100%	1385	1295	1,372	1,372	3.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6001	100%	576	545	569	569	1.49%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6033	100%	561	531	554	554	1.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6034	5%	460	484	466	23	0.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6032	10%	661	671	663	66	0.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6031	100%	384	586	431	431	1.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6022	100%	1078	1105	1,084	1,084	2.83%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6003	100%	710	746	718	718	1.88%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6004	100%	113	123	123	123	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6061	20%	405	359	394	79	0.21%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6074	100%	52	40	49	49	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6073	100%	47	45	47	47	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6072	100%	231	660	330	330	0.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6071	100%	398	369	391	391	1.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6077	100%	382	378	381	381	1.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6075	100%	100	93	98	98	0.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6076	100%	3	0	2	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6062	40%	1338	1244	1,316	526	1.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6064	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%
						51.725	38.267	100.00%	2,361	6.17%	393	1.03%	10,591	27.68%

Trip Distribution Table
Candelaria / University Project

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

2004 and 2030 Data Taken from Mid-Region Council of Governments 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #		% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year 2010	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
Boundary Specified on DASZ Map			2004	2030															
5201	10%	478	1248	656	66	0.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%
5212	60%	611	638	617	370	0.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%
5262	50%	99	93	98	49	0.13%	0%	0.00%	0	90%	0.12%	44	0%	0.00%	0	10%	0.01%	5	370
5272	10%	0	83	19	2	0.01%	0%	0.00%	0	100%	0.01%	2	0%	0.00%	0	0%	0.00%	0	0
5273	60%	418	434	422	253	0.66%	0%	0.00%	0	100%	0.66%	253	0%	0.00%	0	0%	0.00%	0	0
5213	100%	279	279	279	279	0.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
5221	100%	4	3	4	4	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.73%	279	0
5251	100%	265	271	266	266	0.70%	0%	0.00%	0	15%	0.10%	40	0%	0.00%	0	100%	0.73%	279	4
5232	100%	33	32	33	33	0.09%	0%	0.00%	0	20%	0.02%	7	0%	0.00%	0	85%	0.59%	226	26
5231	100%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.07%	26	1
5242	100%	1274	1192	1,255	1,255	3.28%	0%	0.00%	0	50%	1.64%	628	0%	0.00%	0	50%	1.64%	628	628
5241	100%	502	507	503	503	1.31%	0%	0.00%	0	100%	1.31%	503	0%	0.00%	0	0%	0.00%	0	0
8002	100%	422	524	446	446	1.17%	0%	0.00%	0	50%	0.58%	223	0%	0.00%	0	0%	0.00%	0	0
8001	100%	19	273	78	78	0.20%	0%	0.00%	0	100%	0.20%	78	0%	0.00%	0	0%	0.00%	0	0
8022	100%	1083	1423	1,161	1,161	3.03%	0%	0.00%	0	100%	3.03%	1,161	0%	0.00%	0	0%	0.00%	0	0
8102	100%	1462	1378	1,443	1,443	3.77%	0%	0.00%	0	10%	0.38%	144	0%	0.00%	0	0%	0.00%	0	0
8101	100%	2346	2176	2,307	2,307	6.03%	0%	0.00%	0	5%	0.30%	115	0%	0.00%	0	0%	0.00%	0	0
8012	100%	466	471	467	467	1.22%	0%	0.00%	0	70%	0.85%	327	0%	0.00%	0	0%	0.00%	0	0
8111	100%	1772	1643	1,742	1,742	4.55%	0%	0.00%	0	50%	2.28%	871	0%	0.00%	0	0%	0.00%	0	0
8171	15%	2027	1998	2,020	2,121	3.17%	0%	0.00%	0	100%	3.17%	1,212	0%	0.00%	0	0%	0.00%	0	0
8123	100%	471	435	463	463	1.21%	0%	0.00%	0	50%	0.20%	76	0%	0.00%	0	0%	0.00%	0	0
8122	100%	1241	1168	1,224	1,224	3.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
8121	50%	1229	1136	1,208	604	1.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
8133	70%	1	0	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
8132	30%	1162	1076	1,142	343	0.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7051	50%	2889	2687	2,842	1,421	3.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7012	100%	454	420	446	446	1.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7013	100%	1084	1031	1,072	1,072	2.80%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7022	100%	1690	1570	1,662	1,662	4.34%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7032	40%	1648	1541	1,623	649	1.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7011	100%	13	12	13	13	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7014	100%	1946	1807	1,914	1,914	5.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7021	100%	1282	1185	1,260	1,260	3.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7031	80%	1956	1815	1,923	1,538	4.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7002	100%	5	0	4	4	0.01%	30%	0.00%	1	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7003	100%	87	79	85	85	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7042	100%	1110	1028	1,091	1,091	2.85%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7043	90%	1467	1360	1,442	1,298	3.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7001	100%	0	0	0	0	0.00%	25%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7004	100%	2	2	2	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7041	100%	182	166	178	178	0.47%	10%	0.00%	18	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
7044	90%	13	15	13	12	0.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6141	30%	2004	1951	1,992	598	1.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6021	90%	2191	2065	2,162	1,946	5.09%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	0.78%	299	0
6012	90%	916	902	913	822	2.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	2.54%	973	0
6011	100%	563	564	556	556	1.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	1.07%	411	0
6115	5%	1105	1246	1,138	57	0.15%	0%	0.00%	0	10%	0.15%	56	0%	0.00%	0	80%	1.16%	445	0
6153	5%	1555	1497	1,542	77	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.15%	57	0
6002	100%	1395	1295	1,372	1,372	3.59%	0%	0.00%	0	0%	0.00%	0	10%	0.36%	137	100%	0.20%	77	0
6001	100%	576	545	569	569	1.49%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	80%	2.87%	1,098	0
6033	100%	531	554	554	554	1.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	1.49%	569	0
6034	5%	460	484	466	23	0.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6032	10%	661	671	663	66	0.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6031	100%	384	586	431	431	1.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6022	100%	1078	1105	1,084	1,084	2.83%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6003	100%	710	746	718	718	1.88%	10%	0.19%	72	0%	0.00%	0	45%	0.84%	323	0%	0.00%	0	0
6004	100%	113	155	123	123	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6061	20%	405	359	394	79	0.21%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.32%	123	0
6074	100%	52	40	49	49	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6073	100%	47	45	47	47	0.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0
6072	100%	231	660	330	330	0.86%	10%	0.09%	33										

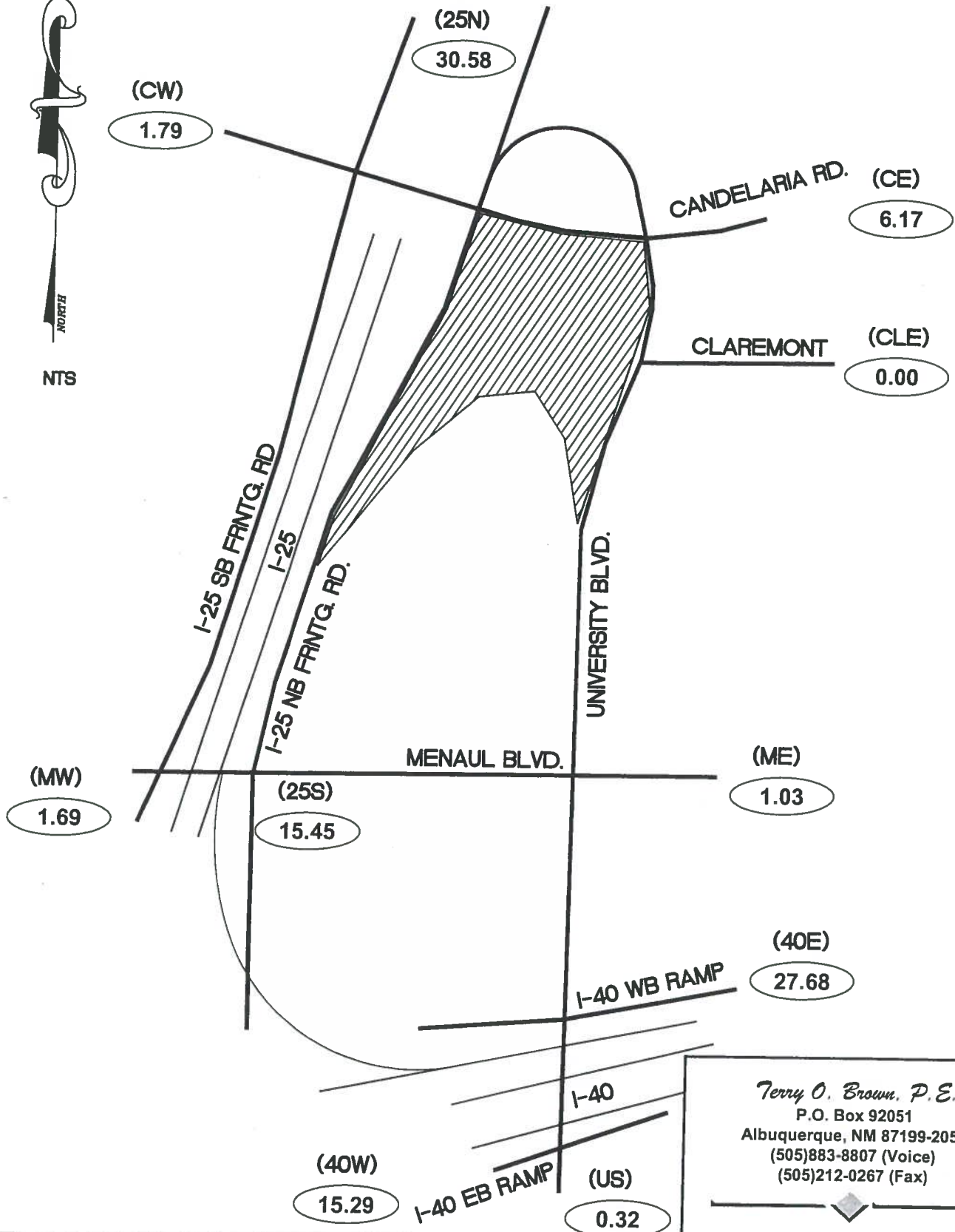
Candelaria / University Project

(Candelaria Rd. / University Blvd.)

Trip Distribution Map (%)



NTS

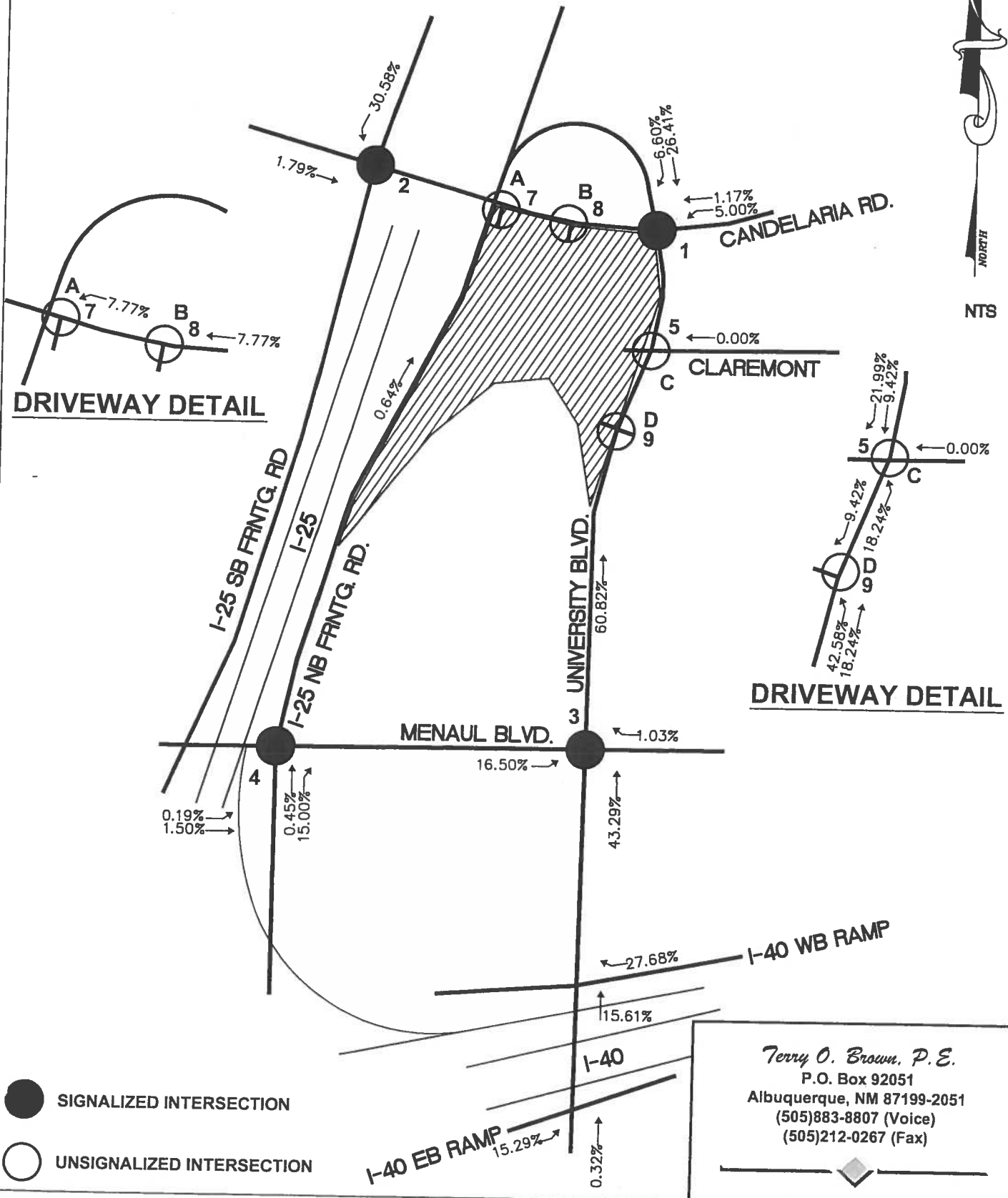


Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

Candelaria / University Project

(Candelaria Rd. / University Blvd.)

Trip Assignments (% Entering)



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

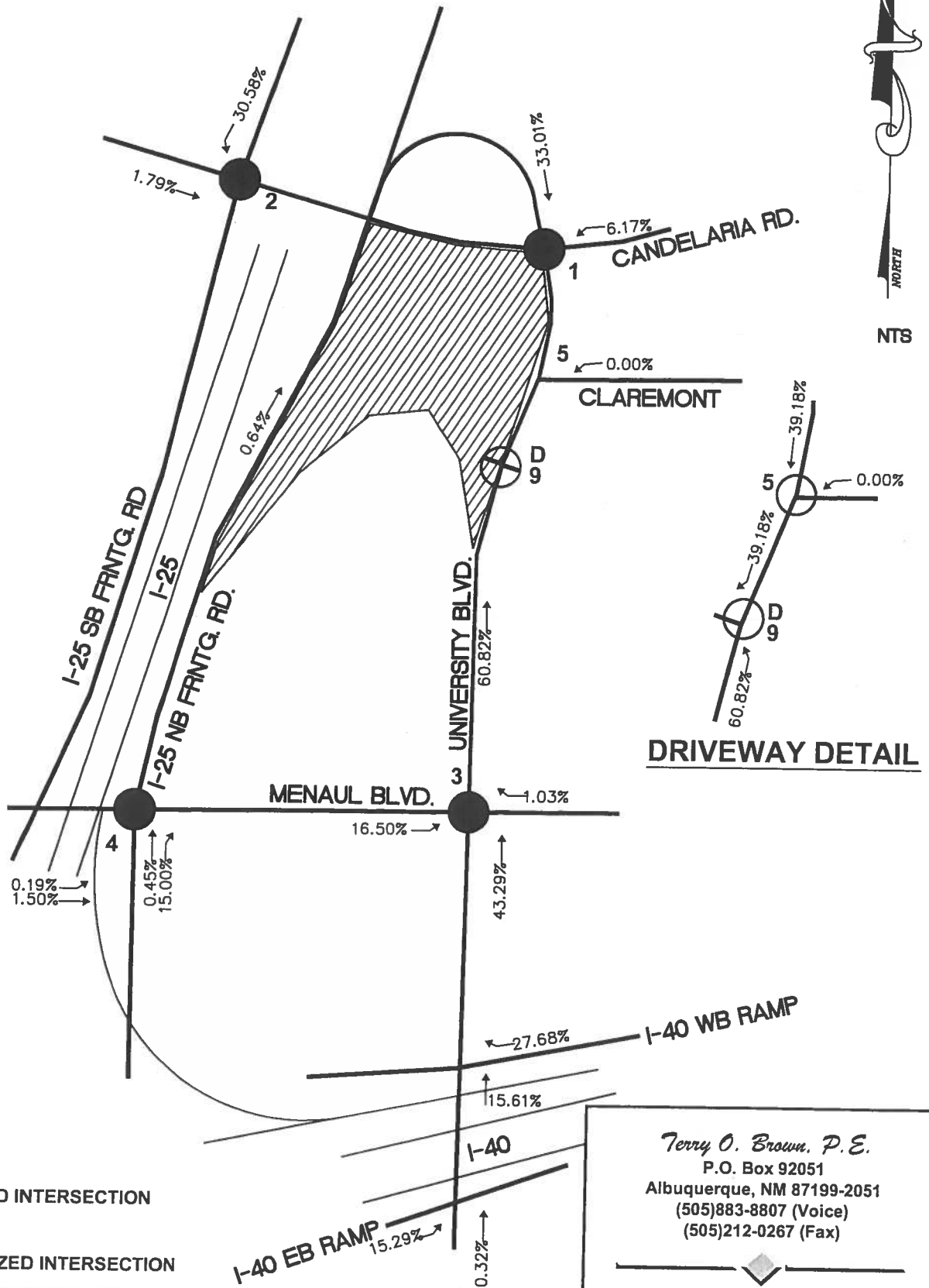
Trip Assignments (% Exiting)



Candelaria / University Project

(Candelaria Rd. / University Blvd.)

Trip Assignments (% Entering) - CASE "N"



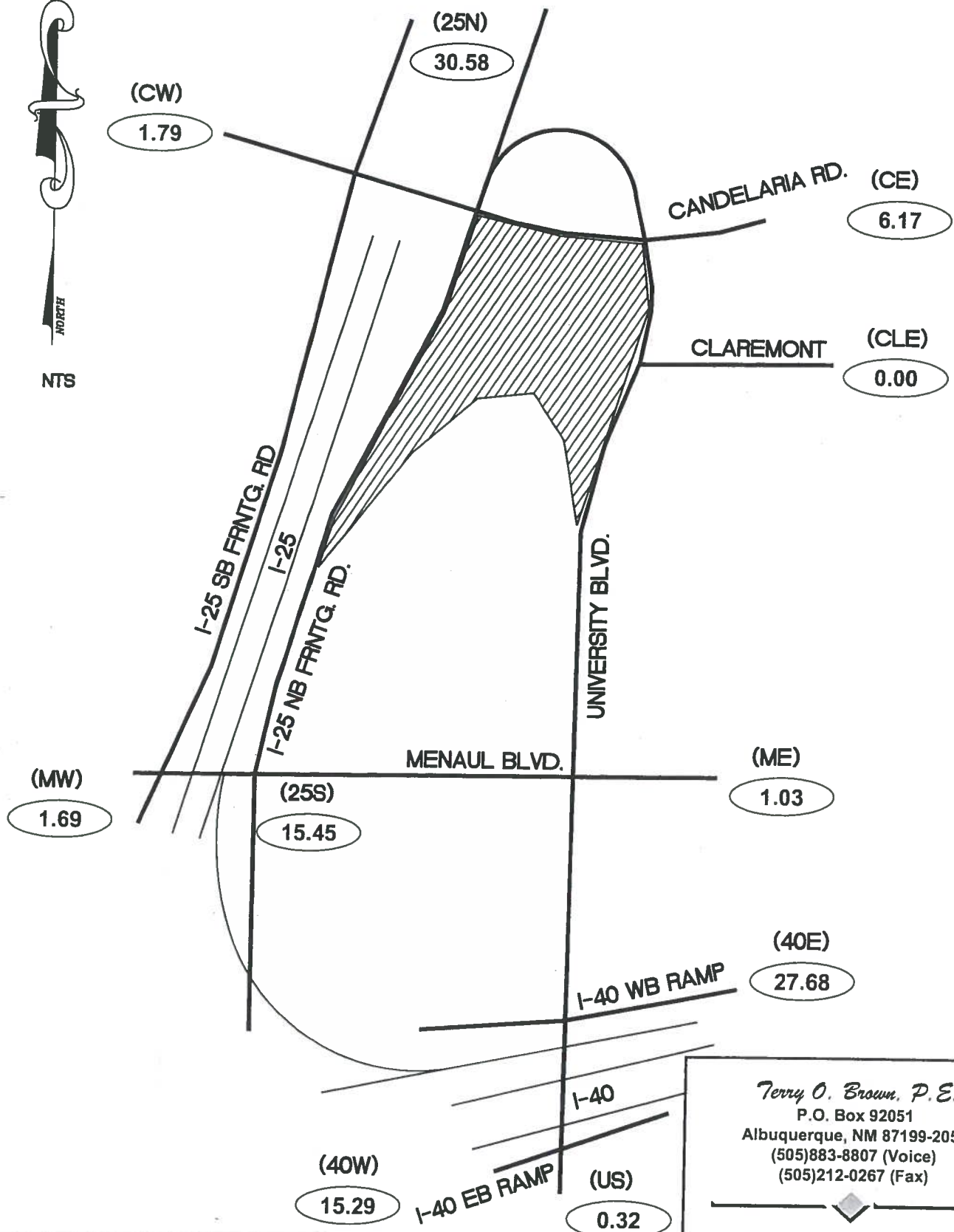
Candelaria / University Project

(Candelaria Rd. / University Blvd.)

Trip Distribution Map (%) - CASE "N"



NTS

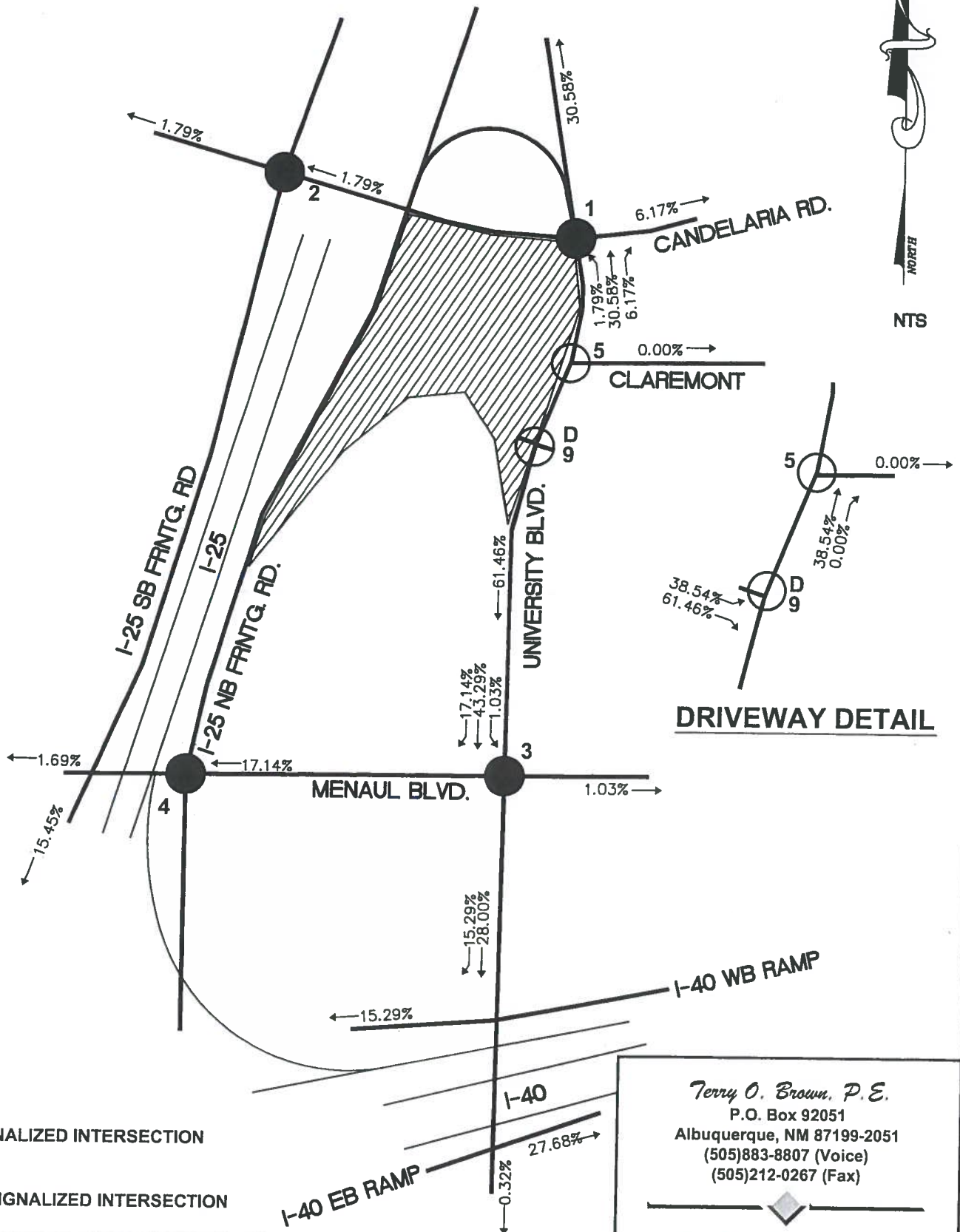


Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

Candelaria / University Project

(Candelaria Rd. / University Blvd.)

