X-Ray Associates of New Mexico

(19th Ave.-Westside Blvd. / Unser Blvd.)

Traffic Impact Study

November 17, 2009

FINAL

FINAL

Signature Date

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Introduction

The purpose of this study is to evaluate the transportation conditions before and after implementation of the proposed X-Ray Associates of New Mexico development project and determine the impact of the development on the adjacent transportation system. The recommendations of this study will provide measures to mitigate the impact of the development of the site plan on critical intersections and street segments. This study is prepared to meet the requirements of the City of Rio Rancho associated with its review of the X-Ray Associates of New Mexico Development as shown on the plan on Page A-3 in the Appendix of this report.

Study Procedures

Communication was established with Tim Brown, Traffic Engineer for the City of Rio Rancho, prior to beginning the study to establish scope and methodology to be utilized within the proposed X-Ray Associates of New Mexico site Traffic Impact Study. Specific items included format, intersections to be studied, intersection analysis procedures, existing traffic counts, trip distribution methodology, and implementation year definition. Additionally, Tony Abbo, District 3 Traffic Engineer for the New Mexico Department of Transportation was contacted by e-mail and responded in a March 4, 2009 e-mail that the New Mexico Department of Transportation had no interest in reviewing the Traffic Impact Study for this project.

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections utilized in the Synchro (Version 7, Build 763) Transportation System analysis software program as required by the New Mexico Department of Transportation and other local governments. Synchro software deviates from the 2000 Highway Capacity Manual methods in several areas. The results obtained using Synchro software are generally deemed by the reviewing agencies to be relatively close to those based on the 2000 Highway Capacity Manual in most cases.

Intersections targeted for analysis in this study include Southern Blvd. / Unser Blvd., Cabazon Blvd. / Unser Blvd., 19th Ave. (Westside Blvd.) / Unser Blvd., Wellspring Rd. (Rhonda Ave.) / Unser Blvd., and McMahon Blvd. / Unser Blvd. In addition, the proposed driveways for the site will be analyzed. Analysis will be for the projected build year (2012).

Outline of basic procedures following in this report are:

- Acquire new turning movement volumes traffic counts for the AM and PM Peak Hour at the intersections targeted for evaluation.
- Calculate implementation year growth rates for each approach of each intersection in the study area based on a five year historic growth rate obtain from recent Mid-Region Council of Governments (MRCOG) Traffic Flow Maps.
- Calculate background traffic volumes for each intersection by applying the annual growth rate to the existing volumes for the number of years to reach the 2012 implementation year. Additionally, add the trips from approved projects that have not yet been constructed into the background traffic volumes to derive the 2012 NO BUILD volumes.
- Calculate the trip generation rate for project during the AM and PM Peak Hour of Adjacent Street Traffic periods utilizing data from the *ITE Trip Generation Manual*, 8th Edition (2008).
- Distribute the new trips onto the adjacent transportation system in the study area based on socio-economic data from the Mid-Region Council of Governments (2030 data set).
- Add the new trips at each intersection to the 2012 NO BUILD volumes to obtain the 2012 BUILD volumes for this study.
- Evaluate each intersection in the study area for the 2012 AM and PM Peak Hour NO BUILD and BUILD conditions beginning with existing (or base) geometry to determine the level-of-service and delay at each intersection for each condition analyzed.
- Consider signalization and / or geometric improvements at each intersection to restore the intersection to acceptable levels-of-service. In some cases, the intersection will be considered acceptable if improved back to the an equivalent or better level-of-service that existed under the 2012 NO BUILD condition.
- Calculate queuing for each lane group at each intersection in the study area based on Poisson's arrival rates utilizing a 95th percentile confidence level.
- Make recommendations for offsite mitigation to be considered for this project.

Study Area Characteristics

The subject area of land discussed in this report is bound on the east by Unser Blvd and on the north by 19th Ave. (Westside Blvd.). See the X-Ray Associates of New Mexico (XRANM) site plan on Page A-3 in the Appendix of this report. The total area encompassed by this project is approximately 15 acres. The project consists of mixed medical office and retail commercial uses. A vicinity map showing the location of the project is included on Page A-1 in the Appendix of this report.