Trip Assignments (% Exiting) - CASE "N"

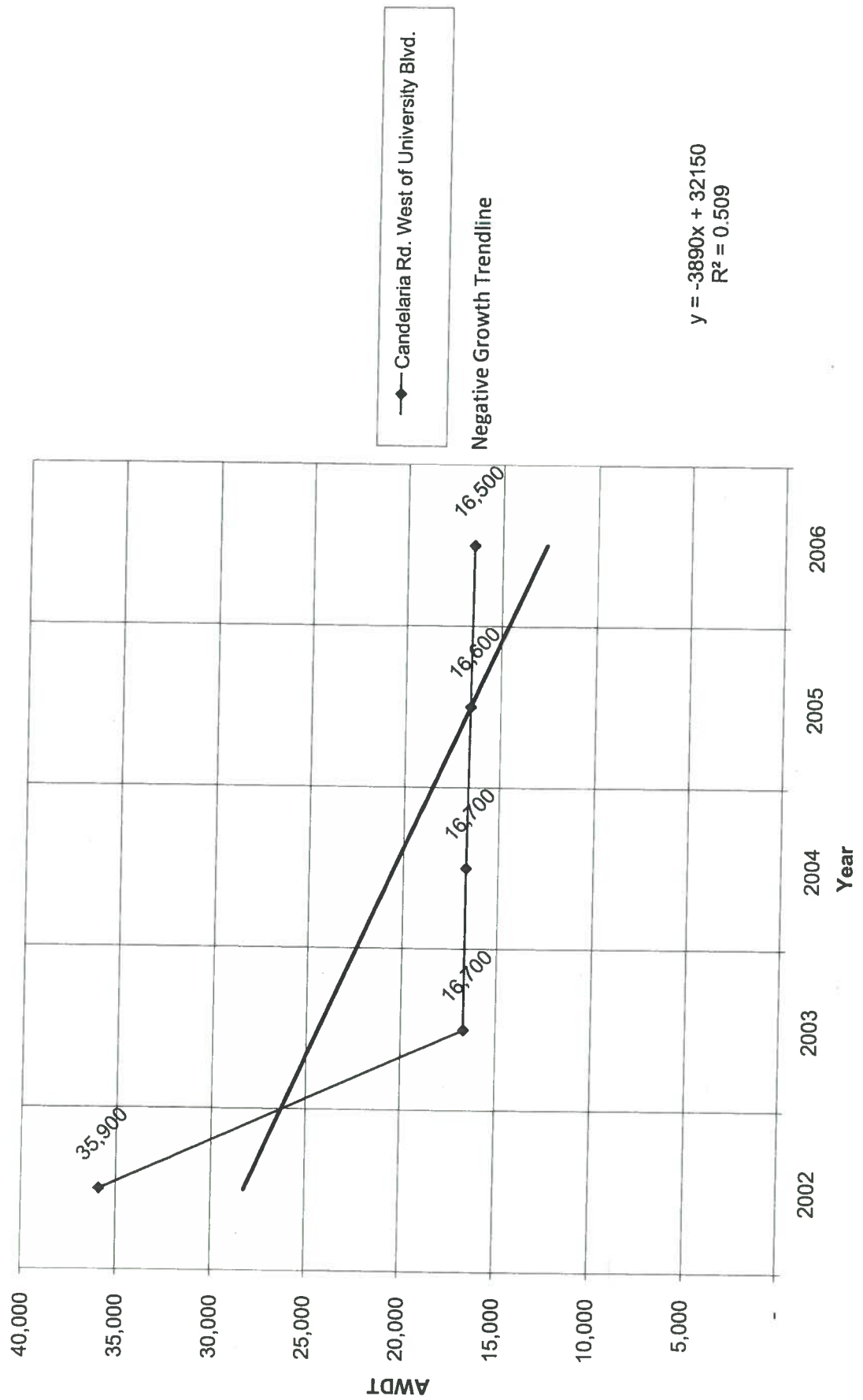


Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

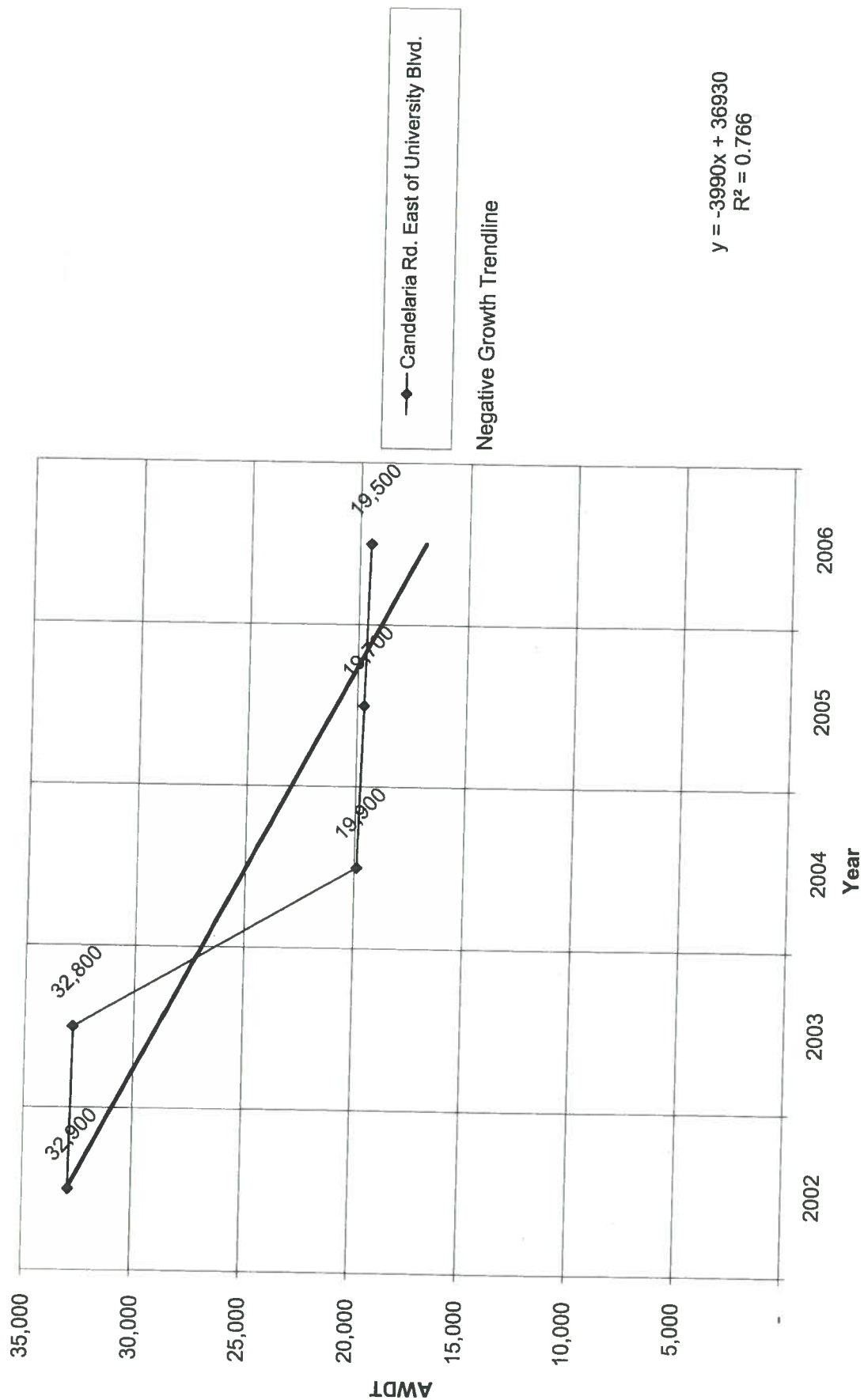
Traffic Flow Table for Candelaria / University Project (Candelaria Rd. / University Blvd.)

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
Candelaria Rd. West of University Blvd.	35,900	16,700	16,700	16,600	16,500
Candelaria Rd. East of University Blvd.	32,900	32,800	19,900	19,700	19,500
University Blvd. South of Candelaria Rd.	19,800	11,900	11,700	11,600	8,000
Menaul Blvd. West of University Blvd.	21,000	21,200	21,700	21,600	21,400
Menaul Blvd. East of University Blvd.	32,500	23,000	22,800	22,500	22,300
University Blvd. North of Menaul Blvd.	19,800	11,900	11,700	11,600	8,000
University Blvd. South of Menaul Blvd.	18,300	20,100	19,900	19,700	19,500

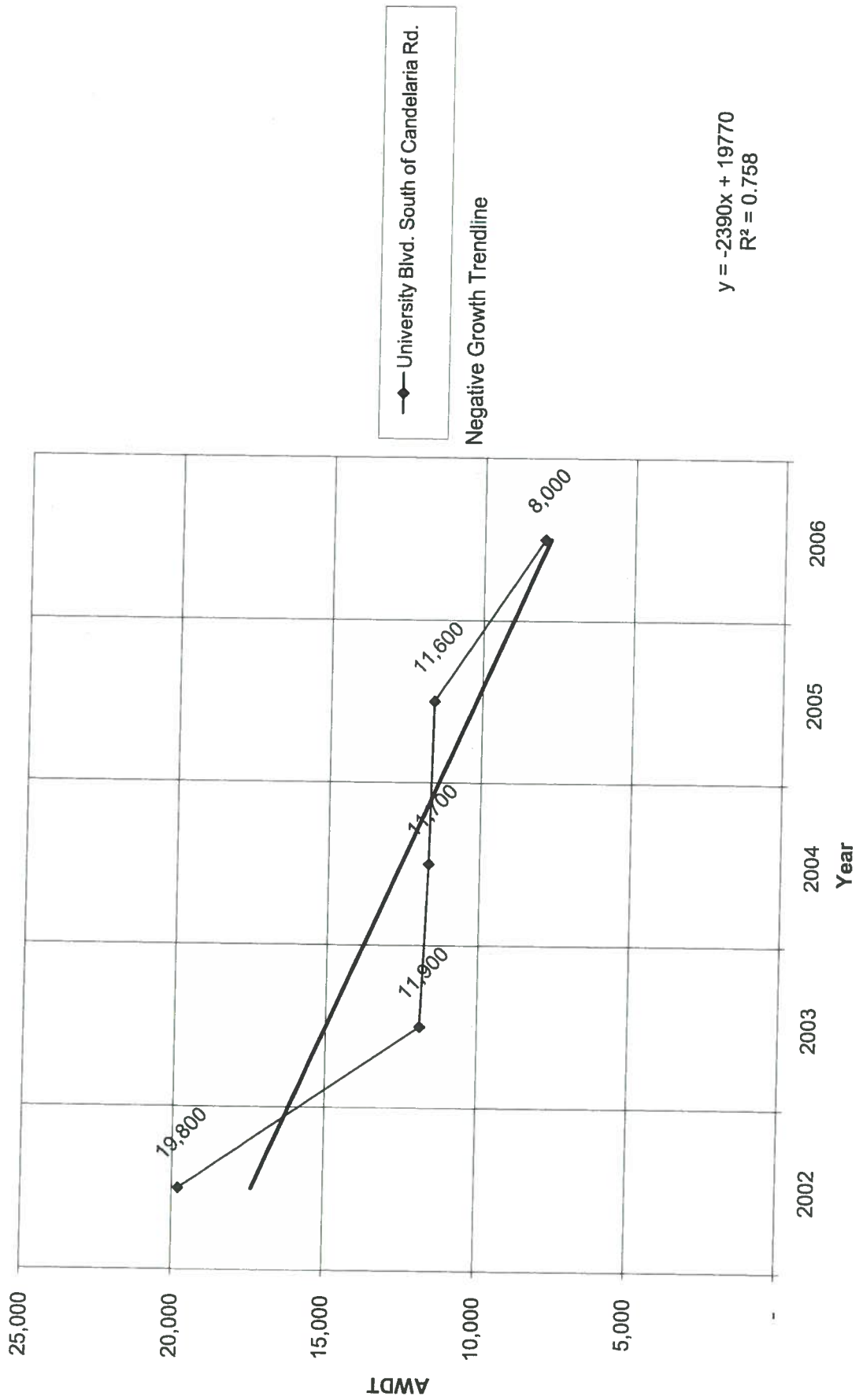
Growth Chart for Candelaria Rd. West of University Blvd.



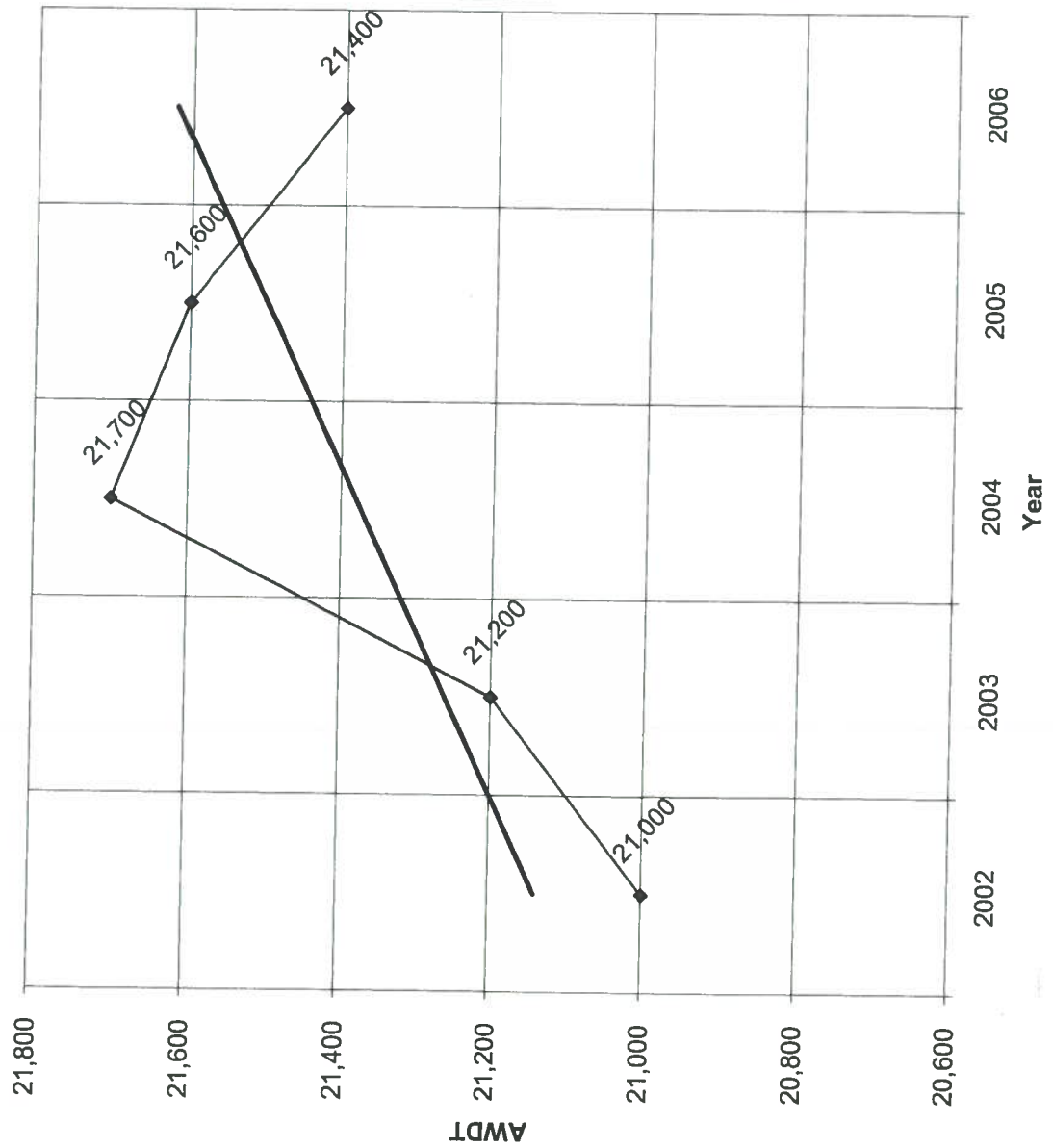
Growth Chart for Candelaria Rd. East of University Blvd.



Growth Chart for University Blvd. South of Candelaria Rd.



Growth Chart for Menaul Blvd. West of University Blvd.



—●— Menaul Blvd. West of University Blvd.

Annual Increase in Volume - 120 veh/day

Rate of Increase - 120 / 21,400

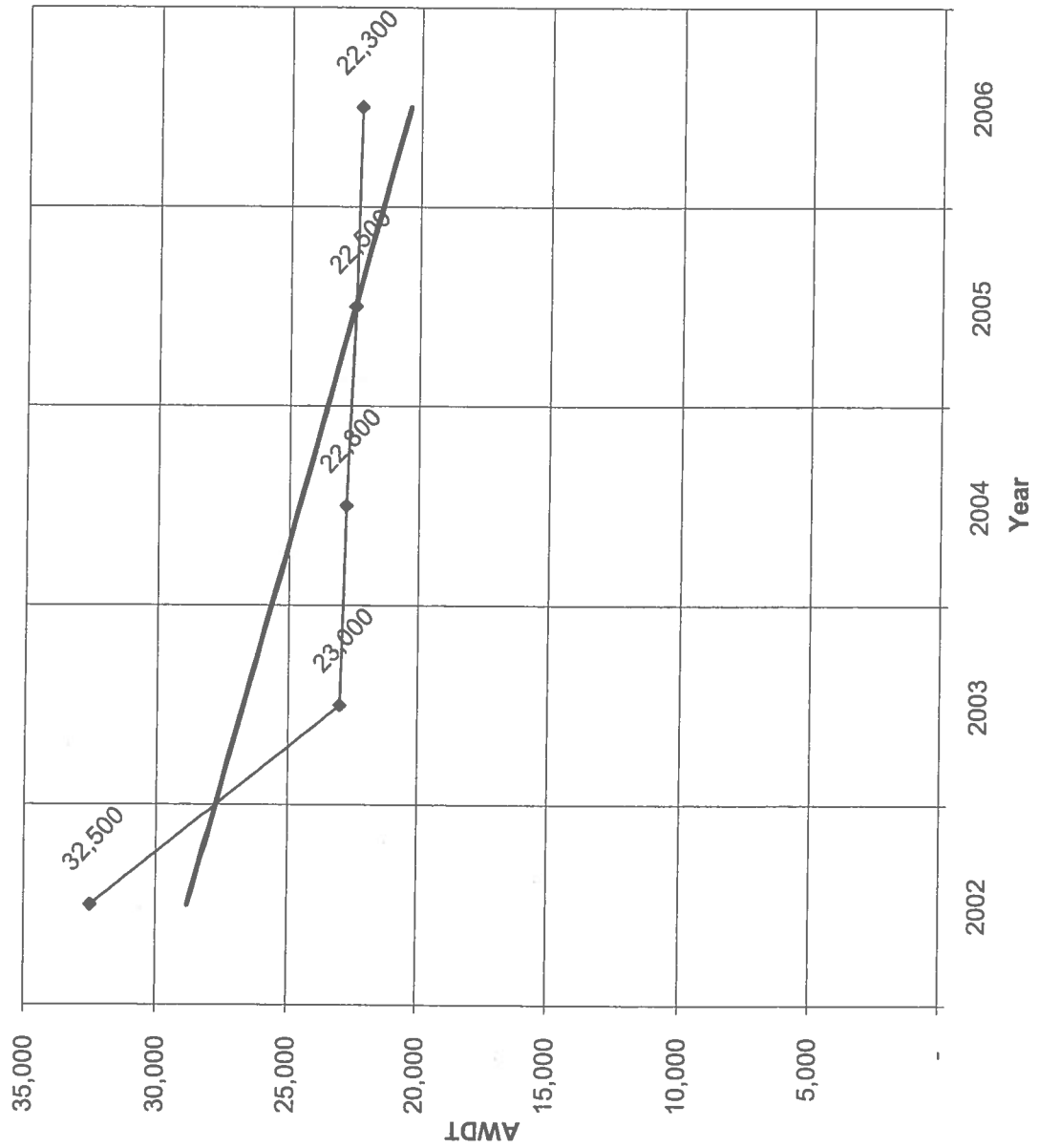
Growth Rate = 0.56%

Use 1.0% Growth Rate

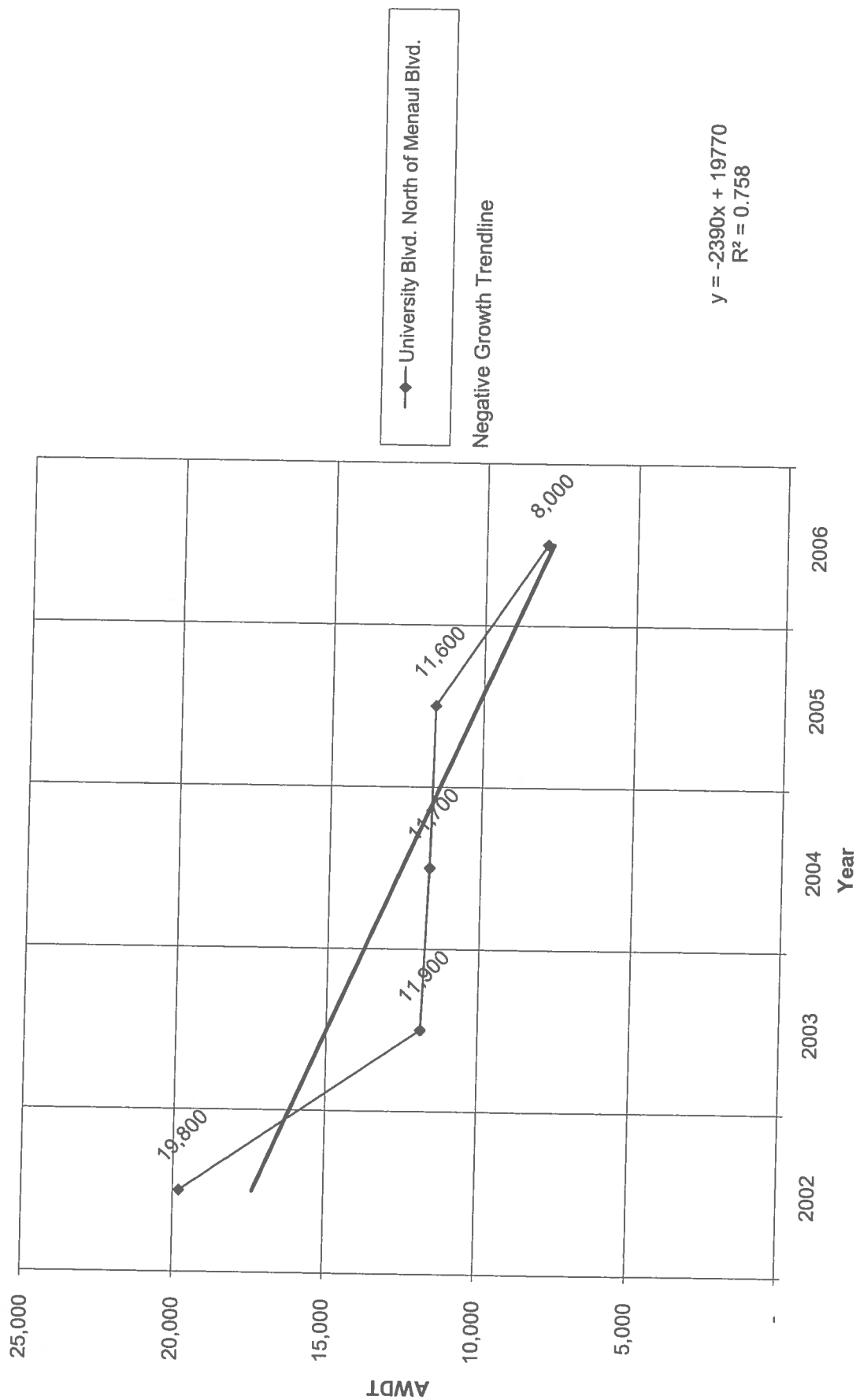
$$y = 120x + 21020$$

$$R^2 = 0.439$$

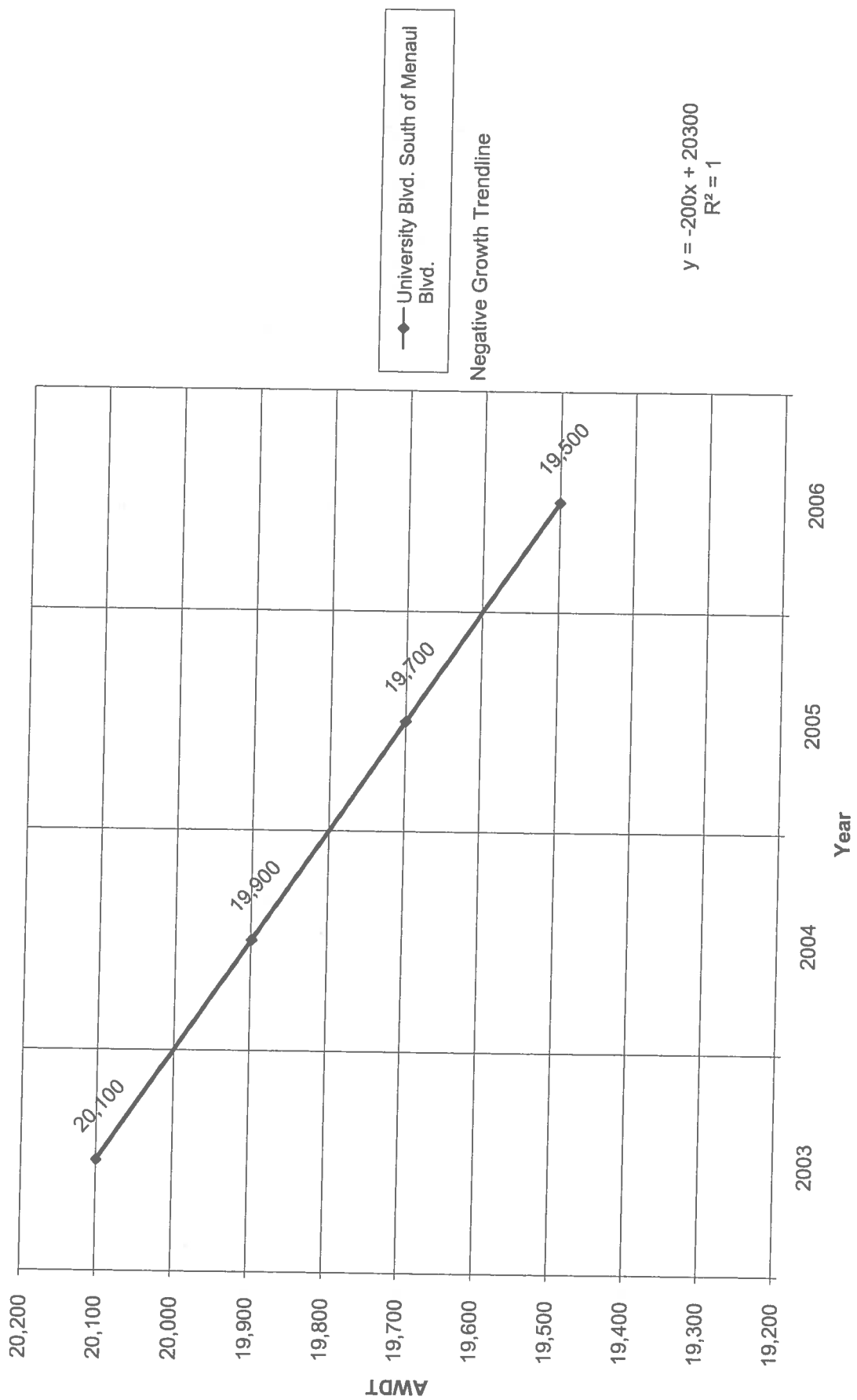
Growth Chart for Menaul Blvd. East of University Blvd.



Growth Chart for University Blvd. North of Menaul Blvd.



Growth Chart for University Blvd. South of Menaul Blvd.



Candelaria / University Project
Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2010) - 100% Development

INTERSECTION: Summary

Candelaria Rd. / University Blvd.

(1)	0.0% Truck	0.89			0.85			0.88			0.75			PHF
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		237	636	237	192	523	155	103	356	82	29	1	9	
Existing (2007)	2010 (NO BUILD - A.M.)	244	655	244	198	539	160	106	367	84	30	1	9	
		249	655	244	202	540	160	106	390	90	30	20	14	
		0.88			0.76			0.93			0.79			PHF
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		125	478	136	155	657	213	121	569	140	78	9	8	
Existing (2007)	2010 (NO BUILD - P.M.)	129	492	140	160	677	219	125	586	144	80	9	8	
		133	492	140	164	678	219	125	603	148	80	33	14	

Candelaria Rd. / I-25 SB Frmtg. Rd.

(2)	0.0% Truck	0.89			0.87			0.75			0.89			PHF
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Frmtg. Rd.)			Southbound (I-25 SB Frmtg. Rd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		0	799	142	115	484	0	0	0	0	199	520	136	
Existing (2007)	2010 (NO BUILD - A.M.)	0	823	146	118	499	0	0	0	0	205	536	140	
		0	824	146	118	501	0	0	0	0	227	536	140	
		0.90			0.91			0.75			0.91			PHF
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Frmtg. Rd.)			Southbound (I-25 SB Frmtg. Rd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		0	614	75	124	681	0	0	0	0	174	446	131	
Existing (2007)	2010 (NO BUILD - P.M.)	0	632	77	128	701	0	0	0	0	179	459	135	
		0	634	77	128	702	0	0	0	0	206	459	135	

Menaul Blvd. / University Blvd.

(3)	0.0% Truck	0.88			0.84			0.91			0.88			PHF
		Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		93	726	314	306	630	80	185	383	135	93	726	314	
Existing (2007)	2010 (NO BUILD - A.M.)	96	748	323	315	649	82	191	394	139	96	748	323	
		108	748	323	315	649	83	191	425	139	97	789	339	
		0.90			0.90			0.88			0.74			PHF
		Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		78	697	185	229	670	70	182	767	196	56	228	33	
Existing (2007)	2010 (NO BUILD - P.M.)	80	718	191	236	690	72	187	790	202	58	235	34	
		95	718	191	236	690	73	187	829	202	59	264	46	

Menaul Blvd. / I-25 NB Frmtg. Rd.

(4)	0.0% Truck	0.94			0.86			0.81			0.75			PHF
		Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (I-25 NB Frmtg. Rd.)			Southbound (I-25 NB Frmtg. Rd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		138	994	0	0	817	65	118	270	132	0	0	0	
Existing (2007)	2010 (NO BUILD - A.M.)	142	1,024	0	0	842	67	122	278	136	0	0	0	
		142	1,025	0	0	858	67	122	278	147	0	0	0	
		0.91			0.84			0.83			0.75			PHF
		Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (I-25 NB Frmtg. Rd.)			Southbound (I-25 NB Frmtg. Rd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		178	909	0	0	1,046	109	58	545	131	0	0	0	
Existing (2007)	2010 (NO BUILD - P.M.)	183	936	0	0	1,077	112	60	561	135	0	0	0	
		183	937	0	0	1,089	112	60	561	148	0	0	0	

Candelaria / University Project
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2010) - 100% Development

INTERSECTION: Summary

Claremont / University Blvd.

(5)	0.0% Truck	0.75			0.75			0.96			0.89			PHF
Existing (2007) 2010 (NO BUILD - A.M.) 2010 (BUILD - A.M.)		Eastbound (Claremont)			Westbound (Claremont)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		0	0	0	6	0	13	0	540	65	42	418	0	
		0	0	0	6	0	13	0	556	67	43	431	0	
		24	0	17	6	0	13	13	556	67	43	438	16	
		0.75			0.75			0.88			0.75			PHF
Existing (2007) 2010 (NO BUILD - P.M.) 2010 (BUILD - P.M.)		Eastbound (Claremont)			Westbound (Claremont)			Northbound (University Blvd.)			Southbound (University Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
		0	0	0	27	0	23	0	802	30	14	273	0	
		0	0	0	28	0	24	0	826	31	14	281	0	
		17	0	13	28	0	24	16	826	31	14	289	20	

Not used / Not Used

(6)	0.0% Truck	0.10												0.10	PHF
	Existing (2007)	Eastbound (Not used)			Westbound (Not used)			Northbound (Not Used)			Southbound (Not Used)				
	2010 (NO BUILD - A.M.)	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
	2010 (BUILD - A.M.)	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	
		0.10			0.10			0.10			0.10			PHF	
	Existing (2007)	Eastbound (Not used)			Westbound (Not used)			Northbound (Not Used)			Southbound (Not Used)				
	2010 (NO BUILD - P.M.)	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
	2010 (BUILD - P.M.)	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	25	0	14	0	0	19	10		

Candelaria Rd. / Driveway 'A'

(7)	0.0% Truck Existing (2007) 2010 (NO BUILD - A.M.) 2010 (BUILD - A.M.)	0.89			0.85			0.75			0.75			PHF	
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')				
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
		0	1,110	0	0	635	0	0	0	0	0	0	0		
		0	1,143	0	0	654	0	0	0	0	0	0	0		
		0	1,143	0	6	654	0	2	0	3	0	0	0		
			0.87			0.81			0.75			0.75			PHF
			Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')			
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
			0	734	0	0	795	0	0	0	0	0	0	0	
			0	756	0	0	819	0	0	0	0	0	0		
Existing (2007) 2010 (NO BUILD - P.M.) 2010 (BUILD - P.M.)		0	756	0	7	819	0	1	0	2	0	0	0		

Candelaria Rd. / Driveway 'B'

(8)	0.0% Truck Existing (2007) 2010 (NO BUILD - A.M.) 2010 (BUILD - A.M.)	0.85			0.75			0.75			PHF				
		Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'B')				Southbound (Driveway 'B')			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Left	Thru	Right	
		0	1,110	0	0	635	0	0	0	0		0	0	0	0
		0	1,143	0	0	654	0	0	0	0		0	0	0	0
		0	1,143	0	0	660	0	0	0	3	0	0	0		
0.87			0.81			0.75			0.75			PHF			
Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'B')			Southbound (Driveway 'B')						
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				
0	734	0	0	795	0	0	0	0	0	0	0		0		
0	756	0	0	819	0	0	0	0	0	0	0		0		
		0	756	0	0	826	0	0	0	2	0	0	0		

Candelaria / University Project
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2010) - 100% Development

INTERSECTION: Summary

Driveway 'D' / University Blvd.

(9)	0.75			0.75			0.88			0.83			PHF
	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	5	0	4	0	723	4	0	430	0	
Existing (2007)	0	0	0	5	0	4	0	745	4	0	443	0	
2010 (NO BUILD - A.M.)	5	0	40	5	0	4	30	758	4	0	443	7	
2010 (BUILD - A.M.)	0.75			0.75			0.83			0.73			PHF
Existing (2007)	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	2	0	5	0	808	3	1	298	0	
	0	0	0	2	0	5	0	832	3	1	307	0	
2010 (NO BUILD - P.M.)	4	0	29	2	0	5	38	848	3	1	307	8	
2010 (BUILD - P.M.)													

Candelaria / University Project
Projected Turning Movements Worksheet
Candelaria Rd. / University Blvd.

INTERSECTION :E-W Street: **Candelaria Rd.**

(1)

N-S Street: **University Blvd.**

Year of Existing Counts

2007

Implementation Year

2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	237	636	237	192	523	155	103	356	82	29	1	9
Background Traffic Growth	7	19	7	6	16	5	3	11	2	1	0	0
Subtotal (NO BUILD - A.M.)	244	655	244	198	539	160	106	367	84	30	1	9
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	5.00%	1.17%	0.00%	0.00%	0.00%	0.00%	0.00%	26.41%	6.60%
Percent Commercial Trips Generated(Exiting)	5.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.41%	6.17%	0.00%	0.00%	0.00%
Total Trips Generated	5	0	0	4	1	0	0	23	6	0	19	5
Subtotal AM Pk Hr. BUILD Volumes	249	655	244	202	540	160	106	390	90	30	20	14
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	249	655	244	202	540	160	106	390	90	30	20	14

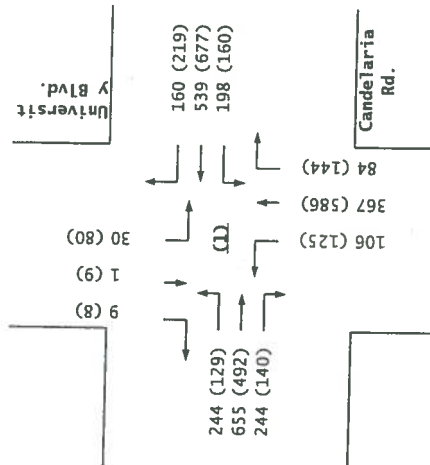
	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	125	478	136	155	657	213	121	569	140	78	9	8
Background Traffic Growth	4	14	4	5	20	6	4	17	4	2	0	0
Subtotal (NO BUILD - P.M.)	129	492	140	160	677	219	125	586	144	80	9	8
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	5.00%	1.17%	0.00%	0.00%	0.00%	0.00%	0.00%	26.41%	6.60%
Percent Commercial Trips Generated(Exiting)	5.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.41%	6.17%	0.00%	0.00%	0.00%
Total Trips Generated	4	0	0	4	1	0	0	17	4	0	24	6
Subtotal PM Pk Hr. BUILD Volumes	133	492	140	164	678	219	125	603	148	80	33	14
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	133	492	140	164	678	219	125	603	148	80	33	14

Number of Commercial Trips Generated

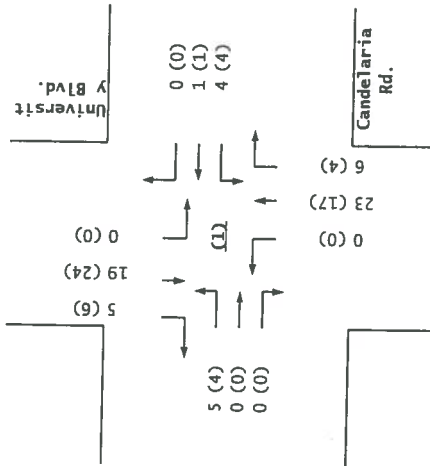
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	237	636	237	192	523	155	103	356	82	29	1	9
2007 PM Peak Hr. Volumes	125	478	136	155	657	213	121	569	140	78	9	8

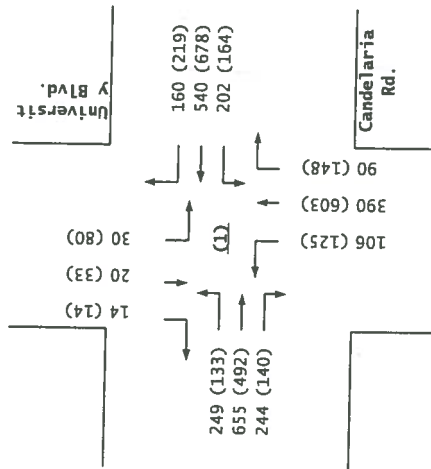
2010
NO BUILD



Trips



2010
BUILD



Candelaria Rd. / University Blvd.

Candelaria / University Project
Projected Turning Movements Worksheet
Candelaria Rd. / I-25 SB Fmtg. Rd.

INTERSECTION:

E-W Street: **Candelaria Rd.**
 N-S Street: **I-25 SB Fmtg. Rd.**

(2)

Year of Existing Counts
 Implementation Year

2007
 2010

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal

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

1.00%			1.00%			1.00%			1.00%		
Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	799	142	115	484	0	0	0	0	199	520	136
0	24	4	3	15	0	0	0	0	6	16	4
0	823	146	118	499	0	0	0	0	205	536	140
0	823	146	118	499	0	0	0	0	205	536	140
0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.58%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	1	0	0	2	0	0	0	0	22	0	0
0	824	146	118	501	0	0	0	0	227	536	140
0	0	0	0	0	0	0	0	0	0	0	0
0	824	146	118	501	0	0	0	0	227	536	140

Existing Volumes

Background Traffic Growth

Subtotal

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 (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	614	75	124	681	0	0	0	0	174	446	131
0	18	2	4	20	0	0	0	0	5	13	4
0	632	77	128	701	0	0	0	0	179	459	135
0	632	77	128	701	0	0	0	0	179	459	135
0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.58%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	2	0	0	1	0	0	0	0	27	0	0
0	634	77	128	702	0	0	0	0	206	459	135
0	0	0	0	0	0	0	0	0	0	0	0
0	634	77	128	702	0	0	0	0	206	459	135

Number of Commercial Trips Generated

Entering Exiting

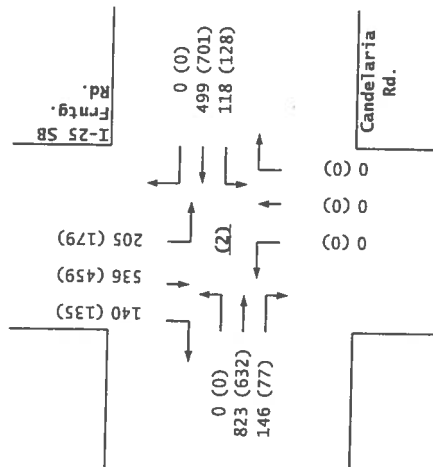
71 94 A.M.
 89 68 P.M.

100% Commercial Development

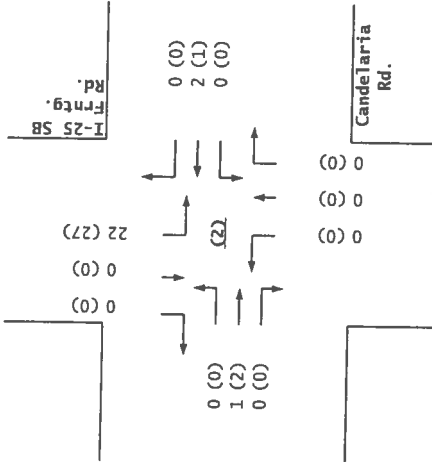
2007 AM Peak Hr. Volumes
 2007 PM Peak Hr. Volumes

Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	799	142	115	484	0	0	0	0	199	520	136
0	614	75	124	681	0	0	0	0	174	446	131

2010
NO BUILD

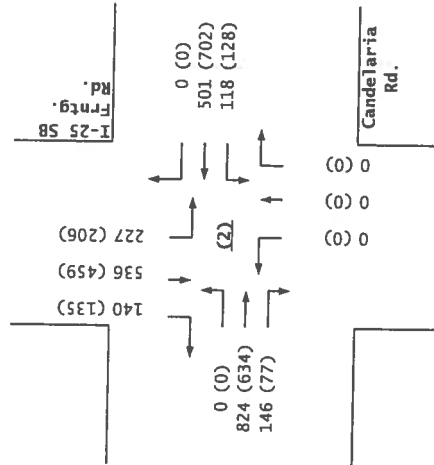


Trips



Candelaria Rd. / I-25 SB Fmtg. Rd.

2010
BUILD



Candelaria / University Project
Projected Turning Movements Worksheet
Menaul Blvd. / University Blvd.

INTERSECTION:

E-W Street: **Menaul Blvd.**
N-S Street: **University Blvd.**

(3)

Year of Existing Counts: 2007
Implementation Year: 2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	93	726	314	306	630	80	185	383	135	93	726	314
Background Traffic Growth	3	22	9	9	19	2	6	11	4	3	22	9
Subtotal	96	748	323	315	649	82	191	394	139	96	748	323
Subtotal (NO BUILD - A.M.)	96	748	323	315	649	82	191	394	139	96	748	323
Percent Commercial Trips Generated(Entering)	16.50%	0.00%	0.00%	0.00%	0.00%	1.03%	0.00%	43.29%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	43.29%	17.14%
Total Trips Generated	12	0	0	0	0	1	0	31	0	1	41	16
Subtotal AM Pk Hr. BUILD Volumes	108	748	323	315	649	83	191	425	139	97	789	339
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	108	748	323	315	649	83	191	425	139	97	789	339

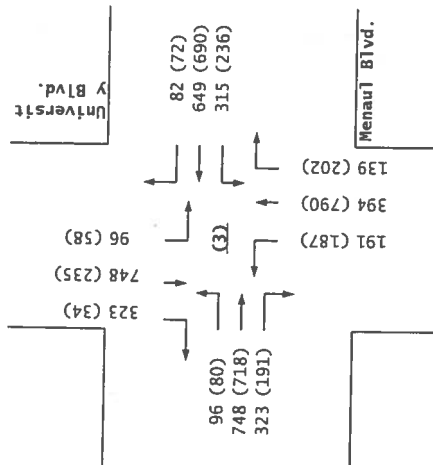
	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	78	697	185	229	670	70	182	767	196	56	228	33
Background Traffic Growth	2	21	6	7	20	2	5	23	6	2	7	1
Subtotal	80	718	191	236	690	72	187	790	202	58	235	34
Subtotal (NO BUILD - P.M.)	80	718	191	236	690	72	187	790	202	58	235	34
Percent Commercial Trips Generated(Entering)	16.50%	0.00%	0.00%	0.00%	0.00%	1.03%	0.00%	43.29%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	43.29%	17.14%
Total Trips Generated	15	0	0	0	0	1	0	39	0	1	29	12
Subtotal PM Pk Hr. BUILD Volumes	95	718	191	236	690	73	187	829	202	59	264	46
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	95	718	191	236	690	73	187	829	202	59	264	46

Number of Commercial Trips Generated

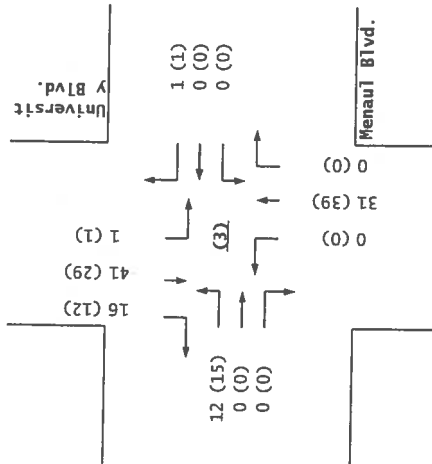
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	93	726	314	306	630	80	185	383	135	93	726	314
2007 PM Peak Hr. Volumes	78	697	185	229	670	70	182	767	196	56	228	33

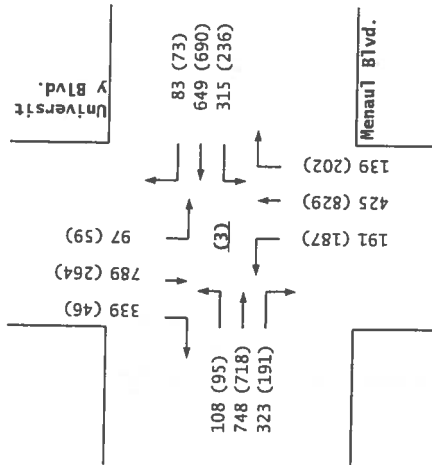
2010
NO BUILD



Trips



2010
BUILD



Menaul Blvd. / University Blvd.