Generally, the adjacent land uses in the area of this project are a mix of residential and commercial / office. The property on which this project is proposed is also zoned C-1. There are other proposed developments in the vicinity of this project including a large commercial development to the east across the street. The proposed development to the east is a part of the Cabezon project denoted as Tracts 12, 13, and 14.

The expected year of full implementation of the X-Ray Associates of New Mexico is 2012.

Proposed access to this new site will be an intersection on Unser Blvd. (a full access signalized extension of Wellspring Rd.) and one or more driveways on 19th Ave. west of Unser Blvd.

Unser Blvd. and 19th Ave. (Westside Blvd.) are classified as a Limited Access Principal Arterial Roadways on the Long Range Roadway Plan for the Albuquerque Urban Area. Generally speaking, Unser Blvd. is currently a four lane urban roadway with curbs and gutters on both sides of the street and a raised median in the center. The Traffic Impact Study for the proposed Cabezon Community dated September 22, 2007 requires the developer of Cabezon to construct a third northbound and a third southbound thru lane on Unser Blvd. from north of Southern Blvd. to south of McMahon Blvd. The posted speed limit along Unser Blvd in the vicinity of the project is generally 45 MPH. 19th Ave. (Westside Blvd.) is not significantly improved in the vicinity of this project. Design and construction of 19th Ave. (Westside Blvd.) will be required to conform with the McMahon / Westside Corridor Plan adopted by the Mid-Region Council of Governments.

Southern Blvd. is classified as a Principal Arterial Roadway on the Long Range Roadway Plan for the Albuquerque Urban Area. Near Unser Blvd., it is generally a four lane urban facility with raised medians and curbs and gutters on both sides of the street.

Cabezon Blvd. is classified as a Collector Roadway on the Long Range Roadway Map for the Albuquerque Metropolitan Area. It is a four lane roadway near the intersection with Unser Blvd. It has curbs and gutters on both sides of the street and raised medians in the center.

McMahon Blvd. is classified as a Limited Access Principal Arterial Roadway on the Long Range Roadway Map for the Albuquerque Metropolitan Area. It is generally a four lane urban roadway near Unser Blvd. with raised medians and curbs and gutters on both sides of the street.

The Long Range Roadway Plan for the Albuquerque Urban Area Map is included in the report on Page A-4 of the Appendix.

Description of Proposed Development

The X-Ray Associates of New Mexico Development is a proposed mixed use medical office / commercial project.

The proposed development is expected to consist of a 161,120 S.F. medical-dental office buildings, a gasoline station with convenience market, a 4,600 S.F. restaurant, 56,200 S.F. general office buildings, 28,700 S.F. of shopping center and a 2-bay drive-in bank (all building sizes are approximate). Proposed uses are speculative and, hence, are subject to change. The proposed land use scenario, though, should provide a representative traffic generation rate for most development scenarios associated with development of this property. If the property were

to develop in a manner significantly different than the proposed plan considered in this report such that the number of generated trips are significantly greater, then an update to this study may be required by the City.

There is currently no approved access to this property from either major street. Both Unser Blvd. and 19th Ave. / Westside Blvd. are classified as Limited Access Principal Arterial roadways and, as such, partial access is required to be spaced ¼ mile apart, full access is required to be spaced ½ mile apart, and either partial or full access must be approved by the Mid-Region Council of Governments' Transportation Coordinating Committee. The Access Justification Study to make the case for the new access on Unser Blvd. will be a separate companion report.

If approved by the Transportation Coordinating Committee, access to this project will be via a full access signalized intersection on Unser Blvd. (the approved signalized access at Wellspring Rd.) and a full access driveway on 19th Ave. west of Unser Blvd.

Trip Generation Rates

Generation of the 2012 AM and PM Peak Hour BUILD conditions incorporated ITE Trip Generation Rates based on ITE's Trip Generation Manual (7th Edition).

Trip generation rates for this project were determined based unadjusted ITE Trip Generation data entered into the VISUM model for the City of Santa Fe. The trip generation rates were then adjusted for internal capture, pass-by trips, and transit reduction within the VISUM model.

The trip generation rate for this project was calculated utilizing data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (8th Edition). The following table summarizes the results of that calculation:

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

COMMENT	USE (ITE CODE) / DESCRIPTION		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER	EXIT
	Summary Sheet	Units					
Tract No.	Medical-Dental Office Building (720)	161.12	6,373	293	78	116	313
Tract No.	General Office Building (710)	56.20	856	104	14	24	118
Tr. 4-8 & 10	Shopping Center (820)	28.70	3,017	45	29	135	141
Tract 2	High Turnover (Sit-Down) Restaurant (932)	4.60	585	28	25	30	21
Tract 9	Gasoline / Service Station w/ Convenience Market (945)	12	1,953	61	61	80	80
Tract 3	Drive-In Bank (912)	2	279	11	8	27	28
	Subtotal		**13,063**	**542**	**215**	**412**	**701**
	Office / Medical Office Trips		**7,229**	**397**	**92**	**140**	**431**
	Retail Commercial Trips		**5,834**	**145**	**123**	**272**	**270**
	Pass-by Reduction for Commercial Trips	30%	(1,750)	(44)	(37)	(82)	(81)
	Adjusted Retail Commercial Trips		**4,084**	**101**	**86**	**190**	**189**

Note: All Units are 1,000's S.F. except Gasoline / Service Station is number of fueling positions and Drive-in Bank is number of windows.

The preceding table demonstrates the calculated trip generation rate based on the proposed plan and the projected uses for each building on the site. An adjustment of 30% was made to account for pass-by trips or mixed use (internal capture) traffic reductions, as shown in the table above. Trip Generation Rate Summary Table and Individual Trip Generation Rate Worksheets for individual land uses are contained on Pages A-6 thru A-9 in the Appendix.

Trip Distribution / Trip Assignments

Primary and Diverted Linked Trips:

Trips were distributed as follows:

Commercial Land Uses

Primary and diverted linked trips for the commercial land use development were distributed proportionally to the 2012 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 (July, 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 2012 population data to utilize for this analysis. Population Subzones were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones is shown in the Appendix. The commercial Trip Distribution map can be found in the Appendix on Page A-14.

Office Land Uses

Primary and diverted linked trips for the office land use development were distributed proportionally to the 2012 projected population of Data Subareas citywide inversely proportional to the distance of the subarea from the project location. 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 (July, 2007), Appendix E and Appendix F, supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2004 and 2030 was interpolated linearly to obtain 2012 population data to utilize for this analysis. Population Subareas were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones is shown in the Appendix. The office Trip Distribution map can be found in the Appendix on Page A-23.

Analysis of Existing Conditions

2007 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-4 of the Appendix.

An analysis of the existing conditions of the transportation system was not provided in this report for two primary reasons:

1) The implementation year analysis (2012) is only about three years into the future and significantly represents existing conditions considering approved nearby developments that have not been fully implemented.
2) The existing volumes do not reflect new volumes that will be present shortly resulting from land development projects that have been approved by the City within the last two years, but have not yet been implemented. Therefore, an existing condition analysis would under-report the delays present at the intersections.

Background Traffic Growth

Background traffic growth rates for the implementation year (2012) were considered for each individual approach to an intersection that was targeted for analysis based on data from the 2003, 2004, 2005, 2006, 2007 Traffic Flow maps prepared by the Mid-Region Council of Governments (MRCOG). Almost all of the Traffic Flow Data for those years taken from the MRCOG Traffic Flow Maps were Standard Data. The data from those years for each approach was plotted on a graph and a linear "regression trend line" calculated using the equation format $y=mx+b$. The growth rate was determined by calculating the average volume increase per year during the time period considered and dividing that volume into the most recent AWDT used in the analysis from which future volumes will be calculated. The rate of growth of that trend line was utilized as the growth rate for each approach if that calculated rate appeared feasible. However, there were some instances where the rate indicated a negative growth trend. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was considered. Due to the potential for growth in the area, it was believed that a zero percent growth rate was unlikely in most cases. 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 for the implementation year (2012) with linear regression trend lines are shown in the Appendix on Pages A-28 thru A-36. A Historic Growth Map can be found in the Appendix, pg. A-37. The growth rate utilized for each approach to an intersection is printed at the top of the Turning Movement sheets for each intersection (pp. A-42 thru A-64 in the Appendix).