Candelaria / University Project
Projected Turning Movements Worksheet
Candelaria Rd. / Driveway 'A'

INTERSECTION:

E-W Street: Candelaria Rd.
 N-S Street: Driveway 'A'

(7)

Year of Existing Counts
 Implementation Year

2007
 2010

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal

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

1.00%			1.00%			1.00%			1.00%		
Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	1,110	0	0	635	0	0	0	0	0	0	0
0	33	0	0	19	0	0	0	0	0	0	0
0	1,143	0	0	654	0	0	0	0	0	0	0
0	1,143	0	0	654	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	7.77%	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%	1.79%	0.00%	2.76%	0.00%	0.00%	0.00%
0	0	0	6	0	0	2	0	3	0	0	0
0	1,143	0	6	654	0	2	0	3	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1,143	0	6	654	0	2	0	3	0	0	0

Existing Volumes

Background Traffic Growth

Subtotal

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 (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	734	0	0	795	0	0	0	0	0	0	0
0	22	0	0	24	0	0	0	0	0	0	0
0	756	0	0	819	0	0	0	0	0	0	0
0	756	0	0	819	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	7.77%	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%	1.79%	0.00%	2.76%	0.00%	0.00%	0.00%
0	0	0	7	0	0	1	0	2	0	0	0
0	756	0	7	819	0	1	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	756	0	7	819	0	1	0	2	0	0	0

Number of Commercial Trips Generated

Entering Exiting

71 94 A.M.

89 68 P.M.

100% Commercial Development

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	1110	0	0	635	0	0	0	0	0	0	0
0	734	0	0	795	0	0	0	0	0	0	0

Candelaria / University Project
 Projected Turning Movements Worksheet
Driveway 'D' / University Blvd.

INTERSECTION :

E-W Street: Driveway 'D'

(9)

N-S Street: University Blvd.

Year of Existing Counts

2007

Implementation Year

2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	5	0	4	0	723	4	0	430	0
Background Traffic Growth	0	0	0	0	0	0	0	22	0	0	13	0
Subtotal	0	0	0	5	0	4	0	745	4	0	443	0
Subtotal (NO BUILD - A.M.)	0	0	0	5	0	4	0	745	4	0	443	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	42.58%	18.24%	0.00%	0.00%	0.00%	9.42%
Percent Commercial Trips Generated(Exiting)	5.52%	0.00%	43.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	5	0	40	0	0	0	30	13	0	0	0	7
Subtotal AM Pk Hr. BUILD Volumes	5	0	40	5	0	4	30	758	4	0	443	7
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	5	0	40	5	0	4	30	758	4	0	443	7

	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	2	0	5	0	808	3	1	298	0
Background Traffic Growth	0	0	0	0	0	0	0	24	0	0	9	0
Subtotal	0	0	0	2	0	5	0	832	3	1	307	0
Previous Development #1	0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #2	0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #3	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	2	0	5	0	832	3	1	307	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	42.58%	18.24%	0.00%	0.00%	0.00%	9.42%
Percent Commercial Trips Generated(Exiting)	5.52%	0.00%	43.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	4	0	29	0	0	0	38	16	0	0	0	8
Subtotal PM Pk Hr. BUILD Volumes	4	0	29	2	0	5	38	848	3	1	307	8
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	4	0	29	2	0	5	38	848	3	1	307	8

Number of Commercial Trips Generated

Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	0	0	5	0	4	0	723	4	0	430	0
2007 PM Peak Hr. Volumes	0	0	0	2	0	5	0	808	3	1	298	0

Candelaria / University Project - CASE "N"
Projected Turning Movements Worksheet
Candelaria Rd. / I-25 SB Fmtg. Rd.

INTERSECTION :

E-W Street: Candelaria Rd.
 N-S Street: I-25 SB Fmtg. Rd.

(2)

Year of Existing Counts
 Implementation Year

2007
 2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	799	142	115	484	0	0	0	0	199	520	136
Background Traffic Growth	0	24	4	3	15	0	0	0	0	6	16	4
Subtotal	0	823	146	118	499	0	0	0	0	205	536	140
Subtotal (NO BUILD - A.M.)	0	823	146	118	499	0	0	0	0	205	536	140
Percent Commercial Trips Generated(Entering)	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.58%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	1	0	0	2	0	0	0	0	22	0	0
Subtotal AM Pk Hr. BUILD Volumes	0	824	146	118	501	0	0	0	0	227	536	140
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	824	146	118	501	0	0	0	0	227	536	140

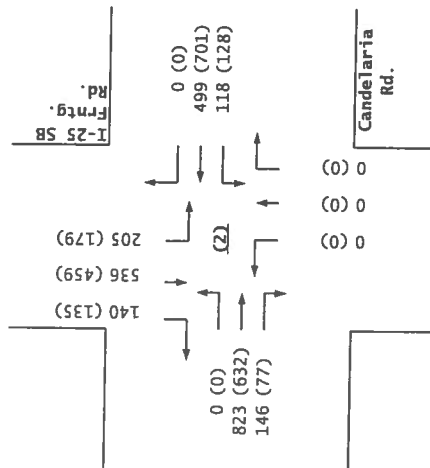
	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	614	75	124	681	0	0	0	0	174	446	131
Background Traffic Growth	0	18	2	4	20	0	0	0	0	5	13	4
Subtotal	0	632	77	128	701	0	0	0	0	179	459	135
Subtotal (NO BUILD - P.M.)	0	632	77	128	701	0	0	0	0	179	459	135
Percent Commercial Trips Generated(Entering)	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.58%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	2	0	0	1	0	0	0	0	27	0	0
Subtotal PM Pk Hr. BUILD Volumes	0	634	77	128	702	0	0	0	0	206	459	135
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	634	77	128	702	0	0	0	0	206	459	135

Number of Commercial Trips Generated

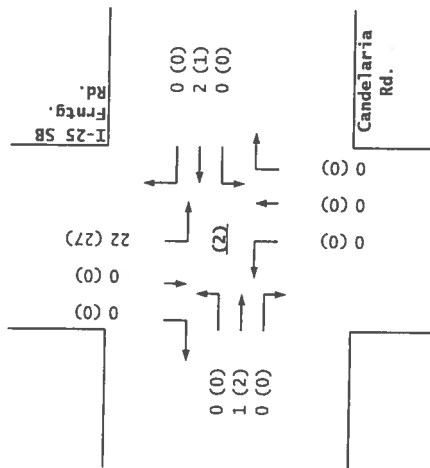
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (I-25 SB Fmtg. Rd.)			Southbound (I-25 SB Fmtg. Rd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	799	142	115	484	0	0	0	0	199	520	136
2007 PM Peak Hr. Volumes	0	614	75	124	681	0	0	0	0	174	446	131

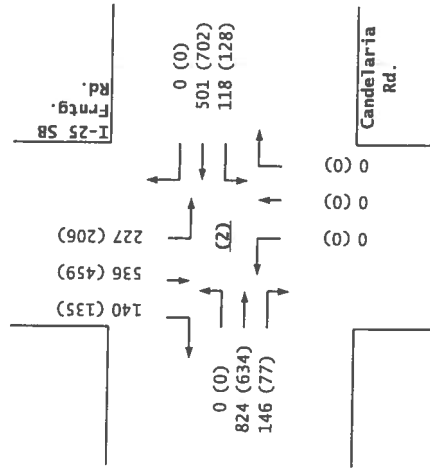
2010
NO BUILD



Trips



2010
BUILD



Candalaria Rd. / I-25 SB Frntg. Rd.

Candelaria / University Project - CASE 'N'
Projected Turning Movements Worksheet
Menaul Blvd. / University Blvd.

INTERSECTION:

E-W Street: Menaul Blvd. (3)

N-S Street: University Blvd.

Year of Existing Counts 2007

Implementation Year 2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	93	726	314	306	630	80	185	383	135	93	726	314
Background Traffic Growth	3	22	9	9	19	2	6	11	4	3	22	9
Subtotal	96	748	323	315	649	82	191	394	139	96	748	323
Subtotal (NO BUILD - A.M.)	96	748	323	315	649	82	191	394	139	96	748	323
Percent Commercial Trips Generated(Entering)	16.50%	0.00%	0.00%	0.00%	0.00%	1.03%	0.00%	43.29%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	43.29%	17.14%
Total Trips Generated	12	0	0	0	0	1	0	31	0	1	41	16
Subtotal AM Pk Hr. BUILD Volumes	108	748	323	315	649	83	191	425	139	97	789	339
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	108	748	323	315	649	83	191	425	139	97	789	339

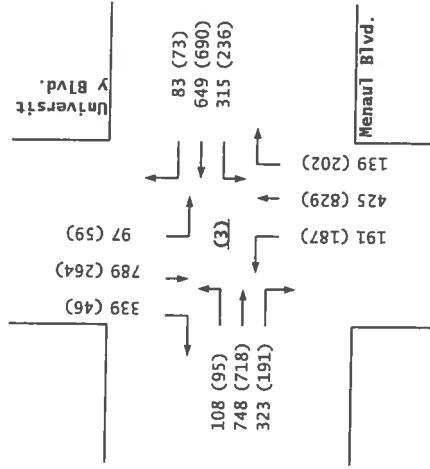
	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	78	697	185	229	670	70	182	767	196	56	228	33
Background Traffic Growth	2	21	6	7	20	2	5	23	6	2	7	1
Subtotal	80	718	191	236	690	72	187	790	202	58	235	34
Subtotal (NO BUILD - P.M.)	80	718	191	236	690	72	187	790	202	58	235	34
Percent Commercial Trips Generated(Entering)	16.50%	0.00%	0.00%	0.00%	0.00%	1.03%	0.00%	43.29%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	43.29%	17.14%
Total Trips Generated	15	0	0	0	0	1	0	39	0	1	29	12
Subtotal PM Pk Hr. BUILD Volumes	95	718	191	236	690	73	187	829	202	59	264	46
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	95	718	191	236	690	73	187	829	202	59	264	46

Number of Commercial Trips Generated

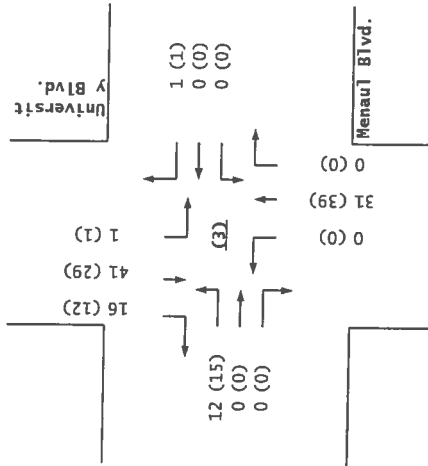
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	93	726	314	306	630	80	185	383	135	93	726	314
2007 PM Peak Hr. Volumes	78	697	185	229	670	70	182	767	196	56	228	33

2010
BUILD

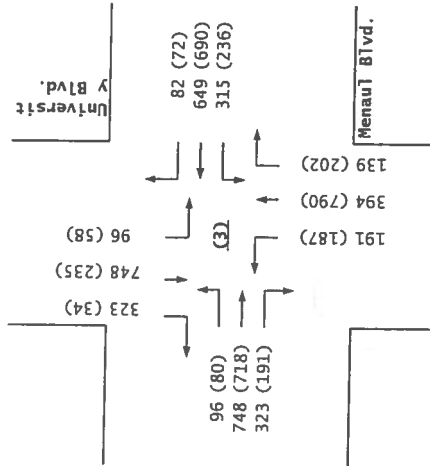


Trips



Menaul Blvd. / University Blvd.

2010
NO BUILD



Candelaria / University Project - CASE "N"
Projected Turning Movements Worksheet
Menaul Blvd. / I-25 NB Fmtg. Rd.

INTERSECTION :E-W Street: **Menaul Blvd.** (4)N-S Street: **I-25 NB Fmtg. Rd.**Year of Existing Counts
Implementation Year2007
2010

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal

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

1.00%			1.00%			1.00%			1.00%		
Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (I-25 NB Fmtg. Rd.)			Southbound (I-25 NB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
138	994	0	0	817	65	118	270	132	0	0	0
4	30	0	0	25	2	4	8	4	0	0	0
142	1,024	0	0	842	67	122	278	136	0	0	0
142	1,024	0	0	842	67	122	278	136	0	0	0
0.19%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	15.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	17.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	1	0	0	16	0	0	0	11	0	0	0
142	1,025	0	0	858	67	122	278	147	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
142	1,025	0	0	858	67	122	278	147	0	0	0

Existing Volumes

Background Traffic Growth

Subtotal

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 (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (I-25 NB Fmtg. Rd.)			Southbound (I-25 NB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
178	909	0	0	1,046	109	58	545	131	0	0	0
5	27	0	0	31	3	2	16	4	0	0	0
183	936	0	0	1,077	112	60	561	135	0	0	0
183	936	0	0	1,077	112	60	561	135	0	0	0
0.19%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	15.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	17.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	1	0	0	12	0	0	0	13	0	0	0
183	937	0	0	1,089	112	60	561	148	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
183	937	0	0	1,089	112	60	561	148	0	0	0

Number of Commercial Trips Generated

Entering Exiting

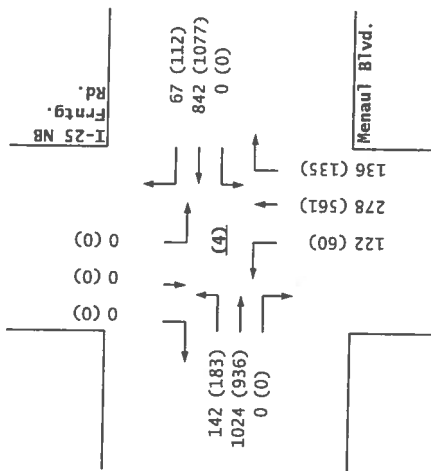
71 94 A.M.
89 68 P.M.

100% Commercial Development

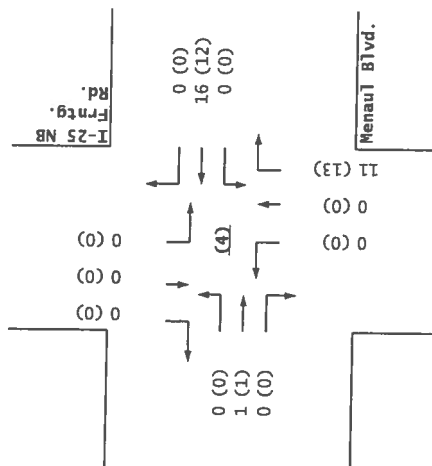
2007 AM Peak Hr. Volumes
2007 PM Peak Hr. Volumes

Eastbound (Menaul Blvd.)			Westbound (Menaul Blvd.)			Northbound (I-25 NB Fmtg. Rd.)			Southbound (I-25 NB Fmtg. Rd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
138	994	0	0	817	65	118	270	132	0	0	0
178	909	0	0	1,046	109	58	545	131	0	0	0

2010
NO BUILD

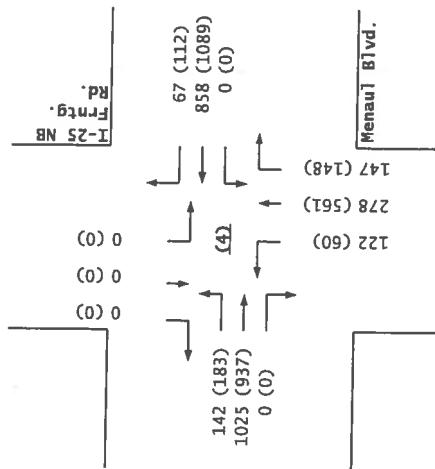


Trips



Menaul Blvd. / I-25 NB Frntg. Rd.

2010
BUILD



Candelaria / University Project - CASE "N"
 Projected Turning Movements Worksheet
Claremont / University Blvd.

INTERSECTION :

E-W Street: Claremont

(5)

N-S Street: University Blvd.

Year of Existing Counts

2007

Implementation Year

2010

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Claremont)			Westbound (Claremont)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	6	0	13	0	540	65	42	418	0
Background Traffic Growth	0	0	0	0	0	0	0	16	2	1	13	0
Subtotal	0	0	0	6	0	13	0	556	67	43	431	0
Subtotal (NO BUILD - A.M.)	0	0	0	6	0	13	0	556	67	43	431	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.18%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.54%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	36	0	0	28	0
Subtotal AM Pk Hr. BUILD Volumes	0	0	0	6	0	13	0	592	67	43	459	0
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	0	0	6	0	13	0	592	67	43	459	0

	Eastbound (Claremont)			Westbound (Claremont)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	27	0	23	0	802	30	14	273	0
Background Traffic Growth	0	0	0	1	0	1	0	24	1	0	8	0
Subtotal	0	0	0	28	0	24	0	826	31	14	281	0
Subtotal (NO BUILD - P.M.)	0	0	0	28	0	24	0	826	31	14	281	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.18%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.54%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	26	0	0	35	0
Subtotal PM Pk Hr. BUILD Volumes	0	0	0	28	0	24	0	852	31	14	316	0
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	0	0	28	0	24	0	852	31	14	316	0

Number of Commercial Trips Generated

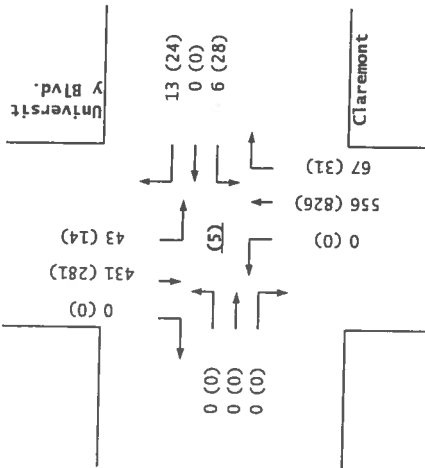
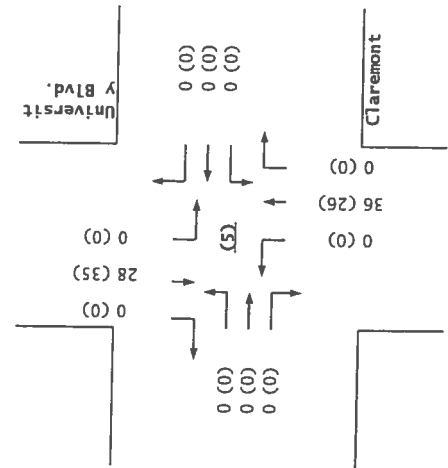
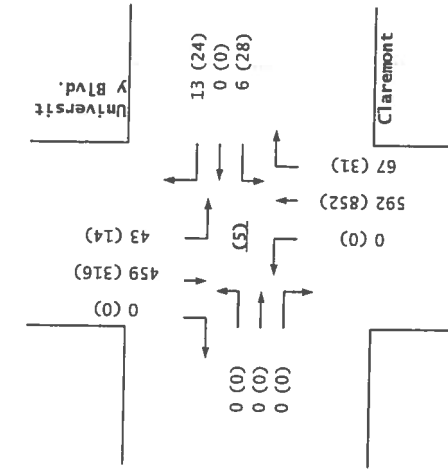
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Claremont)			Westbound (Claremont)			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	0	0	6	0	13	0	540	65	42	418	0
2007 PM Peak Hr. Volumes	0	0	0	27	0	23	0	802	30	14	273	0

2010
BUILD

Trips

2010
NO BUILD



Claremont / University Blvd.

Candelaria / University Project - CASE 'N'
Projected Turning Movements Worksheet
Driveway 'D' / University Blvd.

INTERSECTION : E-W Street: **Driveway 'D'**
 N-S Street: **University Blvd.**
 Year of Existing Counts: **2007**
 Implementation Year: **2010**

(9)

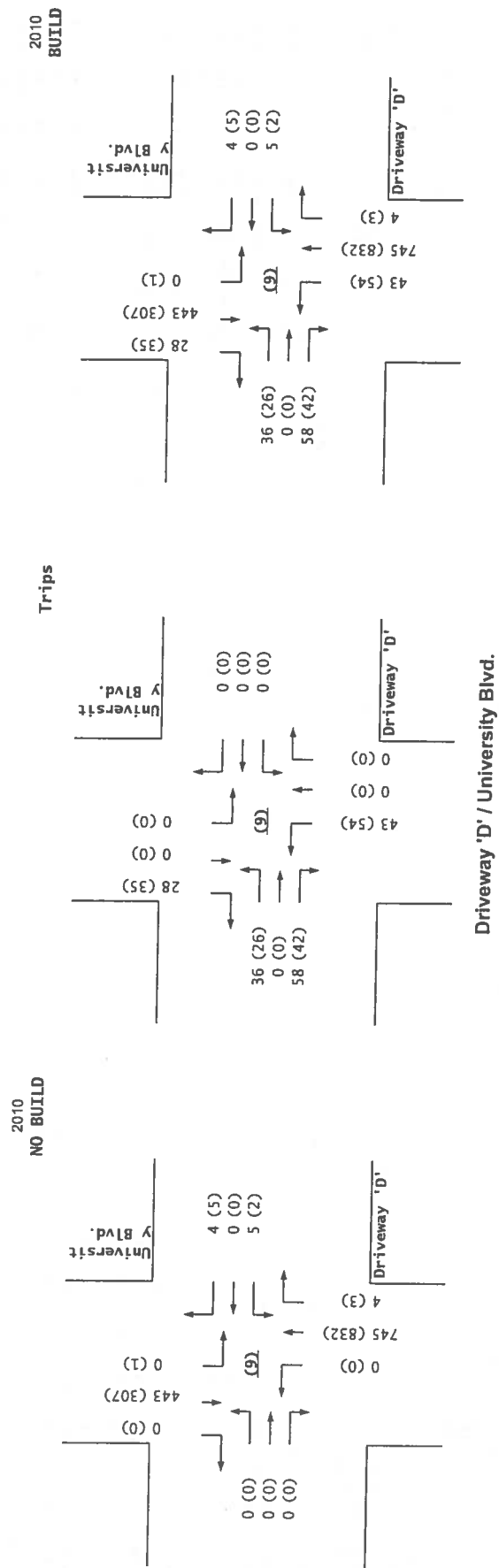
		1.00%			1.00%			1.00%			1.00%		
		Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	0	0	5	0	4	0	723	4	0	430	0
Background Traffic Growth		0	0	0	0	0	0	0	22	0	0	13	0
Subtotal		0	0	0	5	0	4	0	745	4	0	443	0
Subtotal (NO BUILD - A.M.)		0	0	0	5	0	4	0	745	4	0	443	0
Percent Commercial Trips Generated(Entering)		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.82%	0.00%	0.00%	0.00%	0.00%	39.18%
Percent Commercial Trips Generated(Exiting)		38.54%	0.00%	61.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated		36	0	58	0	0	0	43	0	0	0	0	28
Subtotal AM Pk Hr. BUILD Volumes		36	0	58	5	0	4	43	745	4	0	443	28
Pass-by Trip Adjustments		0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes		36	0	58	5	0	4	43	745	4	0	443	28

		Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	0	0	2	0	5	0	808	3	1	298	0
Background Traffic Growth		0	0	0	0	0	0	0	24	0	0	9	0
Subtotal		0	0	0	2	0	5	0	832	3	1	307	0
Previous Development #1		0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #2		0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #3		0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)		0	0	0	2	0	5	0	832	3	1	307	0
Percent Commercial Trips Generated(Entering)		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.82%	0.00%	0.00%	0.00%	0.00%	39.18%
Percent Commercial Trips Generated(Exiting)		38.54%	0.00%	61.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated		26	0	42	0	0	0	54	0	0	0	0	35
Subtotal PM Pk Hr. BUILD Volumes		26	0	42	2	0	5	54	832	3	1	307	35
Pass-by Trip Adjustments		0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes		26	0	42	2	0	5	54	832	3	1	307	35

Number of Commercial Trips Generated

Entering	Exiting		
71	94	A.M.	100% Commercial Development
89	68	P.M.	

	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	0	0	5	0	4	0	723	4	0	430	0
2007 PM Peak Hr. Volumes	0	0	0	2	0	5	0	808	3	1	298	0



Candelaria / University Project - CASE "N"
Projected Turning Movements Worksheet
Driveway 'D' / University Blvd.