Projected Peak Hour Turning Movements for 2012 Buildout

The calculated annual growth rates were applied to the most recent peak hour traffic count volumes and trips were added for Cabezon Community development, Tracts 12, 13, and 14 to account for trips generated by projects that are planned to be constructed in the near future. The sum of the existing volumes plus growth plus other proposed projects constitute the 2012 NO BUILD volumes utilized in this report. To these volumes, the generated trips based on implementation of the proposed X-Ray Associates of New Mexico development were added to obtain the 2012 BUILD Volumes utilized for the 2012 BUILD Condition analyses. See Appendix Pages A-42 thru A-64 for further information regarding the 2012 turning movement volumes.

Implementation Year Traffic Analysis

Classification of levels-of-service and delay for signalized and unsignalized intersections will be made based on criteria established by Synchro, Version 7 (Build 763) computer modeling software which approximates the 2000 Highway Capacity Manual methodology. The average control delay is calculated for each intersection and for each lane group of each leg of the intersection. The control delay then determines the level-of-service based on the following tables:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

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

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

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

Generally speaking, a Level-of-Service D or better is an acceptable parameter for design purposes.

Following is a summary of the results of the Synchro Analysis for each of the intersections targeted for evaluation in this report:

Intersection #1 – Southern Blvd. / Unser Blvd. - Pages A-88 thru A-93

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **Southern Blvd. / Unser Blvd.**

		2012 AM Peak Hour					2012 PM Peak Hour				
		BASE GEOMETRY			MIT. GEOM.		BASE GEOMETRY			MIT. GEOM.	
		NO BUILD		BUILD	BUILD		NO BUILD		BUILD	BUILD	
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay
EB	L	1	C - 25.2	C - 34.1	1	C - 25.2	1	E - 62.2	E - 62.1	1	F - 111
	T	2	D - 52.7	F - 101	2	D - 52.7	2	F - 97.9	F - 97.9	2	F - 97.9
	R	1	A - 0.9	A - 1.0	1	A - 1.0	1	A - 0.7	A - 0.7	1	A - 0.7
WB	L	1	F - 115	F - 112	2	E - 71.3	1	F - 184	F - 202	2	F - 135
	T	2	C - 23.2	C - 26.4	2	C - 26.4	2	E - 58.8	E - 55.2	2	F - 88.8
	R	1	A - 0.2	A - 0.2	1	A - 0.2	1	A - 0.6	A - 0.6	1	A - 0.6
NB	L	2	F - 96.8	F - 119	2	E - 73.9	2	F - 160	F - 188	2	F - 115
	T	2	C - 20.4	D - 39.9	2	C - 29.3	2	D - 35.1	E - 55.8	2	D - 54.9
	R	1	A - 7.0	B - 15.1	1	B - 15.7	1	A - 4.8	A - 7.1	1	B - 17.7
SB	L	2	D - 43.4	D - 54.1	2	D - 43.4	2	F - 172	F - 172	2	F - 101
	T	2	E - 60.9	E - 64.7	2	D - 43.0	2	F - 108	F - 130	2	F - 96.3
	R	1	B - 14.9	B - 18.0	1	B - 13.2	1	C - 24.8	C - 25.4	1	C - 25.5
Intersection:		***D - 43.7***	***E - 55.5***		***D - 36.6***		***E - 79.5***	***F - 91.4***		***E - 72.9***	

The analysis of the intersection of Southern Blvd. / Unser Blvd. in this report demonstrates that the projected levels-of-service and delays are acceptable for the 2012 AM Peak Hour analysis, but unacceptable for the 2012 PM Peak Hour analysis. Mitigation of the increase in delay during the 2012 PM Peak Hour period consists of constructing dual westbound left turn lanes on Southern Blvd. at the intersection.