INTERSECTION :

E-W Street: **Driveway 'D'**
 N-S Street: **University Blvd.**

(9)

Year of Existing Counts: **2007**
 Implementation Year: **2010**

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	5	0	4	0	723	4	0	430	0
Background Traffic Growth	0	0	0	0	0	0	0	22	0	0	13	0
Subtotal	0	0	0	5	0	4	0	745	4	0	443	0
Subtotal (NO BUILD - A.M.)	0	0	0	5	0	4	0	745	4	0	443	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.82%	0.00%	0.00%	0.00%	0.00%	39.18%
Percent Commercial Trips Generated(Exiting)	38.54%	0.00%	61.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	36	0	58	0	0	0	43	0	0	0	0	28
Subtotal AM Pk Hr. BUILD Volumes	36	0	58	5	0	4	43	745	4	0	443	28
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	36	0	58	5	0	4	43	745	4	0	443	28

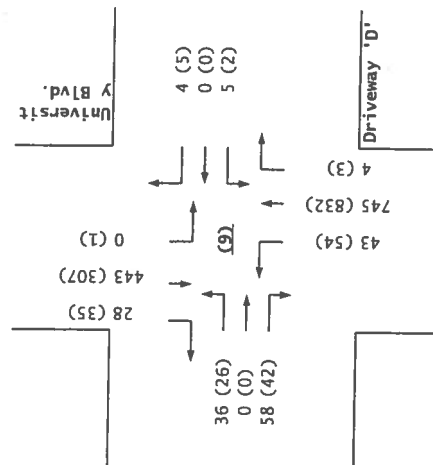
	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	2	0	5	0	808	3	1	298	0
Background Traffic Growth	0	0	0	0	0	0	0	24	0	0	9	0
Subtotal	0	0	0	2	0	5	0	832	3	1	307	0
Previous Development #1	0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #2	0	0	0	0	0	0	0	0	0	0	0	0
Previous Development #3	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	2	0	5	0	832	3	1	307	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.82%	0.00%	0.00%	0.00%	0.00%	39.18%
Percent Commercial Trips Generated(Exiting)	38.54%	0.00%	61.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	26	0	42	0	0	0	54	0	0	0	0	35
Subtotal PM Pk Hr. BUILD Volumes	26	0	42	2	0	5	54	832	3	1	307	35
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	26	0	42	2	0	5	54	832	3	1	307	35

Number of Commercial Trips Generated

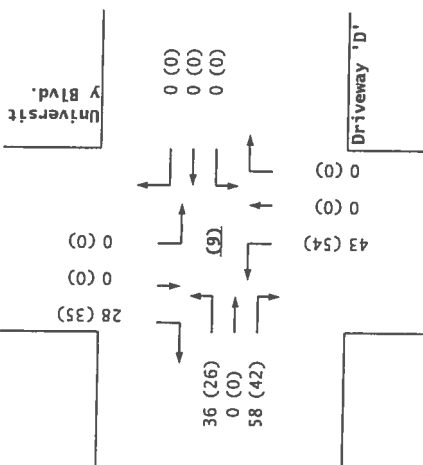
Entering	71	94	A.M.	100% Commercial Development
Exiting	89	68	P.M.	

	Eastbound (Driveway 'D')			Westbound (Driveway 'D')			Northbound (University Blvd.)			Southbound (University Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	0	0	5	0	4	0	723	4	0	430	0
2007 PM Peak Hr. Volumes	0	0	0	2	0	5	0	808	3	1	298	0

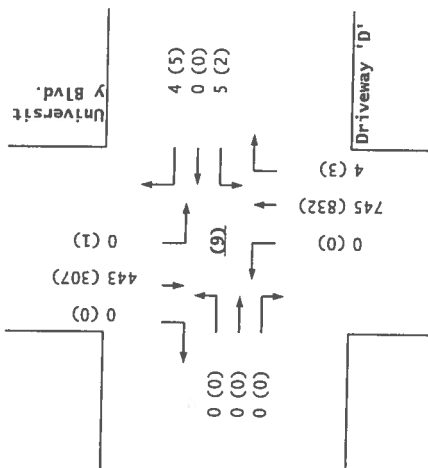
2010
BUILD



Trips



2010
NO BUILD



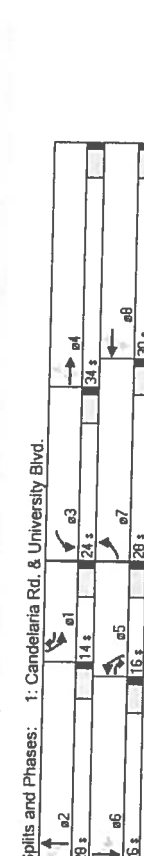
Driveway 'D' / University Blvd.

Timings

1: Candelaria Rd. & University Blvd. Terry O. Brown, P.E. 10/31/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	237	636	237	192	523	155	103	356	29	1
Volume (vph)	pm+pt	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt
Turn Type	4	4	5	3	8	1	5	2	1	6
Protected Phases	4	4	4	8	8	2	2	6	6	6
Detector Phases	7	4	5	3	8	1	5	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	21.0	9.0	21.0	21.0
Total Split (s)	28.0	34.0	16.0	24.0	30.0	14.0	16.0	28.0	14.0	26.0
Total Split (%)	28.0%	34.0%	16.0%	24.0%	30.0%	14.0%	16.0%	28.0%	14.0%	26.0%
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
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	40.8	29.8	51.9	45.6	32.1	39.3	44.8	33.6	25.9	18.7
Act Effct Green Ratio	0.41	0.30	0.52	0.46	0.32	0.39	0.45	0.34	0.26	0.19
v/c Ratio	0.72	0.66	0.27	0.54	0.35	0.23	0.16	0.41	0.07	0.01
Queue Delay	31.8	15.4	0.9	20.7	26.4	2.3	13.7	19.1	20.8	0.0
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS	C	B	A	C	C	A	B	B	C	A
Approach Delay	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
Approach LOS	B	B	B	B	B	B	B	B	B	B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 18.0	
Intersection Capacity Utilization 50.7%	
Analysis Period (min) 15	
Intersection LOS: B	
ICU Level of Service A	



2007 AM Existing Condition

Existing Geometry

1: Candelaria Rd. & University Blvd. Terry O. Brown, P.E. 10/31/2007

HCM Signalized Intersection Capacity Analysis

1: Candelaria Rd. & University Blvd. Terry O. Brown, P.E. 10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBT
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.95
Lane Util. Factor	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	1.00	0.97	1.00	0.86
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	0.95	0.95
Satd. Flow (prot)	1770	3539	1583	1770	5085	1583	1770	3440	3433	3057	3433	3057
Flt Permitted	0.39	1.00	1.00	0.19	1.00	1.00	0.75	1.00	0.31	1.00	1.00	0.31
Satd. Flow (perm)	728	3539	1583	362	5085	1583	1397	3440	1109	3057	1109	3057
Volume (vph)	237	636	237	192	523	155	103	356	82	29	1	9
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	258	691	258	209	568	168	112	387	89	32	1	10
RTOR Reduction (vph)	0	0	124	0	0	102	0	17	0	0	9	0
Lane Group Flow (vph)	258	691	134	209	568	66	112	459	0	32	2	0
Turn Type	pm+pt	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt
Protected Phases	7	4	5	3	8	1	5	2	1	6	6	6
Permitted Phases	4	4	4	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	38.9	28.8	49.9	43.5	31.1	37.3	43.8	32.6	23.9	17.7	23.9	17.7
Effective Green, g (s)	40.9	29.8	51.9	45.5	32.1	39.3	44.8	33.6	25.9	18.7	25.9	18.7
Actuated g/C Ratio	0.41	0.30	0.52	0.46	0.32	0.39	0.45	0.34	0.26	0.19	0.26	0.19
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	413	1055	822	353	1632	622	708	1156	455	572	455	572
v/c Ratio Prot	0.07	0.20	0.04	0.08	0.11	0.01	0.03	0.13	0.01	0.01	0.01	0.01
v/c Ratio Perm	0.19	0.65	0.16	0.59	0.35	0.11	0.16	0.40	0.07	0.07	0.07	0.07
Uniform Delay, d1	20.5	30.6	12.6	18.7	26.0	19.2	16.6	25.4	33.3	33.1	33.3	33.1
Progression Delay, d2	1.37	0.42	0.49	1.00	1.00	1.00	0.72	0.71	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	1.2	0.1	2.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Delay (s)	30.4	14.1	6.3	21.3	26.1	19.3	12.0	19.0	33.4	33.1	33.4	33.1
Level of Service	C	B	A	C	C	B	B	B	C	C	C	C
Approach Delay (s)	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
Approach LOS	B	B	B	B	B	B	B	B	B	B	B	B

Intersection Summary	
HCM Average Control Delay	19.2
HCM Volume to Capacity ratio	0.50
Actuated Cycle Length (s)	100.0
Intersection Capacity Utilization	50.7%
Analysis Period (min)	15
c Critical Lane Group	
HCM Level of Service	B
Sum of lost time (s)	16.0
ICU Level of Service	A

2007 AM Existing Condition

Existing Geometry

1: Candelaria Rd. & University Blvd. Terry O. Brown, P.E. 10/31/2007

Timings

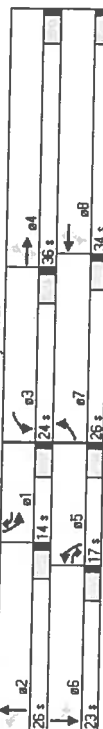
1: Candelaria Rd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	244	655	244	198	539	160	106	367	30	1
Volume (vph)	pm+pt	7	4	5	3	8	1	5	2	1
Turn Type	pm+pt	4	4	4	3	8	2	6	6	6
Permitted Phases	4	4	4	4	4	4	4	4	4	4
Detector Phases	4	4	4	4	4	4	4	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	21.0	9.0	21.0	9.0	21.0	9.0	21.0
Total Split (s)	26.0	36.0	17.0	24.0	34.0	14.0	17.0	26.0	14.0	23.0
Total Split (%)	26.0%	36.0%	17.0%	24.0%	34.0%	14.0%	17.0%	26.0%	14.0%	23.0%
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
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	41.4	30.5	52.0	46.8	33.2	40.4	43.9	32.7	25.5	18.3
Actuated g/C Ratio	0.41	0.30	0.52	0.47	0.33	0.40	0.44	0.33	0.26	0.18
v/c Ratio	0.70	0.65	0.28	0.56	0.35	0.23	0.17	0.43	0.08	0.01
Control Delay	23.4	14.3	0.7	20.2	25.4	2.1	14.6	21.5	22.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	14.3	0.7	20.2	25.4	2.1	14.6	21.5	22.3	0.0
LOS	C	B	A	C	C	A	B	C	C	A
Approach Delay	13.3									
Approach LOS	B									
Intersection Summary										
Cycle Length: 100										
Actuated Cycle Length: 100										
Offset: 26 (26%), Referenced to phase 2: NBT and 6: SBT, Start of Green										
Natural Cycle: 60										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.70										
Intersection Signal Delay: 17.1										
Intersection Capacity Utilization 51.9%										
Analysis Period (min) 15										

Intersection LOS: B
ICU Level of Service A

Splits and Phases: 1: Candelaria Rd. & University Blvd.



2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro\2010ANX.sy7

HCM Signalized Intersection Capacity Analysis
1: Candelaria Rd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.95	1.00	0.86
Lane Util. Factor	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	1.00	0.95
Fit Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1770	3539	1583	1770	5085	1583	1770	3441	3433	3057
Fit Permitted	0.39	1.00	1.00	0.19	1.00	0.75	1.00	0.75	1.00	0.28
Satd. Flow (perm)	720	3539	1583	350	5085	1583	1397	3441	1027	3057
Volume (vph)	244	655	244	198	539	160	106	367	30	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	712	265	215	586	174	115	399	91	10
RTOR Reduction (vph)	0	0	127	0	0	104	0	17	0	9
Lane Group Flow (vph)	265	712	138	215	586	70	115	473	0	33
Turn Type	pm+pt	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt
Protected Phases	7	4	5	3	8	1	5	2	1	6
Permitted Phases	4	4	4	8	8	2	2	6	6	6
Actuated Green, G (s)	39.6	29.6	50.2	44.8	32.2	38.4	42.8	31.6	23.4	17.2
Effective Green, g (s)	41.6	30.6	52.2	46.8	33.2	40.4	43.8	32.6	25.4	18.2
Actuated g/C Ratio	0.42	0.31	0.52	0.47	0.33	0.40	0.44	0.33	0.25	0.18
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	415	1083	826	357	1688	640	692	1122	434	556
v/s Ratio Prot	0.07	c0.20	c0.04	c0.08	0.12	0.01	0.04	c0.14	0.01	0.00
v/s Ratio Perm	0.20	0.66	0.05	0.20	0.04	0.04	0.04	0.01	0.01	0.00
v/c Ratio	0.64	0.66	0.17	0.60	0.35	0.11	0.17	0.42	0.08	0.00
Uniform Delay, d1	20.1	30.1	12.5	18.1	25.2	18.6	17.2	26.3	34.2	33.5
Progression Factor	0.98	0.40	0.22	1.00	1.00	1.00	0.71	0.75	1.00	1.00
Incremental Delay, d2	2.5	1.1	0.1	2.9	0.1	0.1	0.1	1.1	0.1	0.0
Delay (s)	22.3	13.1	2.9	21.0	25.3	18.7	12.3	21.0	34.2	33.5
Level of Service	C	B	A	C	C	B	C	C	C	C
Approach Delay (s)	12.9									
Approach LOS	B									
Intersection Summary										
HCM Average Control Delay	18.1									
HCM Volume to Capacity ratio	0.52									
Actuated Cycle Length (s)	100.0									
Intersection Capacity Utilization	51.9%									
Analysis Period (min)	15									
c Critical Lane Group										

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro\2010ANX.sy7

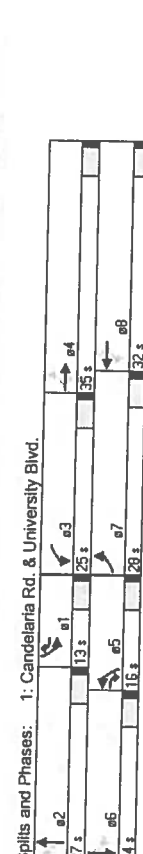
Timings

1: Candelaria Rd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	249	655	244	106	106	106	390	390	30	20
Volume (vph)	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov
Turn Type	7	4	5	3	8	1	5	2	1	6
Protected Phases	4	4	5	3	8	1	5	2	1	6
Permitted Phases	7	4	5	3	8	1	5	2	1	6
Detector Phases	4	4	5	3	8	1	5	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	21.0	9.0	21.0	9.0
Total Split (s)	28.0	35.0	16.0	25.0	32.0	13.0	16.0	27.0	13.0	24.0
Yellow Time (s)	28.0%	35.0%	16.0%	25.0%	32.0%	13.0%	16.0%	27.0%	13.0%	24.0%
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	41.6	29.6	51.4	44.8	31.2	38.4	44.8	33.6	26.1	18.9
Act Eff Green Ratio	0.42	0.30	0.51	0.45	0.31	0.38	0.45	0.34	0.26	0.19
v/c Ratio	0.71	0.68	0.28	0.59	0.37	0.24	0.16	0.45	0.08	0.06
Control Delay	25.9	15.7	0.7	21.4	26.9	2.2	14.5	22.2	22.3	28.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	15.7	0.7	21.4	26.9	2.2	14.5	22.2	22.3	28.0
LOS	C	B	A	C	C	A	B	C	C	C
Approach Delay	14.7	B			21.3	C		20.8	C	25.3
Approach LOS	B				C			C		C

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 16 (16%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 18.5
 Intersection Capacity Utilization 52.9%
 Analysis Period (min) 15



2010 AM BUILD Condition

Existing Geometry
 I:\Candelaria_University\Synchrol\2010ABX.sy7

HCM Signalized Intersection Capacity Analysis
 1: Candelaria Rd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.95	1.00	1.00	0.91	1.00	0.85	1.00	0.95	1.00	0.97	0.95
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.85	1.00	0.95	1.00	0.97	0.95
Fit Protected	1770	3539	1583	1770	5085	1583	1770	3440	3433	3324	3433	3324
Satd. Flow (prot)	0.37	1.00	1.00	0.18	1.00	1.00	0.73	1.00	0.26	1.00	0.26	1.00
Fit Permitted	249	655	244	202	540	160	106	390	90	30	20	14
Satd. Flow (perm)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak-hour factor, PHF	271	712	265	220	587	174	115	424	98	33	22	15
Adj. Flow (vph)	0	0	129	0	0	107	0	17	0	0	12	0
RTOR Reduction (vph)	271	712	136	220	587	67	115	505	0	33	25	0
Lane Group Flow (vph)	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov
Turn Type	7	4	5	3	8	1	5	2	1	6	1	6
Protected Phases	4	4	5	3	8	1	5	2	1	6	1	6
Permitted Phases	7	4	5	3	8	1	5	2	1	6	1	6
Actuated Green, G (s)	39.7	28.6	49.5	42.9	30.2	36.4	43.7	32.5	24.0	17.8	24.0	17.8
Effective Green, g (s)	41.7	29.6	51.5	44.9	31.2	38.4	44.7	33.5	26.0	18.8	26.0	18.8
Actuated g/C Ratio	0.42	0.30	0.52	0.45	0.31	0.38	0.45	0.34	0.26	0.19	0.26	0.19
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	1048	815	350	1587	608	698	1152	477	625	477	625
v/s Ratio Prot	0.08	c0.20	c0.04	c0.09	0.12	0.01	0.04	c0.15	0.01	0.01	0.01	0.01
v/s Ratio Perm	0.19	0.65	0.88	0.17	0.63	0.37	0.11	0.16	0.08	0.04	0.08	0.04
Uniform Delay, d1	20.2	31.0	12.9	19.2	26.8	19.8	16.7	25.9	34.3	33.2	34.3	33.2
Progression Factor	1.11	0.42	0.14	1.00	1.00	1.00	0.71	0.78	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.4	0.1	3.5	0.1	0.1	0.1	1.2	0.1	0.1	0.1	0.1
Delay (s)	25.3	14.5	1.8	22.7	26.9	19.9	11.9	21.4	34.4	33.3	34.4	33.3
Level of Service	C	B	A	C	C	B	B	C	C	C	C	C
Approach Delay (s)	14.2	B			24.7	C		19.7	B		33.8	C
Approach LOS	B				C			B			C	C

Intersection Summary
 HCM Average Control Delay
 HCM Volume to Capacity ratio
 Actuated Cycle Length (s)
 Intersection Capacity Utilization
 Analysis Period (min)
 Critical Lane Group

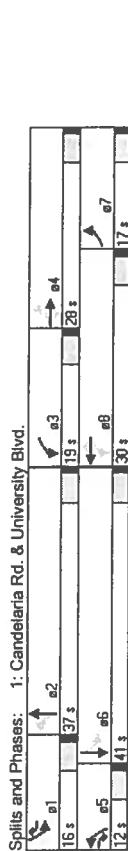
2010 AM BUILD Condition

Existing Geometry
 I:\Candelaria_University\Synchrol\2010ABX.sy7

Timings
1: Candelaria Rd. & University Blvd.
Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	129	492	140	160	677	219	125	586	80	9
Volume (vph)	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov
Turn Type	7	4	5	3	8	1	5	2	1	6
Protected Phases	4	4	5	3	8	1	5	2	1	6
Detector Phases	4	4	5	3	8	1	5	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	21.0	9.0	21.0
Total Split (s)	17.0	28.0	12.0	19.0	30.0	16.0	12.0	37.0	16.0	41.0
Total Split (%)	17.0%	28.0%	12.0%	19.0%	30.0%	16.0%	12.0%	37.0%	16.0%	41.0%
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
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	24.0	24.0	35.7	21.0	21.0	29.0	46.0	38.3	46.7	38.7
Actuated g/C Ratio	0.24	0.24	0.36	0.21	0.21	0.29	0.46	0.38	0.47	0.39
v/c Ratio	0.41	0.63	0.23	0.60	0.69	0.41	0.20	0.59	0.17	0.01
Control Delay	16.8	15.6	1.2	42.9	39.8	7.0	4.8	9.2	13.9	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	15.6	1.2	42.9	39.8	7.0	4.8	9.2	13.9	14.2
LOS	B	B	A	D	D	A	A	A	B	B
Approach Delay	13.2				33.5			8.6		13.9
Approach LOS	B				C			A		B

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 27 (27%), Referenced to phase 2: NBT and 6: SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 19.5
Intersection Capacity Utilization 59.9%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service B



2010 PM NO BUILD
Existing Geometry
I:\Candelaria_University\Synchro\2010PNX.sy7

HCM Signalized Intersection Capacity Analysis
1: Candelaria Rd. & University Blvd.
Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.95	1.00	1.00	0.91	1.00	0.95	1.00	0.97	0.95	1.00
Lane Util. Factor	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	1.00	0.93	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	5085	1583	1770	3434	3433	3288	1900
Flt Permitted	0.54	1.00	1.00	0.54	1.00	0.54	1.00	0.74	1.00	0.21	1.00
Satd. Flow (perm)	1007	3539	1583	1007	5085	1583	1386	3434	774	3288	1900
Volume (vph)	129	492	140	160	677	219	125	586	80	9	8
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	140	535	152	174	736	238	136	637	157	10	9
RTOR Reduction (vph)	0	0	104	0	0	117	0	20	0	0	6
Lane Group Flow (vph)	140	535	48	174	736	121	136	774	0	87	13
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	7	4	5	3	8	1	5	2	1	6	6
Permitted Phases	4	4	5	3	8	1	5	2	1	6	6
Actuated Green, G (s)	23.1	29.8	20.0	20.0	20.0	27.1	43.9	37.2	44.7	37.6	37.6
Effective Green, g (s)	24.1	31.8	21.0	21.0	21.0	29.1	45.9	38.2	46.7	38.6	38.6
Actuated g/C Ratio	0.24	0.24	0.32	0.21	0.21	0.29	0.46	0.38	0.47	0.39	0.39
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	370	853	567	315	1068	461	666	1312	577	1269	1269
v/c Ratio Prot	0.06	0.15	0.01	0.08	0.14	0.02	0.02	0.23	0.01	0.00	0.00
v/c Ratio Perm	0.03	0.02	0.04	0.04	0.04	0.06	0.08	0.06	0.06	0.06	0.06
v/c Ratio	0.38	0.63	0.09	0.55	0.69	0.26	0.20	0.59	0.15	0.01	0.01
Uniform Delay, d1	32.0	33.9	23.9	41.4	36.5	27.2	15.9	24.7	15.8	18.9	18.9
Progression Factor	0.40	0.37	0.16	1.00	1.00	1.00	0.31	0.32	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.1	0.0	2.1	1.9	0.3	0.1	1.4	0.1	0.0	0.0
Delay (s)	13.2	13.8	3.8	43.5	38.4	27.5	5.0	9.3	15.9	18.9	18.9
Level of Service	B	B	A	D	D	C	A	A	B	B	B
Approach Delay (s)	11.9				36.9			8.7			16.5
Approach LOS	B				D			A			B

Intersection Summary
HCM Average Control Delay
HCM Volume to Capacity ratio
Actuated Cycle Length (s)
Intersection Capacity Utilization
Analysis Period (min)
c Critical Lane Group

HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

2010 PM NO BUILD
Existing Geometry
I:\Candelaria_University\Synchro\2010PNX.sy7

Timings

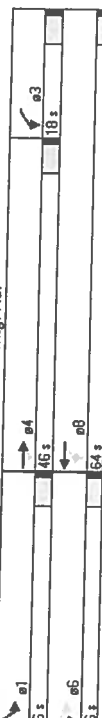
2: Candelaria Rd. & I-25 SB Fmrg. Rd. Terry O. Brown, P.E.
10/31/2007

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔↔	↔
Volume (vph)	799	142	115	484	199	520	136
Turn Type	Perm	pm+pt	pm+pt	pm+pt	pm+pt	Perm	Perm
Protected Phases	4	4	8	8	1	6	6
Permitted Phases	4	4	3	3	8	6	6
Detector Phases	4	4	3	3	8	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	9.0	21.0	21.0
Total Split (s)	46.0	46.0	18.0	64.0	36.0	36.0	36.0
Total Split (%)	46.0%	46.0%	18.0%	64.0%	36.0%	36.0%	36.0%
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
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min
Act Effect Green (s)	30.8	30.8	41.6	41.6	50.4	50.4	50.4
Act Effect g/C Ratio	0.31	0.31	0.42	0.42	0.50	0.50	0.50
v/c Ratio	0.80	0.26	0.25	0.25	0.27	0.33	0.17
Control Delay	37.2	4.7	20.0	20.1	16.8	16.5	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	4.7	20.0	20.1	16.8	16.5	3.4
LOS	D	A	C	C	B	B	A
Approach Delay	32.3				14.5		
Approach LOS	C				B		

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 24 (24%), Referenced to phase 2: and 6 SBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.9
 Intersection Capacity Utilization 49.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 2: Candelaria Rd. & I-25 SB Fmrg. Rd.