The X-Ray Associates of New Mexico is a much smaller project than the proposed Cabazon Community development and is located farther away from the intersection of Southern Blvd. / Unser Blvd. The requirements for mitigation of the Southern Blvd. / Unser Blvd. intersection in the Cabazon Community development Traffic Impact Reassessment dated September 22, 2009, includes constructing a third northbound and southbound thru lane on Unser Blvd. at Southern Blvd. and constructing a second eastbound and westbound left turn lane on Southern Blvd. at Unser Blvd. Since the requirements for improvements to the intersection of Southern Blvd. / Unser Blvd. in the Cabazon report exceed the indicated mitigation needs in this report, no recommendations are made with regard to measures to increase capacity at the existing signalized intersection of Southern Blvd. / Unser Blvd. associated with this project. It should be the case that the Cabazon Community developer will build the needed improvements at Southern Blvd. / Unser Blvd.

The results of the queuing analysis for the intersection of Southern Blvd. / Unser Blvd. are summarized in the following table:

Queueing Analysis Summary Sheet

Project: X-Ray Associates (19th Ave / Unser Blvd)

Intersection: **Southern Blvd / Unser Blvd**

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*113*	*360*	*2*	*440*	*Cont*		*1*	*309*	*300*
AM NO BUILD Queue	1	137	200	2	535	375		1	576	675
AM BUILD Queue	**1**	**137**	**200**	**2**	**535**	**375**		**1**	**613**	**700**
Existing Lane Length	*1*	*111*	*360*	*2*	*308*	*Cont*		*1*	*195*	*300*
PM NO BUILD Queue	1	135	225	2	375	300		1	437	**575**
PM BUILD Queue	**1**	**135**	**225**	**2**	**375**	**300**		**1**	**465**	**600**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*113*	*325*	*2*	*262*	*Cont*		*1*	*146*	*400*
AM NO BUILD Queue	1	413	500	2	272	225		1	186	275
AM BUILD Queue	**1**	**455**	**550**	**2**	**272**	**225**		**1**	**186**	**275**
Existing Lane Length	*1*	*195*	*325*	*2*	*660*	*Cont*		*1*	*446*	*400*
PM NO BUILD Queue	1	455	**575**	2	670	500		1	466	600
PM BUILD Queue	**1**	**486**	**625**	**2**	**670**	**500**		**1**	**466**	**600**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*2*	*158*	*200*	*2*	*357*	*Cont*		*1*	*163*	*300*
AM NO BUILD Queue	2	315	250	2	618	425		1	311	400
AM BUILD Queue	**2**	**329**	**250**	**2**	**630**	**425**		**1**	**327**	**425**
Existing Lane Length	*2*	*406*	*200*	*2*	*742*	*Cont*		*1*	*149*	*300*
PM NO BUILD Queue	2	925	**650**	2	1,409	>1,000	*	1	544	**675**
PM BUILD Queue	**2**	**973**	**675**	**2**	**1,449**	**>1,000**	*	**1**	**597**	**725**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*2*	*416*	*300*	*2*	*678*	*Cont*		*1*	*86*	*450*
AM NO BUILD Queue	2	432	325	2	1,058	675		1	87	150
AM BUILD Queue	**2**	**432**	**325**	**2**	**1,090**	**700**		**1**	**87**	**150**
Existing Lane Length	*2*	*355*	*300*	*2*	*539*	*Cont*		*1*	*98*	*450*
PM NO BUILD Queue	2	390	325	2	947	**650**		1	99	175
PM BUILD Queue	**2**	**390**	**325**	**2**	**969**	**675**		**1**	**99**	**175**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

Intersection #2 – Cabazon Blvd. / Unser Blvd. - Pages A-94 thru A-99

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **Cabezon Blvd. / Unser Blvd.**