2007 AM Existing Condition

Existing Geometry
 I:\Candelaria_University\Synchro\2007\AX.sy7

HCM Signalized Intersection Capacity Analysis

2: Candelaria Rd. & I-25 SB Fmrg. Rd. Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔	↔	↔↔	↔↔	↔↔	↔	↔	↔	↔	↔↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	0.95	1.00	0.97	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3539	1583	3433	5085	5085	5085	1610	3390	1583	3433	5085	1610
Flt Permitted	1.00	1.00	0.14	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3539	1583	518	5085	5085	5085	1610	3390	1583	518	5085	1610
Volume (vph)	0	799	142	115	484	0	0	0	0	199	520	136
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	868	154	125	526	0	0	0	0	216	565	148
RTOR Reduction (vph)	0	0	107	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	868	47	125	526	0	0	0	0	216	565	75
Turn Type	Protected	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Permitted Phases	4	4	4	3	8	4	3	8	4	3	8	4
Actuated Green, G (s)	29.8	29.8	40.6	40.6	40.6	29.8	29.8	40.6	40.6	29.8	29.8	40.6
Effective Green, g (s)	30.8	30.8	41.6	41.6	41.6	30.8	30.8	41.6	41.6	30.8	30.8	41.6
Actuated g/C Ratio	0.31	0.31	0.42	0.42	0.42	0.31	0.31	0.42	0.42	0.31	0.31	0.42
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1090	488	414	2115	2115	1090	488	414	2115	488	414	2115
v/c Ratio Prot	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
v/c Ratio Perm	0.80	0.10	0.30	0.25	0.25	0.80	0.10	0.30	0.25	0.80	0.10	0.30
Uniform Delay, d1	31.7	24.7	34.0	19.0	19.0	31.7	24.7	34.0	19.0	31.7	24.7	34.0
Progression Factor	1.00	1.00	0.97	1.08	1.08	1.00	1.00	0.97	1.08	1.00	1.00	0.97
Incremental Delay, d2	4.1	0.1	0.4	0.1	0.1	4.1	0.1	0.4	0.1	4.1	0.1	0.4
Delay (s)	35.8	24.8	33.4	20.5	20.5	35.8	24.8	33.4	20.5	35.8	24.8	33.4
Level of Service	D	C	C	C	C	D	C	C	C	D	C	C
Approach Delay (s)	34.2					23.0				34.2		
Approach LOS	C					C				C		

Intersection Summary

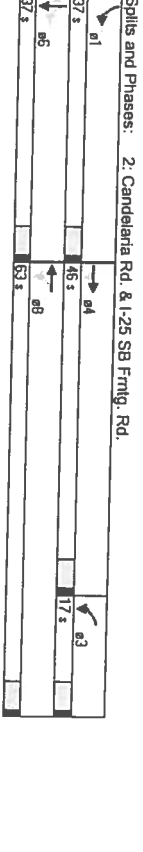
HCM Average Control Delay: 24.4
 HCM Level of Service: C
 HCM Volume to Capacity ratio: 0.47
 Actuated Cycle Length (s): 100.0
 Sum of lost time (s): 8.0
 Intersection Capacity Utilization: 49.8%
 ICU Level of Service: A
 Analysis Period (min): 15
 Critical Lane Group: c

2007 AM Existing Condition

Existing Geometry
 I:\Candelaria_University\Synchro\2007\AX.sy7

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	823	146	118	499	205	536	140
Turn Type	Perm	pm+pt	3	8	1	6	Perm
Protected Phases	4	4	3	8	1	6	6
Detector Phases	4	4	3	8	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	9.0	21.0	21.0
Total Split (s)	46.0	46.0	17.0	63.0	37.0	37.0	37.0
Total Split (%)	46.0%	46.0%	17.0%	63.0%	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
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min
Act Effect Green (s)	31.6	31.6	42.9	42.9	49.1	49.1	49.1
Actuated g/C Ratio	0.32	0.32	0.43	0.43	0.49	0.49	0.49
v/c Ratio	0.80	0.26	0.25	0.25	0.28	0.35	0.18
Control Delay	36.8	4.6	17.2	17.8	18.1	17.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	4.6	17.2	17.8	18.1	17.7	3.7
LOS	D	A	B	B	B	B	A
Approach Delay	D	A	B	B	B	B	A
Approach LOS	C	C	B	B	B	B	B

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 34 (34%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.5
 Intersection Capacity Utilization 50.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A



Spills and Phases: 2: Candelaria Rd. & I-25 SB Fmly. Rd.
 2010 AM NO BUILD

Existing Geometry
 I:\Candelaria_University\Synchro2010\ANX.sv7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	0.95	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Flt. Protected	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3539	1583	3433	5085	1610	3390	1583	1610	3390	1583	1610	3390
Flt. Permitted	1.00	1.00	0.14	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3539	1583	496	5085	1610	3390	1583	1610	3390	1583	1610	3390
Volume (vph)	823	146	118	499	205	536	140	0	0	205	536	140
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	895	159	128	542	0	0	0	0	223	583	152
RTOR Reduction (vph)	0	0	109	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	895	50	128	542	0	0	0	0	223	583	75
Turn Type	Perm	pm+pt	3	8	1	6	Perm	pm+pt	3	8	1	6
Protected Phases	4	4	3	8	1	6	Perm	pm+pt	3	8	1	6
Permitted Phases	4	4	3	8	1	6	Perm	pm+pt	3	8	1	6
Actuated Green, G (s)	30.6	30.6	41.9	41.9	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1
Effective Green, g (s)	31.6	31.6	42.9	42.9	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1
Actuated g/C Ratio	0.32	0.32	0.43	0.43	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1118	500	427	2181	791	1664	777	0	0	791	1664	777
W/s Ratio Prot	0.25	0.02	0.11	0.14	0.14	0.17	0.05	0.05	0.05	0.14	0.17	0.05
W/s Ratio Perm	0.80	0.10	0.30	0.25	0.28	0.35	0.10	0.10	0.10	0.28	0.35	0.10
Uniform Delay, d1	31.3	24.2	33.7	18.2	15.0	15.6	13.6	15.0	15.6	13.6	15.0	13.6
Progression Factor	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	0.1	0.4	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2
Delay (s)	35.5	24.2	29.5	18.3	15.2	15.8	13.8	15.2	15.8	13.8	15.2	13.8
Level of Service	D	C	C	C	B	B	B	B	B	B	B	B
Approach Delay (s)	33.8	C	C	C	20.4	A	0.0	0.0	0.0	20.4	B	15.3
Approach LOS	C	C	C	C	C	A	A	A	A	C	B	B

Intersection Summary
 HCM Average Control Delay: 23.9
 HCM Volume to Capacity ratio: 0.49
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 50.9%
 Analysis Period (min): 15
 Critical Lane Group: C
 HCM Level of Service: C
 Sum of lost time (s): 8.0
 ICU Level of Service: A

2010 AM NO BUILD

Existing Geometry
 I:\Candelaria_University\Synchro2010\ANX.sv7

Timings 2: Candelaria Rd. & I-25 SB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Volume (vph)	824	146	118	501	227	536	140
Turn Type	Perm	Perm	prn+pl	prn+pl	prn+pl	Perm	Perm
Protected Phases	4	4	3	8	1	6	6
Permitted Phases	4	4	8	8	1	6	6
Detector Phases	4	4	3	8	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Spill (s)	21.0	21.0	9.0	21.0	9.0	21.0	21.0
Total Spill (s)	46.0	46.0	17.0	63.0	37.0	37.0	37.0
Total Spill (%)	46.0%	46.0%	17.0%	63.0%	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
Lead/Lag	Lead	Lead	Lag				
Lead-Lag Optimizer?	Yes	Yes	Yes				
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min
Act Effect Green (s)	31.7	31.7	43.5	43.5	48.5	48.5	48.5
Actuated g/C Ratio	0.32	0.32	0.44	0.44	0.48	0.48	0.48
Control Delay	0.80	0.26	0.24	0.25	0.32	0.35	0.18
Queue Delay	36.7	4.6	15.0	15.1	19.0	18.1	3.8
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS	D	A	B	B	B	B	A
Approach Delay	31.9			15.1		16.1	
Approach LOS	C			B		B	

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 27 (27%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.0
 Intersection Capacity Utilization 51.0%
 Analysis Period (min) 15

Splits and Phases: 2: Candelaria Rd. & I-25 SB Fmly. Rd.



2010 AM BUILD Condition

Existing Geometry
i:\Candelaria_University\Synchro2010\ABX.sv7

HCM Signalized Intersection Capacity Analysis 2: Candelaria Rd. & I-25 SB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	0.95	1.00	0.97	0.91	1.00	0.95	1.00	0.85	1.00	0.91	0.91	1.00
Fit Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3539	1583	3433	5085	1610	3390	1583	1610	3390	1583	1610	3390
Fit Permitted	1.00	1.00	0.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3539	1583	497	5085	1610	3390	1583	1610	3390	1583	1610	3390
Volume (vph)	824	146	118	501	227	536	140	824	146	118	501	227
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	896	159	128	545	0	0	0	0	247	583	152
RTOR Reduction (vph)	0	0	109	0	0	0	0	0	0	0	0	78
Lane Group Flow (vph)	0	896	50	128	545	0	0	0	0	247	583	74
Turn Type	Perm	Perm	prn+pl	prn+pl	prn+pl	Perm	Perm	prn+pl	prn+pl	prn+pl	Perm	Perm
Protected Phases	4	4	3	8	1	6	6	4	4	3	8	1
Permitted Phases	4	4	8	8	1	6	6	4	4	8	8	1
Actuated Green, G (s)	30.7	30.7	42.5	42.5	47.5	47.5	47.5	30.7	30.7	42.5	42.5	47.5
Effective Green, g (s)	31.7	31.7	43.5	43.5	48.5	48.5	48.5	32.7	32.7	44.5	44.5	49.5
Actuated g/C Ratio	0.32	0.32	0.44	0.44	0.48	0.48	0.48	0.32	0.32	0.44	0.44	0.48
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1122	502	445	2212	781	1644	768	1122	502	445	2212	781
v/c Ratio Prot	c0.25		0.02	c0.11	0.15	c0.17		c0.25		0.02	c0.11	0.15
v/c Ratio Perm	0.80	0.10	0.03	0.10	0.32	0.35	0.10	0.80	0.10	0.03	0.10	0.32
Uniform Delay, d1	31.2	24.1	33.1	17.9	15.7	16.0	13.9	31.2	24.1	33.1	17.9	15.7
Progression Factor	1.00	1.00	0.77	0.86	1.00	1.00	1.00	1.00	1.00	0.77	0.86	1.00
Incremental Delay, d2	4.1	0.1	0.3	0.1	0.2	0.1	0.2	4.1	0.1	0.3	0.1	0.2
Delay (s)	35.3	24.2	25.8	15.5	15.9	16.1	14.2	35.3	24.2	25.8	15.5	15.9
Level of Service	D	C	C	C	B	B	B	D	C	C	C	B
Approach Delay (s)	33.6			17.4		15.8		33.6			17.4	15.8
Approach LOS	C			B		B		C			B	B

Intersection Summary
 HCM Average Control Delay: 23.1
 HCM Volume to Capacity ratio: 0.49
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 51.0%
 Analysis Period (min): 15
 Critical Lane Group: C

2010 AM BUILD Condition

Existing Geometry
i:\Candelaria_University\Synchro2010\ABX.sv7

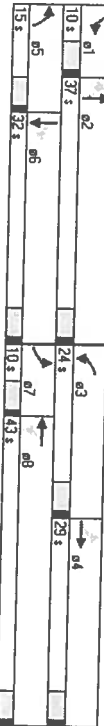
Trinings
3. Menaul Blvd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	93	726	306	630	185	383	93	726
Volume (vph)	pm+pt	7	4	3	8	5	2	6
Turn Type	7	4	3	8	5	2	1	6
Protected Phases								
Detector Phases								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	21.0	9.0	9.0	21.0	9.0
Total Split (s)	10.0	29.0	24.0	43.0	15.0	37.0	10.0	32.0
Total Split (%)	10.0%	29.0%	24.0%	43.0%	15.0%	37.0%	10.0%	32.0%
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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effect Green (s)	31.4	25.2	47.5	37.4	44.2	34.3	35.9	29.7
Act Effect Green (s)	0.31	0.25	0.48	0.37	0.44	0.34	0.36	0.30
Act Effect Green (s)	0.37	0.87	0.83	0.41	0.75	0.47	0.32	0.74
Control Delay	16.1	28.1	41.8	22.8	38.4	25.1	19.5	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	28.1	41.8	22.8	38.4	25.1	19.5	28.9
LOS	B	C	D	C	D	C	B	C
Approach Delay								
Approach LOS								

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%), Referenced to phase 2:NBT, and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 28.0
Intersection Capacity Utilization 82.6%
Analysis Period (min) 15

Splits and Phases: 3: Menaul Blvd. & University Blvd.



2007 AM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro2007\AX.sy7

HCM Signalized Intersection Capacity Analysis
3. Menaul Blvd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	93	726	314	306	630	80	185	383	135	93	726	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	1.00	0.91	1.00	0.91	1.00	0.91	1.00	0.95	1.00	0.95	1.00	0.95
Flt	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	4855	1770	4999	1770	4855	1770	4855	1770	4855	1770	4855
Flt Permitted	0.35	1.00	0.14	1.00	0.12	1.00	0.12	1.00	0.38	1.00	0.12	1.00
Satd. Flow (perm)	647	4855	255	4999	221	3401	221	3401	701	4855	221	3401
Volume (vph)	93	726	314	306	630	80	185	383	135	93	726	314
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	789	341	333	685	87	201	416	147	101	789	341
RTOR Reduction (vph)	0	78	0	0	16	0	35	0	0	77	0	0
Lane Group Flow (vph)	101	1052	0	333	756	0	201	528	0	101	1053	0
Turn Type	pm+pt	7	4	pm+pt	8	pm+pt	5	2	pm+pt	1	6	pm+pt
Protected Phases												
Permitted Phases												
Actuated Green, G (s)	29.3	24.2	46.5	36.4	43.1	33.3	33.9	28.7	33.9	28.7	33.9	28.7
Effective Green, g (s)	31.3	25.2	47.5	37.4	44.5	34.3	35.9	29.7	35.9	29.7	35.9	29.7
Actuated g/C Ratio	0.31	0.25	0.48	0.37	0.44	0.34	0.36	0.30	0.36	0.30	0.36	0.30
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Gap Cap (vph)	271	1223	398	1870	266	1167	266	1167	318	1442	266	1167
v/s Ratio Prot	0.02	0.22	0.15	0.15	0.08	0.16	0.08	0.16	0.02	0.22	0.08	0.16
v/s Ratio Perm	0.09		0.24		0.25		0.25		0.09		0.22	
v/c Ratio	0.37	0.86	0.84	0.40	0.76	0.45	0.32	0.73	0.32	0.73	0.32	0.73
Uniform Delay, d1	25.0	35.7	24.9	23.1	20.7	25.5	21.9	31.6	21.9	31.6	21.9	31.6
Progression Factor	0.77	0.61	1.00	1.00	1.00	1.00	0.94	0.87	0.94	0.87	0.94	0.87
Incremental Delay, d2	0.8	6.0	14.1	0.1	11.6	1.3	0.6	3.3	0.6	3.3	0.6	3.3
Delay (s)	20.1	28.0	39.1	23.2	32.3	26.8	21.2	30.9	21.2	30.9	21.2	30.9
Level of Service	C	C	D	C	C	C	C	C	C	C	C	C
Approach Delay (s)												
Approach LOS												

Intersection Summary
HCM Average Control Delay 28.5
HCM Volume to Capacity ratio 0.78
Actuated Cycle Length (s) 100.0
Intersection Capacity Utilization 82.6%
Analysis Period (min) 15
c Critical Lane Group

2007 AM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro2007\AX.sy7

Timings

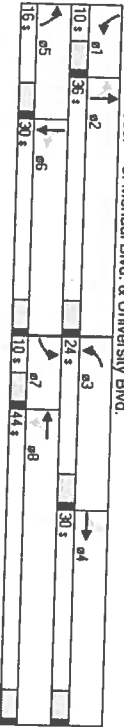
3: Menaui Blvd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	96	444	315	444	191	364	96	444
Volume (vph)	748	748	649	649	191	364	96	748
Turn Type	pm+pt	4	pm+pt	4	pm+pt	4	pm+pt	4
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4	7	3	8	5	2	1	6
Detector Phases	4	7	3	8	5	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	9.0	21.0	9.0	21.0	9.0	21.0
Total Split (s)	10.0	30.0	24.0	44.0	16.0	36.0	10.0	30.0
Yellow Time (s)	10.0%	30.0%	24.0%	44.0%	16.0%	36.0%	10.0%	30.0%
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead-Lag Optimizer?	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Recall Mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Act Effect Green (s)	32.2	26.2	48.7	38.7	43.1	33.1	34.0	27.8
Act Effect g/c Ratio	0.32	0.26	0.49	0.39	0.43	0.33	0.34	0.28
Actuated g/c Ratio	0.38	0.86	0.85	0.41	0.73	0.50	0.35	0.82
Control Delay	16.1	27.7	43.9	22.0	36.7	26.3	21.0	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	27.7	43.9	22.0	36.7	26.3	21.0	33.4
LOS	B	C	D	C	D	C	C	C
Approach Delay	26.8	C	28.6	C	29.1	C	32.4	C
Approach LOS	C	C	C	C	C	C	C	C

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%). Referenced to phase 2:NBT, and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 29.2
 Intersection Capacity Utilization 84.7%
 Analysis Period (min) 15

Splits and Phases: 3: Menaui Blvd. & University Blvd.



HCM Signalized Intersection Capacity Analysis

3: Menaui Blvd. & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	96	444	315	444	191	364	96	444	191	364	96	444
Ideal Flow (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	1.00	0.91	1.00	0.91	1.00	0.98	1.00	0.96	1.00	0.95	1.00	0.91
Flt Protected	0.95	1.00	0.95	1.00	0.98	1.00	0.95	1.00	0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	4855	1770	4855	1770	5000	1770	3401	1770	4855	1770	4855
Flt Permitted	0.34	1.00	0.34	1.00	0.13	1.00	0.13	1.00	0.37	1.00	0.37	1.00
Satd. Flow (perm)	632	4855	247	5000	235	3401	235	3401	685	4855	235	3401
Volume (vph)	96	748	323	315	649	82	191	394	139	96	748	323
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	813	351	342	705	89	208	428	151	104	813	351
RTOR Reduction (vph)	0	77	0	0	16	0	0	35	0	0	76	0
Lane Group Flow (vph)	104	1087	0	342	778	0	208	544	0	104	1088	0
Turn Type	pm+pt	7	4	pm+pt	3	8	pm+pt	5	2	pm+pt	1	6
Protected Phases	7	4	8	3	8	2	5	2	6	1	6	6
Permitted Phases	4	7	3	8	5	2	1	6	6	4	7	3
Actuated Green, G (s)	30.2	25.2	47.7	37.7	42.3	32.1	31.9	26.7	31.9	26.7	31.9	26.7
Effective Green, g (s)	32.2	26.2	48.7	38.7	43.3	33.1	33.9	27.7	33.9	27.7	33.9	27.7
Actuated g/c Ratio	0.32	0.26	0.49	0.39	0.43	0.33	0.34	0.28	0.34	0.28	0.34	0.28
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	1272	402	1935	280	1126	280	1126	280	1126	280	1126
v/c Ratio Prot	0.02	0.22	c0.16	0.16	c0.09	0.16	c0.09	0.16	c0.09	0.16	c0.09	0.16
v/c Ratio Perm	0.10	0.22	c0.26	0.16	c0.24	0.16	c0.24	0.16	c0.24	0.16	c0.24	0.16
Uniform Delay, d1	0.38	0.85	0.85	0.40	0.74	0.48	0.35	0.81	0.35	0.81	0.35	0.81
Progression Factor	24.4	35.1	25.5	22.3	21.6	26.6	23.3	33.7	23.3	33.7	23.3	33.7
Incremental Delay, d2	0.8	0.78	0.63	1.00	1.00	1.00	1.00	0.95	0.89	0.95	0.89	0.95
Level of Service	B	C	D	C	D	C	C	D	C	D	C	D
Approach Delay (s)	26.8	C	28.1	C	29.1	C	34.2	C	34.2	C	34.2	C
Approach LOS	C	C	C	C	C	C	C	C	C	C	C	C

Intersection Summary
 HCM Average Control Delay: 29.6
 HCM Volume to Capacity ratio: 0.78
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 84.7%
 Analysis Period (min): 15
 Critical Lane Group: E

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro2010ANX.sv7

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro2010ANX.sv7

Timings

4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	138	994	817	65	118	270	132
Volume (vph)	pm+pl	7	4	8	Perm	Perm	Perm
Turn Type	7	4	8	8	2	2	2
Protected Phases	4	4	8	8	2	2	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Detector Phases	9.0	21.0	21.0	21.0	21.0	21.0	21.0
Minimum Initial (s)	25.0	72.0	47.0	47.0	28.0	28.0	28.0
Minimum Split (s)	25.0%	72.0%	47.0%	28.0%	28.0%	28.0%	28.0%
Total Split (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	Lag	Yes	Lead	Lead	Yes	Yes	Yes
Lead-Lag Optimize?	Recall Mode	Min	Min	Min	C-Min	C-Min	C-Min
Act Effct Green (s)	52.0	52.0	38.9	38.9	40.0	40.0	40.0
Actuated g/C Ratio	0.52	0.52	0.39	0.39	0.40	0.40	0.40
v/c Ratio	0.46	0.41	0.64	0.11	0.18	0.21	0.20
Control Delay	21.9	14.7	26.3	2.5	24.4	23.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	14.7	26.3	2.5	24.4	23.2	6.5
LOS	C	B	C	A	C	C	A
Approach Delay	15.6	24.6	19.2	B			
Approach LOS	B	C	B				

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 7 (7%), Referenced to phase 2,NBTL and 6:, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 19.5
 Intersection Capacity Utilization 47.7%
 Analysis Period (min) 15

Splits and Phases: 4: Menaui Blvd. & I-25 NB Fmly. Rd.



HCM Signalized Intersection Capacity Analysis

4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	1.00	0.91	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Flt. Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085
Flt. Permitted	0.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	354	5085	354	5085	354	5085	354	5085	354	5085	354	5085
Volume (vph)	138	994	0	0	817	65	118	270	132	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	1080	0	0	888	71	128	293	143	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	43	0	80	0	0	0	0
Lane Group Flow (vph)	150	1080	0	0	888	28	128	293	63	0	0	0
Turn Type	pm+pl	7	4	8	Perm	Perm	Perm	Perm	Perm			
Protected Phases	7	4	8	8	2	2	2	2	2			
Permitted Phases	4	51.0	51.0	37.9	37.9	39.0	39.0	39.0	39.0			
Actuated Green, G (s)	51.0	52.0	52.0	38.9	38.9	40.0	40.0	40.0	40.0			
Effective g/C Ratio	0.52	0.52	0.52	0.39	0.39	0.40	0.40	0.40	0.40			
Actuated g/C Ratio	0.52	0.52	0.52	0.39	0.39	0.40	0.40	0.40	0.40			
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	313	2644	1377	616	708	1416	633					
v/s Ratio Prot	0.04	c0.21	c0.25	0.02	0.07	0.04	0.04					
v/s Ratio Perm	0.21	0.41	0.41	0.64	0.04	0.18	0.21					
v/c Ratio	0.48	0.28	0.46	0.24	0.24	0.19	0.19					
Uniform Delay, d1	1.00	1.00	1.00	1.01	0.59	1.00	1.00					
Progression Factor	1.2	0.4	0.4	0.9	0.0	0.6	0.3					
Incremental Delay, d2	29.8	14.7	20.0	26.0	11.3	20.0	19.1					
Level of Service	C	B	B	C	B	B	B					
Approach Delay (s)	16.6	24.9	19.7	0.0								
Approach LOS	B	C	B	A								

Intersection Summary

HCM Average Control Delay
 HCM Volume to Capacity ratio
 Actuated Cycle Length (s)
 Intersection Capacity Utilization
 Analysis Period (min)
 Critical Lane Group

20.1
 0.41
 100.0
 47.7%
 15
 C
 Sum of lost time (s)
 ICU Level of Service
 8.0
 A

2007 AM Existing Condition

Existing Geometry
 i:\Candelaria_University\Synchro2007\AX.sy7

2007 AM Existing Condition

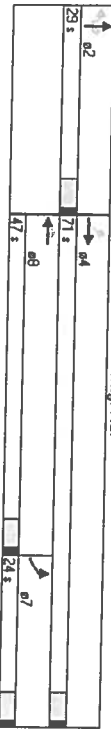
Existing Geometry
 i:\Candelaria_University\Synchro2007\AX.sy7

Timings
4: Menaui Blvd. & I-25 NB Fring. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	142	1024	842	67	122	278	136
Volume (vph)	pm+pl	7	4	8	Perm	Perm	Perm
Turn Type	4	4	8	8	2	2	2
Protected Phases	4	4	8	8	2	2	2
Permitted Phases	4	4	8	8	2	2	2
Detector Phases	4	4	8	8	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Spill (s)	9.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Spill (s)	24.0	71.0	47.0	47.0	29.0	29.0	29.0
Total Spill (%)	24.0%	71.0%	47.0%	47.0%	29.0%	29.0%	29.0%
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
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	53.1	53.1	39.8	39.8	38.9	38.9	38.9
Actuated g/C Ratio	0.53	0.53	0.40	0.40	0.39	0.39	0.39
v/c Ratio	0.47	0.41	0.65	0.11	0.19	0.22	0.21
Control Delay	22.3	14.2	25.2	2.1	25.4	24.1	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	14.2	25.2	2.1	25.4	24.1	8.5
LOS	C	B	C	A	C	C	A
Approach Delay	15.2	23.5	23.5	20.4	20.4	20.4	20.4
Approach LOS	B	C	C	C	C	C	C
Intersection Summary							
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 16 (16%), Referenced to phase 2:NBT, and 6: Start of Green							
Natural Cycle: 55							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.65							
Intersection Signal Delay: 19.1							
Intersection Capacity Utilization 48.8%							
Analysis Period (min) 15							
	Intersection LOS: B						
	ICU Level of Service A						

Spills and Phases: 4: Menaui Blvd. & I-25 NB Fring. Rd.