		2012 AM Peak Hour					2012 PM Peak Hour				
		BASE GEOMETRY			MIT. GEOM.		BASE GEOMETRY			MIT. GEOM.	
		NO BUILD		BUILD	BUILD		NO BUILD		BUILD	BUILD	
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay
EB	L	1	C - 27.7	C - 24.3	1	D - 36.7	1	D - 41.9	D - 41.9	1	D - 53.8
	T	1	C - 27.8	C - 24.5	1	D - 37.3	1	D - 41.8	D - 41.8	1	D - 53.9
	R	1	C - 28.5	C - 25.2	1	D - 38.4	1	D - 41.7	D - 41.7	1	D - 53.7
WB	L	1	E - 64.1	E - 62.6	1	F - 83.4	1	F - 142	F - 157	1	E - 71.5
	T	1	C - 29.7	C - 26.4	1	C - 32.2	1	F - 313	F - 313	1	F - 255
	R	>	C - 29.7	C - 26.4	>	C - 32.2	>	F - 313	F - 313	>	F - 255
NB	L	1	C - 26.8	C - 23.6	1	D - 36.0	1	B - 10.8	B - 14.2	1	F - 112
	T	2	A - 7.1	C - 22.2	2	B - 18.8	2	F - 260	F - 297	2	F - 305
	R	1	A - 0.3	B - 12.1	1	A - 8.1	1	A - 5.8	A - 6.2	1	A - 8.1
SB	L	1	D - 51.0	E - 71.8	1	D - 49.3	1	F - 384	F - 385	1	F - 269
	T	2	B - 12.5	C - 21.0	2	B - 19.6	2	A - 3.5	A - 4.2	2	B - 15.0
	R	1	A - 4.1	A - 3.6	1	A - 3.8	1	A - 1.2	A - 1.4	1	A - 5.6
Intersection:		***B - 18.2***	***C - 27.7***		***C - 26.0***		***F - 185***	***F - 201***		***F - 188***	

The analysis of the intersection of Cabazon Blvd. / Unser Blvd. in this report demonstrates that the projected levels-of-service and delays are acceptable for the 2012 AM Peak Hour analysis, but unsatisfactory for the 2012 PM Peak Hour analysis. Mitigation of the increase in delays at the intersection resulting from development of the X-Ray Associates of New Mexico project consists of adding a westbound permitted / protected left turn phase to the signal. This improvement would restore the delay / level-of-service at the intersection to slightly better than the 2012 PM Peak Hour NO BUILD condition.

The results of the queuing analysis for the intersection of Cabazon Blvd. / Unser Blvd. are summarized in the following table:

Queueing Analysis Summary Sheet

Project: X-Ray Associates (19th Ave / Unser Blvd)

Intersection: **Cabezon Blvd / Unser Blvd**

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*2*	*180*	*1*	*23*	*Cont*		*1*	*51*	*180*
AM NO BUILD Queue	1	2	0	1	23	50		1	51	100
AM BUILD Queue	**1**	**2**	**0**	**1**	**23**	**50**		**1**	**51**	**100**
Existing Lane Length	*1*	*0*	*180*	*1*	*6*	*Cont*		*1*	*17*	*180*
PM NO BUILD Queue	1	0	0	1	6	25		1	17	50
PM BUILD Queue	**1**	**0**	**0**	**1**	**6**	**25**		**1**	**17**	**50**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*45*	*200*	*1*	*33*	*Cont*		*0*	*88*	*0*
AM NO BUILD Queue	1	235	325	1	33	75		0	268	350
AM BUILD Queue	**1**	**243**	**325**	**1**	**33**	**75**		**0**	**268**	**350**
Existing Lane Length	*1*	*61*	*200*	*1*	*26*	*Cont*		*0*	*273*	*0*
PM NO BUILD Queue	1	271	**375**	1	26	75		0	583	725
PM BUILD Queue	**1**	**281**	**400**	**1**	**26**	**75**		**0**	**583**	**725**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*38*	*150*	*2*	*729*	*Cont*		*1*	*69*	*150*
AM NO BUILD Queue	1	44	100	2	1,114	700		1	211	300
AM BUILD Queue	**1**	**44**	**100**	**2**	**1,157**	**725**		**1**	**216**	**300**
Existing Lane Length	*1*	*44*	*150*	*2*	*1,257*	*Cont*		*1*	*59*	*150*
PM NO BUILD Queue	1	52	100	2	2,792	>1,000	*	1	349	475
PM BUILD Queue	**1**	**52**	**100**	**2**	**2,934**	**>1,000**	*	**1**	**360**	**475**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*177*	*200*	*2*	*1,184*	*Cont*		*1*	*8*	*120*
AM NO BUILD Queue	1	397	475	2	2,076	>1,000	*	1	9	25
AM BUILD Queue	**1**	**397**	**475**	**2**	**2,187**	**>1,000**	*	**1**	**9**	**25