2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro2010\ANX.sv7

HCM Signalized Intersection Capacity Analysis
4: Menaui Blvd. & I-25 NB Fring. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.91	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085
Satd. Flow (prot)	0.18	1.00	0.18	1.00	0.18	1.00	0.18	1.00	0.18	1.00	0.18	1.00
Flt Permitted	342	5085	342	5085	342	5085	342	5085	342	5085	342	5085
Satd. Flow (perm)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Volume (vph)	142	1024	842	67	122	278	136	136	136	136	136	136
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	1113	73	133	133	302	148	148	148	148	148	148
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	154	1113	0	0	0	915	29	133	302	73	0	0
Turn Type	pm+pl	7	4	8	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	4	4	8	8	2	2	2	2	2	2	2	2
Permitted Phases	4	4	8	8	2	2	2	2	2	2	2	2
Actuated Green, G (s)	52.1	52.1	38.8	38.8	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
Effective Green, G (s)	53.1	53.1	39.8	39.8	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9
Actuated g/C Ratio	0.53	0.53	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	314	2700	1409	630	689	1377	616	616	616	616	616	616
W/S Ratio Prot	0.05	c0.22	c0.26	0.02	0.08	c0.09	0.05	0.05	0.05	0.05	0.05	0.05
W/S Ratio Perm	0.21	0.21	0.65	0.05	0.19	0.22	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.49	0.41	0.65	0.05	0.19	0.22	0.12	0.12	0.12	0.12	0.12	0.12
Uniform Delay, d1	28.6	14.1	24.4	16.5	20.2	20.4	19.6	19.6	19.6	19.6	19.6	19.6
Progression Factor	1.00	1.00	0.98	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	0.9	0.0	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Delay (s)	29.9	14.2	24.8	9.8	20.8	20.8	20.0	20.0	20.0	20.0	20.0	20.0
Level of Service	C	B	C	A	C	C	B	B	B	B	B	B
Approach Delay (s)	16.1	23.7	23.7	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Approach LOS	B	C	C	C	C	C	C	C	C	C	C	C
Intersection Summary												
HCM Average Control Delay	19.6											
HCM Volume to Capacity ratio	0.43											
Actuated Cycle Length (s)	100.0											
Intersection Capacity Utilization	48.8%											
Analysis Period (min)	15											
Critical Lane Group	A											

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro2010\ANX.sv7

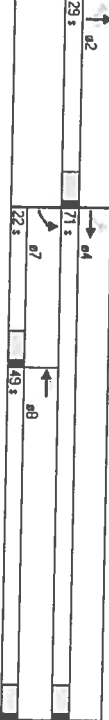
Timings 4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	178	908	1046	109	58	545	131
Turn Type	pm+pl	7	4	8	Perm	Perm	Perm
Protected Phases	7	4	8	8	2	2	2
Detector Phases	4	4	8	8	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	9.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	22.0	71.0	49.0	49.0	29.0	29.0	29.0
Yellow Time (s)	22.0%	71.0%	49.0%	49.0%	29.0%	29.0%	29.0%
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead-Lag	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead-Lag Optimize?	Lead	Yes	Lag	Yes	Lag	Yes	Lag
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min
Act Effct Green (s)	66.5	66.5	47.3	47.3	25.5	25.5	25.5
Actuated g/C Ratio	0.66	0.66	0.47	0.47	0.26	0.26	0.26
v/c Ratio	0.51	0.29	0.68	0.15	0.14	0.66	0.28
Control Delay	15.5	7.2	15.5	1.5	30.3	37.6	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	7.2	15.5	1.5	30.3	37.6	6.7
LOS	B	A	B	A	C	D	A
Approach Delay	8.6	14.2	B	C	31.5	C	
Approach LOS	A	B	B	C	C	C	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%). Referenced to phase 2: NBT and 6: Start of Green
Neutral Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 16.4
Intersection Capacity Utilization 63.8%
Analysis Period (min) 15

Splits and Phases: 4: Menaui Blvd. & I-25 NB Fmly. Rd.



HCM Signalized Intersection Capacity Analysis 4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost 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
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Flt. Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085
Flt. Permitted	0.12	1.00	0.12	1.00	0.12	1.00	0.12	1.00	0.12	1.00	0.12	1.00
Satd. Flow (perm)	227	5085	227	5085	227	5085	227	5085	227	5085	227	5085
Volume (vph)	178	909	0	0	1046	109	58	545	131	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	988	0	0	1137	118	63	592	142	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	62	0	0	0	0	0	0
Lane Group Flow (vph)	193	988	0	0	1137	56	63	592	36	0	0	0

Turn Type	pm+pl	7	4	8	8	2	2	2	2	2	2	2
Protected Phases	7	4	8	8	2	2	2	2	2	2	2	2
Permitted Phases	7	4	8	8	2	2	2	2	2	2	2	2
Actuated Green, G (s)	65.5	65.5	46.3	46.3	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Effective Green, g (s)	66.5	66.5	47.3	47.3	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Actuated g/C Ratio	0.66	0.66	0.47	0.47	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	385	3382	1674	749	451	902	404	404	404	404	404	404
v/s Ratio Prot	c0.08	0.19	c0.32	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02
v/s Ratio Perm	0.26	0.29	0.68	0.07	0.14	0.66	0.09	0.09	0.09	0.09	0.09	0.09
v/c Ratio	0.50	0.29	0.68	0.07	0.14	0.66	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay, d1	12.2	7.0	20.5	14.4	28.8	33.3	28.4	28.4	28.4	28.4	28.4	28.4
Progression Factor	1.00	1.00	0.63	0.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0	1.1	0.0	0.6	3.7	0.4	0.4	0.4	0.4	0.4	0.4
Delay (s)	13.2	7.0	13.9	5.2	29.4	37.1	28.8	28.8	28.8	28.8	28.8	28.8
Level of Service	B	A	B	A	C	D	C	C	C	C	C	C
Approach Delay (s)	8.0	A	13.1	B	35.0	C	0.0	0.0	0.0	0.0	0.0	0.0
Approach LOS	A	B	B	C	C	C	A	A	A	A	A	A

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

2007 PM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro2007PX.sy7

2007 PM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro2007PX.sy7

Timings
4: Menaul Blvd. & I-25 NB Frnlg. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	183	936	1077	112	60	561	135
Volume (vph)	pm+pt	7	4	8	Perm	Perm	Perm
Turn Type	7	4	8	8	2	2	2
Protected Phases	4	4	8	8	2	2	2
Permitted Phases	7	4	8	8	2	2	2
Detector Phases	4	4	8	8	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Splt (s)	9.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Splt (s)	21.0	70.0	49.0	49.0	30.0	30.0	30.0
Total Splt (%)	21.0%	70.0%	49.0%	49.0%	30.0%	30.0%	30.0%
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
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min
Act Effect Green (s)	66.6	66.6	47.6	47.6	25.4	25.4	25.4
Actuated g/C Ratio	0.67	0.67	0.48	0.48	0.25	0.25	0.25
Control Delay	18.7	7.3	15.8	1.5	30.0	38.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	7.3	15.8	1.5	30.0	38.1	7.0
LOS	B	A	B	A	C	D	A
Approach Delay	9.2	14.5					
Approach LOS	A	B					

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2, NBTL and 6, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 16.8
Intersection Capacity Utilization 65.4%
Analysis Period (min) 15

Splits and Phases: 4: Menaul Blvd. & I-25 NB Frnlg. Rd.



2010 PM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro2010PNX.sv7

HCM Signalized Intersection Capacity Analysis
4: Menaul Blvd. & I-25 NB Frnlg. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	0.91	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Lane Util. Factor	1.00	0.91	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085	1770	5085
Flt Permitted	0.11	1.00	0.11	1.00	0.11	1.00	0.11	1.00	0.11	1.00	0.11	1.00
Satd. Flow (perm)	212	5085	212	5085	212	5085	212	5085	212	5085	212	5085
Volume (vph)	183	936	0	0	1077	112	60	561	135	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	199	1017	0	0	1171	122	65	610	147	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	64	0	107	0	0	0	0
Lane Group Flow (vph)	199	1017	0	0	1171	58	65	610	40	0	0	0
Turn Type	pm+pt	7	4	8	8	2	2	2	2	8	2	2
Protected Phases	4	4	8	8	2	2	2	2	2	8	2	2
Permitted Phases	7	4	8	8	2	2	2	2	2	8	2	2
Actuated Green, G (s)	65.6	65.6	46.6	46.6	24.4	24.4	24.4	24.4	24.4	46.6	24.4	24.4
Effective Green, g (s)	66.6	66.6	47.6	47.6	25.4	25.4	25.4	25.4	25.4	48.6	26.4	26.4
Actuated g/C Ratio	0.67	0.67	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.48	0.25	0.25
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	375	3387	1685	754	450	899	402					
vs Ratio Prot	60.08	0.20	60.33	0.04	0.04	0.04	0.03					
vs Ratio Perm	0.27	0.30	0.69	0.08	0.14	0.68	0.10					
v/c Ratio	0.53	0.30	0.69	0.08	0.14	0.68	0.10					
Uniform Delay, d1	13.0	7.0	20.5	14.3	28.9	33.6	28.6					
Progression Factor	1.00	1.00	0.64	0.37	1.00	1.00	1.00					
Incremental Delay, d2	1.4	0.1	1.2	0.0	0.7	4.1	0.5					
Delay (s)	14.4	7.0	21.7	14.3	29.6	37.7	29.1					
Level of Service	B	A	B	A	C	D	C					
Approach Delay	8.2		13.4									
Approach LOS	A		B									

Intersection Summary
HCM Average Control Delay 17.0
HCM Volume to Capacity ratio 0.66
Actuated Cycle Length (s) 100.0
Intersection Capacity Utilization 65.4%
Analysis Period (min) 15
c Critical Lane Group

2010 PM NO BUILD

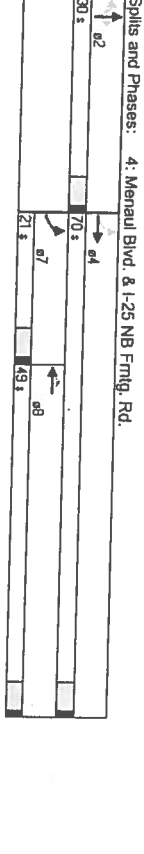
Existing Geometry
I:\Candelaria_University\Synchro2010PNX.sv7

Timings 4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	183	937	1089	112	60	561	148
Volume (vph)	pm+pt	7	4	8	Perm	Perm	Perm
Turn Type	7	4	8	8	2	2	2
Protected Phases	4	7	4	8	2	2	2
Permitted Phases	4	4	4	4	4	4	4
Detector Phases	4	4	4	4	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	70.0	49.0	49.0	30.0	30.0	30.0
Total Split (%)	21.0%	70.0%	49.0%	49.0%	30.0%	30.0%	30.0%
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
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min
Act. Effect Green (s)	67.0	67.0	48.0	48.0	25.0	25.0	25.0
Act. Effect g/c Ratio	0.67	0.67	0.48	0.48	0.25	0.25	0.25
Control Delay	19.1	7.1	14.9	1.3	30.4	38.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	7.1	14.9	1.3	30.4	38.7	8.7
LOS	B	A	B	A	C	D	A
Approach Delay	9.1	13.6					
Approach LOS	A	B					

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84 (84%), Referenced to phase 2: NBT and 6: Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 16.6
 Intersection Capacity Utilization: 65.7%
 Analysis Period (min): 15



Spills and Phases: 4: Menaui Blvd. & I-25 NB Fmly. Rd.
 2010 PM BUILD Condition
 Existing Geometry
 I:\Candelaria_University\Synchro\2010PBX.sv7

HCM Signalized Intersection Capacity Analysis 4: Menaui Blvd. & I-25 NB Fmly. Rd.

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit Permitted	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Volume (vph)	183	937	0	0	1089	112	60	561	148	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	199	1018	0	0	1184	122	65	610	161	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	199	1018	0	0	1184	59	65	610	54	0	0
Turn Type	pm+pt	7	4	8	8	2	2	2	2	2	2
Protected Phases	4	7	4	8	8	2	2	2	2	2	2
Permitted Phases	4	4	4	4	4	4	4	4	4	4	4
Actuated Green, G (s)	66.0	66.0	66.0	47.0	47.0	24.0	24.0	24.0	24.0	24.0	24.0
Effective Green, g (s)	67.0	67.0	67.0	48.0	48.0	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/c Ratio	0.67	0.67	0.67	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	374	3407	0	1699	760	443	885	396	396	396	396
v/s Ratio Prot	c0.08	0.20	0.04	c0.33	0.04	0.04	0.04	0.04	0.04	0.04	0.04
v/s Ratio Perm	0.28	0.03	0.03	0.70	0.08	0.15	0.09	0.14	0.14	0.14	0.14
v/c Ratio	0.53	0.30	0.30	20.3	14.0	29.2	34.0	29.1	29.1	29.1	29.1
Uniform Delay, d1	13.0	6.8	6.8	0.60	0.30	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.00	1.00	1.00	1.2	0.0	0.7	4.4	0.7	0.7	0.7	0.7
Incremental Delay, d2	1.5	0.0	0.0	13.3	4.3	29.9	38.4	29.8	29.8	29.8	29.8
Delay (s)	14.5	6.9	6.9	13.3	4.3	29.9	38.4	29.8	29.8	29.8	29.8
Level of Service	B	A	A	B	A	C	D	C	C	C	C
Approach Delay (s)	8.1	12.5		12.5							
Approach LOS	A	B		B							

Intersection Summary
 HCM Average Control Delay: 16.6
 HCM Volume to Capacity ratio: 0.67
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 65.7%
 Analysis Period (min): 15
 Critical Lane Group: C

2010 PM BUILD Condition
 Existing Geometry
 I:\Candelaria_University\Synchro\2010PBX.sv7

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Stop	Stop	Free	Free	Free	Free
Sign Control	0%	0%	0%	0%	0%	0%
Grade	6	13	540	65	42	418
Volume (veh/h)	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	7	14	587	71	46	454
Hourly flow rate (vph)	Pedestrians					
Lane Width (ft)	Walking Speed (ft/s)					
Percent Blockage	Right turn flare (veh)					
Median type	Median storage (veh)					
Upstream signal (ft)	418					
PX, platoon unblocked						
VC, conflicting volume	941	329	658			
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	941	329	658			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
P0 queue free %	97	98	95			
cM capacity (veh/h)	249	667	926			
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	21	391	266	46	227	227
Volume Left	7	0	0	46	0	0
Volume Right	14	0	71	0	0	0
CSH	436	1700	1700	926	1700	1700
Volume to Capacity	0.05	0.23	0.16	0.05	0.13	0.13
Queue Length 95th (ft)	4	0	0	4	0	0
Control Delay (s)	13.7	0.0	0.0	9.1	0.0	0.0
Lane LOS	B					
Approach Delay (s)	13.7	0.0	0.8			
Approach LOS	B					
Intersection Summary						
Average Delay	0.6					
Intersection Capacity Utilization	33.7%					
Analysis Period (min)	15					
ICU Level of Service	A					

2007 AM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro\2007AX.sy7

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007

5: Claremont & University Blvd.

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	Stop	Stop	Free	Free	Free	Free	
Sign Control	0%	0%	0%	0%	0%	0%	
Volume (veh/h)	6	13	556	67	43	431	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	7	14	604	73	47	468	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage (veh)							
Upstream signal (ft)							418
PX, platoon unblocked							
VC, conflicting volume	968	339			677		
VC1, stage 1 conf vol							
VC2, stage 2 conf vol							
VCu, unblocked vol	968	339			677		
TC, single (s)	6.8	6.9					
TC, 2 stage (s)							
TF (s)	3.5	3.3			2.2		
P0 queue free %	97	98			95		
CM capacity (veh/h)	238	657			910		
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3	
Volume Total	21	403	274	47	234	234	
Volume Left	7	0	0	47	0	0	
Volume Right	14	0	73	0	0	0	
CSH	423	1700	1700	910	1700	1700	
Volume to Capacity	0.05	0.24	0.16	0.05	0.14	0.14	
Queue Length 95th (ft)	4	0	0	4	0	0	
Control Delay (s)	14.0	0.0	0.0	9.2	0.0	0.0	
Lane LOS	B			A			
Approach Delay (s)	14.0	0.0		0.8			
Approach LOS	B						
Intersection Summary							
Average Delay	0.6						
Intersection Capacity Utilization	34.2%						
Analysis Period (min)	15						
ICU Level of Service	A						

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro\2010ANX.syt

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	24	0	17	6	0.92	7	13	556	67	43	476	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	0	18	7	0	14	14	604	73	47	476	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked												
VC, conflicting volume	923	1284	247	1019	1256	339	493					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCU, unblocked vol	923	1284	247	1019	1256	339	493					
TC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
TC, 2 stage (s)												
TF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
P0 queue free %	88	100	98	96	100	98	99					
cM capacity (veh/h)	209	153	753	177	159	657	1066					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	45	21	316	375	47	317	176					
Volume Left	26	7	14	0	47	0	0					
Volume Right	18	14	0	73	0	0	17					
cSH	299	354	1066	1700	910	1700	1700					
Volume to Capacity	0.15	0.06	0.01	0.22	0.05	0.19	0.10					
Queue Length 95th (ft)	13	5	1	0	4	0	0					
Control Delay (s)	19.2	15.8	0.5	0.0	9.2	0.0	0.0					
Lane LOS	C	C	A	A	A	A	A					
Approach Delay (s)	19.2	15.8	0.2		0.8							
Approach LOS	C	C	A		A							
Intersection Summary												
Average Delay	1.4	1.4	1.4	1.4	1.4	1.4	1.4					
Intersection Capacity Utilization	44.7%	44.7%	44.7%	44.7%	44.7%	44.7%	44.7%					
Analysis Period (min)	15	15	15	15	15	15	15					

2010 AM BUILD Condition

Existing Geometry
I:\Candelaria_University\Synchro\2010ABX.s7



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Stop	Stop	Free	Free	Free	Free
Sign Control	0%	0%	0%	0%	0%	0%
Volume (veh/h)	6	13	592	67	43	459
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	14	643	73	47	499
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
PX, platoon unblocked						
VC, conflicting volume	1023	358			716	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	1023	358			716	
TC, single (s)	6.8	6.9			4.1	
TC, 2 stage (s)	3.5	3.3			2.2	
TF (s)	97	98			95	
P0 queue free %	219	638			880	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	21	429	287	47	249	249
Volume Left	7	0	0	47	0	0
Volume Right	14	0	73	0	0	0
CSH	398	1700	1700	880	1700	1700
Volume to Capacity	0.05	0.25	0.17	0.05	0.15	0.15
Queue Length 95th (ft)	4	0	0	4	0	0
Control Delay (s)	14.5	0.0	0.0	9.3	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	14.5	0.0		0.8		
Approach LOS	B					
Intersection Summary						
Average Delay	0.6					
Intersection Capacity Utilization	35.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Stop		Free		Free	
Sign Control						
Grade	0%	0%	0%		0%	
Volume (veh/h)	27	23	802	30	14	273
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	25	872	33	15	297
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
PX, platoon unblocked					418	
VC, conflicting volume	1067	452			904	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	1067	452			904	
tc, single (s)	6.8	6.9				
tc, 2 stage (s)						
tf (s)	3.5	3.3			2.2	
p0 queue free %	86	95			98	
cM capacity (veh/h)	213	555			748	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	54	581	323	15	148	148
Volume Left	29	0	0	15	0	0
Volume Right	25	0	33	0	0	0
cSH	297	1700	1700	748	1700	1700
Volume to Capacity	0.18	0.34	0.19	0.02	0.09	0.09
Queue Length 95th (ft)	16	0	0	2	0	0
Control Delay (s)	19.8	0.0	0.0	9.9	0.0	0.0
Lane LOS	C			A		
Approach Delay (s)	19.8	0.0		0.5		
Approach LOS	C					
Intersection Summary						
Average Delay	1.0					
Intersection Capacity Utilization	33.1%					
Analysis Period (min)	15					
ICU Level of Service						
A						

2007 PM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro\2007PX.syt

Movement	WBL	WBR	NBT	NBR	SBL	SBT
     						
Lane Configurations	Stop ↓		Free ↓		Free ↓	Free ↓
Sign Control	0%		0%		0%	0%
Grade	28	24	826	31	14	281
Volume (veh/h)	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	30	26	898	34	15	305
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
418						
VC, conflicting volume	1098	466			932	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	1098	466			932	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	85	95			98	
cM capacity (veh/h)	203	543			730	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	57	599	333	15	153	153
Volume Left	30	0	0	15	0	0
Volume Right	26	0	34	0	0	0
cSH	285	1700	1700	730	1700	1700
Volume to Capacity	0.20	0.35	0.20	0.02	0.09	0.09
Queue Length 95th (ft)	18	0	0	2	0	0
Control Delay (s)	20.7	0.0	0.0	10.0	0.0	0.0
Lane LOS	C			B		
Approach Delay (s)	20.7	0.0		0.5		
Approach LOS	C					
Intersection Summary						
Average Delay	1.0					
Intersection Capacity Utilization	33.8%					
Analysis Period (min)	15					
ICU Level of Service						A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩	↩	↩	↩	↩	↩	↩	↩	↩	↩	↩
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	17	1	13	28	1	24	16	826	31	14	289	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	1	14	30	1	26	17	898	34	15	314	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked												
VC, conflicting volume	866	1322	168	1152	1316	466	336					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	866	1322	168	1152	1316	466	336					
TC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
TC, 2 stage (s)												
TF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
P0 queue free %	92	99	98	79	99	95	99					
cM capacity (veh/h)	228	150	847	145	151	543	1220					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	34	58	466	483	15	209	126					
Volume Left	18	30	17	0	15	0	0					
Volume Right	14	26	0	34	0	0	22					
cSH	321	218	1220	1700	730	1700	1700					
Volume to Capacity	0.11	0.26	0.01	0.28	0.02	0.12	0.07					
Queue Length 95th (ft)	9	26	1	0	2	0	0					
Control Delay (s)	17.5	27.4	0.4	0.0	10.0	0.0	0.0					
Lane LOS	C	D	A		B							
Approach Delay (s)	17.5	27.4	0.2		0.4							
Approach LOS	C	D										

Intersection Summary

Intersection Capacity Utilization	45.6%	1.8
Average Delay	15	
Analysis Period (min)		

A

ICU Level of Service

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
11/11/2007



Movement	WBL	WBR	NBT	NBR	SBL	SBT										
Lane Configurations	↔	↔	↔	↔	↔	↔										
Sign Control	Stop		Free			Free										
Grade	0%		0%			0%										
Volume (veh/h)	28	24	852	31	14	316										
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92										
Hourly flow rate (vph)	30	26	926	34	15	343										
Pedestrians																
Lane Width (ft)																
Walking Speed (ft/s)																
Percent Blockage																
Right turn flare (veh)																
Median type	None															
Median storage (veh)																
Upstream signal (ft)																
PX, platoon unblocked						418										
VC, conflicting volume	1145	480			960											
VC1, stage 1 conf vol																
VC2, stage 2 conf vol																
VCU, unblocked vol	1145	480			960											
TC, single (s)	6.8	6.9			4.1											
TC, 2 stage (s)																
TF (s)	3.5	3.3			2.2											
P0 queue free %	84	95			98											
cM capacity (veh/h)	189	532			713											
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3										
Volume Total	57	617	342	15	172	172										
Volume Left	30	0	0	15	0	0										
Volume Right	26	0	34	0	0	0										
CSH	269	1700	1700	713	1700	1700										
Volume to Capacity	0.21	0.36	0.20	0.02	0.10	0.10										
Queue Length 95th (ft)	19	0	0	2	0	0										
Control Delay (s)	21.9	0.0	0.0	10.2	0.0	0.0										
Lane LOS	C			B												
Approach Delay (s)	21.9	0.0		0.4												
Approach LOS	C															
Intersection Summary																
Average Delay	1.0															
Intersection Capacity Utilization	34.5%															
Analysis Period (min)	15															
ICU Level of Service	A															

2010 PM BUILD

CASE "N"
I:\Candelaria_University\Synchro\2010PBX_CASE_N.syn

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007

7: Candelaria Rd. & Dwy A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Free ↓↑	Free ↓↑	Free ↓↑	Free ↓↑	Stop ↓	Stop ↓
Grade	0%	0%	0%	0%	0%	0%
Volume (veh/h)	1143	1	6	654	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1242	1	7	711	2	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	153			863		
PX, platoon unblocked			0.77		0.80	0.77
VC, conflicting volume			1243		1493	622
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol			1015		1053	205
tC, single (s)			4.1		6.8	
tC, 2 stage (s)						6.9
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			521		175	615
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	828	415	149	284	284	5
Volume Left	0	0	7	0	0	2
Volume Right	0	1	0	0	0	3
cSH	1700	1700	521	1700	1700	306
Volume to Capacity	0.49	0.24	0.01	0.17	0.17	0.02
Queue Length 95th (ft)	0	0	1	0	0	1
Control Delay (s)	0.0	0.0	0.7	0.0	0.0	17.0
Lane LOS			A			C
Approach Delay (s)	0.0		0.1			17.0
Approach LOS						C

Intersection Summary

Average Delay
Intersection Capacity Utilization
Analysis Period (min)

0.1
41.6%
ICU Level of Service

A

2010 AM BUILD Condition

Existing Geometry
I:\Candelaria_University\Synchro\2010ABX.syt

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓↑	↓↑	↓↑	↓↑	↓↑	↓↑
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Volume (veh/h)	756	1	7	819	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	822	1	8	890	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	153			863		
PX, platoon unblocked						
VC, conflicting volume						
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol						
TC, single (s)						
TC, 2 stage (s)						
TF (s)						
P0 queue free %						
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	548	275	186	356	356	3
Volume Left	0	0	8	0	0	1
Volume Right	0	1	0	0	0	2
cSH	1700	1700	822	1700	1700	631
Volume to Capacity	0.32	0.16	0.01	0.21	0.21	0.01
Queue Length 95th (ft)	0	0	1	0	0	0
Control Delay (s)	0.0	0.0	0.5	0.0	0.0	10.7
Lane LOS	A		A			B
Approach Delay (s)	0.0		0.1			10.7
Approach LOS						B

Intersection Summary

Average Delay
Intersection Capacity Utilization

0.1
30.9%

ICU Level of Service

A

2010 PM BUILD Condition

Existing Geometry
I:\Candelaria_University\Synchro\2010PBX.s7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓↑		↓↑	↓↑		↓
Sign Control	Free		Free	Free	Stop	
Grade	0%		0%	0%	0%	
Volume (veh/h)	1143	1	0	660	0	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1242	1	0	717	0	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	337		679			
PX, platoon unblocked						
VC, conflicting volume	0.77			0.80	0.77	
VC1, stage 1 conf vol	1243			1482	622	
VC2, stage 2 conf vol				1000	205	
VCu, unblocked vol	1015					
TC, single (s)				6.8	6.9	
TC, 2 stage (s)						
TF (s)	2.2			3.5	3.3	
P0 queue free %						
P0 queue free %						
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	828	415	239	239	239	3
Volume Left	0	0	0	0	0	0
Volume Right	0	1	0	0	0	3
CSH	1700	1700	1700	1700	1700	616
Volume to Capacity	0.49	0.24	0.14	0.14	0.14	0.01
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.9
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.9
Approach LOS						B
Intersection Summary						
Average Delay						
Intersection Capacity Utilization						
Analysis Period (min)						
	15					
	41.6%					
ICU Level of Service						
						A

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007

Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	Free	Free	Free	Free	Stop	Stop	
Sign Control	0%	0%	0%	0%	0%	0%	
Volume (veh/h)	756	1	0	826	0	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	822	1	0	898	0	2	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type					None		
Median storage (veh)							
Upstream signal (ft)	337			679			
PX, platoon unblocked							
VC, conflicting volume							
VC1, stage 1 conf vol							
VC2, stage 2 conf vol							
VCU, unblocked vol							
TC, single (s)							
TC, 2 stage (s)							
TF (s)							
P0 queue free %							
CM capacity (veh/h)							
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	
Volume Total	548	275	299	299	299	2	
Volume Left	0	0	0	0	0	0	
Volume Right	0	1	0	0	0	2	
CSH	1700	1700	1700	1700	1700	796	
Volume to Capacity	0.32	0.16	0.18	0.18	0.18	0.00	
Queue Length 95th (ft)	0	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.5	
Lane LOS						A	
Approach Delay (s)	0.0					9.5	
Approach LOS						A	
Intersection Summary							
Average Delay							
Intersection Capacity Utilization							
Analysis Period (min)							
ICU Level of Service							
A							

2010 PM BUILD Condition

Existing Geometry
I:\Candelaria_University\Synchro\2010PBX.syt

HCM Unsignalized Intersection Capacity Analysis

9: Super 8 Dwy & University Blvd.

Terry O. Brown, P.E.
10/31/2007

Movement	WBL	WBR	NBT	NBR	SBL	SBT
↖ ↗ ↓ ↙ ↘ ↑						
Lane Configurations	Stop		↙		↘	↙
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	5	4	723	4	0	430
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	4	786	4	0	467
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			772		1032	
PX, platoon unblocked	0.95	0.95			0.95	
VC, conflicting volume	1022	395			790	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	968	307			724	
TC, single (s)	6.8	6.9			4.1	
TC, 2 stage (s)						
TF (s)	3.5	3.3			2.2	
P0 queue free %	98	99			100	
CM capacity (veh/h)	238	653			829	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	10	524	266	0	234	234
Volume Left	5	0	0	0	0	0
Volume Right	4	0	4	0	0	0
CSH	332	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.31	0.16	0.00	0.14	0.14
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	16.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	16.2	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	30.1%					
Analysis Period (min)	15					
ICU Level of Service						
A						

2007 AM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro\2007AX.syt

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007



Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations	Stop	Stop	Free	Free	Free	Free
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Volume (veh/h)	5	4	745	4	0	443
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	4	810	4	0	482
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			772		1032	
PX, platoon unblocked	0.94	0.94			0.94	
VC, conflicting volume	1053	407			814	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	995	310			742	
TC, single (s)	6.8	6.9			4.1	
TC, 2 stage (s)						
TF (s)	3.5	3.3			2.2	
PQ queue free %	98	99			100	
CM capacity (veh/h)	228	647			812	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	10	540	274	0	241	241
Volume Left	5	0	0	0	0	0
Volume Right	4	0	4	0	0	0
CSH						
Volume to Capacity	0.03	0.32	0.16	0.00	0.14	0.14
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	16.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	16.6	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	30.7%					
Analysis Period (min)	15					
ICU Level of Service						
A						

2010 AM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro\2010ANX.syt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	5	1	40	5	1	4	30	758	4	1	443	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	43	5	1	4	33	824	4	1	482	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
VC, conflicting volume	970	1381	245	1178	1383	414	489					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	884	1330	245	1110	1331	283	489					
TC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
TC, 2 stage (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
PO queue free %	97	99	94	96	99	99	97					
CM capacity (veh/h)	213	137	756	138	137	660	1070					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	50	11	445	416	1	321	168					
Volume Left	5	5	33	0	1	0	0					
Volume Right	43	4	0	4	0	0	8					
CSH	550	202	1070	1700	802	1700	1700					
Volume to Capacity	0.09	0.05	0.03	0.24	0.00	0.19	0.10					
Queue Length 95th (ft)	7	4	2	0	0	0	0					
Control Delay (s)	12.2	23.8	0.9	0.0	9.5	0.0	0.0					
Lane LOS	B	C	A	A	A	A	A					
Approach Delay (s)	12.2	23.8	0.5									
Approach LOS	B	C	A									
Intersection Summary												
Average Delay	0.9											
Intersection Capacity Utilization	47.8%											
Analysis Period (min)	15											
ICU Level of Service												
A												

2010 AM BUILD Condition

Existing Geometry
 I:\Candelaria_University\Synchro\2010ABX.s77

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.

11/1/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵	↵	↵	↵	↵	↵	↵	↵	↵	↵	↵
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	36	0	58	5	0	4	43	745	4	0	443	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	39	0	63	5	0	4	47	810	4	0	482	30
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None											
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked	0.92	0.92										
VC, conflicting volume	999	1404	256	1209	1417	407	512					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	917	1355	256	1144	1369	275	512					
IC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
p0 queue free %	81	100	92	96	100	99	96					
CM capacity (veh/h)	201	131	743	126	128	667	1050					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	102	10	452	409	0	321	191					
Volume Left	39	5	47	0	0	0	0					
Volume Right	63	4	0	4	0	0	30					
CSH	366	198	1050	1700	1700	1700	1700					
Volume to Capacity	0.28	0.05	0.04	0.24	0.00	0.19	0.11					
Queue Length 95th (ft)	28	4	3	0	0	0	0					
Control Delay (s)	18.6	24.2	1.3	0.0	0.0	0.0	0.0					
Lane LOS	C	C	A									
Approach Delay (s)	18.6	24.2	0.7									
Approach LOS	C	C										
Intersection Summary												
Average Delay	1.8											
Intersection Capacity Utilization	Err% 15											
Analysis Period (min)	H											

2010 AM BUILD

CASE "N"
I:\Candelaria_University\Synchro\2010ABX_CASE_N.syn

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
10/31/2007



Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations	Stop	Stop	Free	Free	Free	Free
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	2	5	808	3	1
Volume (veh/h)	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	2	5	808	3	1	298
Hourly flow rate (vph)	2	5	878	3	1	324
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
PX, platoon unblocked	0.82	0.82	772		0.82	1032
VC, conflicting volume	1044	441			882	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol	830	91			631	
TC, single (s)	6.8	6.9			4.1	
TC, 2 stage (s)						
TF (s)	3.5	3.3			2.2	
PQ queue free %	99	99			100	
CM capacity (veh/h)	252	774			774	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	8	586	296	1	162	162
Volume Left	2	0	0	1	0	0
Volume Right	5	0	3	0	0	0
CSH	486	1700	1700	774	1700	1700
Volume to Capacity	0.02	0.34	0.17	0.00	0.10	0.10
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	12.5	0.0	0.0	9.7	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	12.5	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	32.4%					
Analysis Period (min)	15					
ICU Level of Service	A					

2007 PM Existing Condition

Existing Geometry
I:\Candelaria_University\Synchro\2007PX.syt

HCM Unsignalized Intersection Capacity Analysis 9: Super 8 Dwy & University Blvd.

Terry O. Brown, P.E.
10/31/2007



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Stop	Free	Free	Free	Free	Free
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Volume (veh/h)	2	5	832	3	1	307
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	5	904	3	1	334
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			772		1032	
PX, platoon unblocked	0.80	0.80			0.80	
VC, conflicting volume	1075	454			908	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	851	79			643	
TC, single (s)	6.8	6.9			4.1	
TC, 2 stage (s)						
TF (s)	3.5	3.3			2.2	
P0 queue free %	99	99			100	
CM capacity (veh/h)	240	777			755	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	8	603	305	1	167	167
Volume Left	2	0	0	1	0	0
Volume Right	5	0	3	0	0	0
CSH	475	1700	1700	755	1700	1700
Volume to Capacity	0.02	0.35	0.18	0.00	0.10	0.10
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	12.7	0.0	0.0	9.8	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	12.7	0.0		0.0		
Approach LOS	B			A		
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	33.1%					
Analysis Period (min)	15					
ICU Level of Service						A

2010 PM NO BUILD

Existing Geometry
I:\Candelaria_University\Synchro\2010PNX.syt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	4	1	29	2	1	5	38	848	3	1	307	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	32	2	1	5	41	922	3	1	334	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked	0.79	0.79		0.79	0.79	0.79	0.79	0.79				
VC, conflicting volume	890	1348	171	1207	1351	462	342					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	587	1170	171	991	1174	44	342					
IC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
P0 queue free %	99	99	96	99	99	99	97					
cM capacity (veh/h)	297	145	843	147	144	799	1213					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	37	9	502	464	1	222	120					
Volume Left	4	2	41	0	1	0	0					
Volume Right	32	5	0	3	0	0	9					
CSH	621	298	1213	1700	744	1700	1700					
Volume to Capacity	0.06	0.03	0.03	0.27	0.00	0.13	0.07					
Queue Length 95th (ft)	5	2	3	0	0	0	0					
Control Delay (s)	11.2	17.4	1.0	0.0	9.8	0.0	0.0					
Lane LOS	B	C	A		A							
Approach Delay (s)	11.2	17.4	0.5		0.0							
Approach LOS	B	C	A		A							
Intersection Summary												
Average Delay	0.8											
Intersection Capacity Utilization	46.7%											
Analysis Period (min)	15											
ICU Level of Service												
A												

2010 PM BUILD Condition

Existing Geometry
 I:\Candelaria_University\Synchro\2010PBX.syt

HCM Unsignalized Intersection Capacity Analysis

Terry O. Brown, P.E.
11/11/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume (veh/h)	26	0	42	2	0	5	54	832	3	1	307	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	0	46	2	0	5	59	904	3	1	334	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
PX, platoon unblocked	0.79	0.79		0.79	0.79	0.79						
VC, conflicting volume	930	1380	186	1238	1397	454	372					
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	639	1211	186	1031	1233	33	372					
TC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1					
TC, 2 stage (s)												
TF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					
P0 queue free %	90	100	94	98	100	99	95					
CM capacity (veh/h)	271	135	825	134	131	812	1183					
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	74	8	511	455	1	222	149					
Volume Left	28	2	59	0	1	0	0					
Volume Right	46	5	0	3	0	0	38					
CSH	463	332	1183	1700	758	1700	1700					
Volume to Capacity	0.16	0.02	0.05	0.27	0.00	0.13	0.09					
Queue Length 95th (ft)	14	2	4	0	0	0	0					
Control Delay (s)	14.3	16.1	1.4	0.0	9.8	0.0	0.0					
Lane LOS	B	C	A	A	A							
Approach Delay (s)	14.3	16.1	0.8									
Approach LOS	B	C										
Intersection Summary												
Average Delay	1.4											
Intersection Capacity Utilization	15											
Analysis Period (min)	H											

Intersection Summary

Average Delay
Intersection Capacity Utilization
Analysis Period (min)

1.4
Err%

ICU Level of Service

H

2010 PM BUILD

CASE "N"
\\Candelaria_University\Synchro\2010PBX_CASE_N.syt

Traffic Count Data Sheet

Year Counts Taken: 2007

 Candalaria / University Project
 E-W Street Candalaria Rd.
 N-S Street: Driveway 'A'

UN SIGNALIZED

 Speed Limit (Candalaria Rd.) = 45 MPH
 Speed Limit (Driveway 'A') = 25 MPH
 Date of Count: 10/17/07

Begin Time	End Time	Eastbound (Candalaria Rd.)			Westbound (Candalaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	0	483	0	0	444	0	0	0	0	0	0	0
7:15 AM	7:30 AM	0	238	0	0	148	0	0	0	0	0	0	0
7:30 AM	7:45 AM	0	253	0	0	148	0	0	0	0	0	0	0
7:45 AM	8:00 AM	0	312	0	0	186	0	0	0	0	0	0	0
8:00 AM	8:15 AM	0	307	0	0	153	0	0	0	0	0	0	0
8:15 AM	8:30 AM	0	224	0	0	453	0	0	0	0	0	0	0
8:30 AM	8:45 AM	0	196	0	0	424	0	0	0	0	0	0	0
8:45 AM	9:00 AM	0	206	0	0	442	0	0	0	0	0	0	0

AM Peak Hour Volumes

0	1110	0	0	635	0	0	0	0	0	0	0	0	0
% of Total Traffic	0.0%	63.6%	0.0%	0.0%	36.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Directional		63.6%		36.4%		0.0%		0.0%		0.0%		0.0%	
AM Peak Hour Factor		0.89		0.85		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	

Begin Time	End Time	Eastbound (Candalaria Rd.)			Westbound (Candalaria Rd.)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	0	484	0	0	459	0	0	0	0	0	0	0
4:15 PM	4:30 PM	0	434	0	0	404	0	0	0	0	0	0	0
4:30 PM	4:45 PM	0	459	0	0	460	0	0	0	0	0	0	0
4:45 PM	5:00 PM	0	210	0	0	220	0	0	0	0	0	0	0
5:00 PM	5:15 PM	0	180	0	0	245	0	0	0	0	0	0	0
5:15 PM	5:30 PM	0	190	0	0	171	0	0	0	0	0	0	0
5:30 PM	5:45 PM	0	154	0	0	159	0	0	0	0	0	0	0
5:45 PM	6:00 PM	0	434	0	0	467	0	0	0	0	0	0	0

PM Peak Hour Volumes

0	734	0	0	795	0	0	0	0	0	0	0	0	0
% of Total Traffic	0.0%	48.0%	0.0%	0.0%	52.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Directional		48.0%		52.0%		0.0%		0.0%		0.0%		0.0%	
PM Peak Hour Factor		0.87		0.81		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	

Traffic Count Data Sheet

Year Counts Taken: 2007

Candelaria / University Project

E-W Street Candelaria Rd.

N-S Street: Driveway 'B'

UNSIGNALIZED

Speed Limit (Candelaria Rd.)= 45 MPH
Speed Limit (Driveway 'B')= 25 MPH

Date of Count: 10/17/07

Begin Time	End Time	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	0	483	0	0	444	0	0	0	0	0	0	0
7:15 AM	7:30 AM	0	238	0	0	148	0	0	0	0	0	0	0
7:30 AM	7:45 AM	0	253	0	0	148	0	0	0	0	0	0	0
7:45 AM	8:00 AM	0	312	0	0	186	0	0	0	0	0	0	0
8:00 AM	8:15 AM	0	307	0	0	153	0	0	0	0	0	0	0
8:15 AM	8:30 AM	0	224	0	0	453	0	0	0	0	0	0	0
8:30 AM	8:45 AM	0	496	0	0	424	0	0	0	0	0	0	0
8:45 AM	9:00 AM	0	206	0	0	442	0	0	0	0	0	0	0
AM Peak Hour Volumes		0	1110	0	0	635	0	0	0	0	0	0	0
% of Total Traffic		0.0%	63.6%	0.0%	0.0%	36.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Directional			63.6%			36.4%							
AM Peak Hour Factor			0.89			0.85			#DIV/0!			#DIV/0!	

Begin Time	End Time	Eastbound (Candelaria Rd.)			Westbound (Candelaria Rd.)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	0	484	0	0	459	0	0	0	0	0	0	0
4:15 PM	4:30 PM	0	434	0	0	404	0	0	0	0	0	0	0
4:30 PM	4:45 PM	0	459	0	0	450	0	0	0	0	0	0	0
4:45 PM	5:00 PM	0	210	0	0	220	0	0	0	0	0	0	0
5:00 PM	5:15 PM	0	180	0	0	245	0	0	0	0	0	0	0
5:15 PM	5:30 PM	0	190	0	0	171	0	0	0	0	0	0	0
5:30 PM	5:45 PM	0	154	0	0	159	0	0	0	0	0	0	0
5:45 PM	6:00 PM	0	434	0	0	457	0	0	0	0	0	0	0
PM Peak Hour Volumes		0	734	0	0	795	0	0	0	0	0	0	0
% of Total Traffic		0.0%	48.0%	0.0%	0.0%	52.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Directional			48.0%			52.0%							
PM Peak Hour Factor			0.87			0.81			#DIV/0!			#DIV/0!	

Signalized Intersection Information Sheet

Intersection:

Menaul / Pan Am Frontage

Speed Limit - E-W Street:
Speed Limit - N-S Street:45 M.P.H.
45 M.P.H.

Type of Intersection Control

Signalized

Date:
10/26/2007

East Bound Approach:			
Length	0		
Left Turn Lanes	1	Thru / Lefts	3
Right Turn Lanes	0	Thru / Rights	
Is there a right turn slip laned that by-passes the traffic signal? NO			
Menaul			
Left Turn Arrow?	YES	Thru Green	Right Turn Arrow?
		YES	NO

West Bound Approach:			
Length	0		
Left Turn Lanes	0	Thru / Lefts	2
Right Turn Lanes	0	Thru / Rights	
Is there a right turn slip laned that by-passes the traffic signal? NO			
Menaul			
Left Turn Arrow?	NO	Thru Green	Right Turn Arrow?
		YES	NO

North Bound Approach:			
Length	0		
Left Turn Lanes	1	Thru / Lefts	2
Right Turn Lanes	0	Thru / Rights	
Is there a right turn slip laned that by-passes the traffic signal? NO			
Pan Am Frontage			
Left Turn Arrow?	NO	Thru Green	Right Turn Arrow?
		YES	NO

South Bound Approach:			
Length	0		
Left Turn Lanes	0	Thru / Lefts	
Right Turn Lanes	0	Thru / Rights	
Is there a right turn slip laned that by-passes the traffic signal? NO			
Pan Am Frontage			
Left Turn Arrow?	NO	Thru Green	Right Turn Arrow?
		NO	NO

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection:

Super 8 N. Dwy / University

Speed Limit - E-W Street:

UNKNOWN

Type of Intersection Control

Two-Way Stop

Date:

10/30/2007

East Bound Approach:					
Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes	
-	-	-	-	-	0
					Length

Super 8 N. Dwy					
Left Turn Arrow?	Thru Green	Right Turn Arrow?			
NO	NO	NO			NO
					Is there a right turn slip laned that by-passes the traffic signal?

West Bound Approach:				Super 8 N. Dwy			
Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes			
-	-	1	-	-	0		
Lv/Rt Combo							
Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO		
Is there a right turn slip laned that by-passes the traffic signal?							
NO							

North Bound Approach:				University			
Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes	0	0	0
Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO	NO	NO
Is there a right turn slip laned that by-passes the traffic signal?							

South Bound Approach:				University			
Left Turn Lanes	1	Thru / Lefts	2	Thru Lanes	Thru / Rights	Right Turn Lanes	0
Left Turn Arrow?				Thru Green	Right Turn Arrow?		
NO				NO			

Is there a right turn slip laned that by-passes the traffic signal? NO

NOTE: Existing Geometry

NEW Mexico
DEPARTMENT OF
TRANSPORTATION

INTRA DEPARTMENTAL CORRESPONDENCE

Date: 5/28/08

SUBJECT: Agenda for Access Control Committee Meeting, May 29, 2008, at 1:00, ROW Conference Room

TO: Access Control Committee Members

FROM: Chris Vigil, Chairman

I. 1:00-1:15 Roll Call/Sign In/Approval of Minutes from the 2/14/08 & 4/22/08 Meetings.

II. 1:15-1:45 Follow-up for review and approval of a modification in the access control line for I-40, mp 126-132, CN G1436
Ron Romero, District 6

1:45-2:15 Request for change in the access in the access control limits at the I-40 & Paseo Del Volcan Interchange
Tony Abbo, District 3

2:15-2:45 Candelaria/University Property Access Control Break Request
Tony Abbo, District 3

2:45-3:15 Kirtland Air Force Base EUL access to Gibson: Carlisle to San Mateo on the south side of Gibson
Tony Abbo, District 3

3:15-3:45 I-40/West Central Interchange, CN 4013
Tony Abbo, District 3

III. Old Business

3:45-4:15

V. Adjourn: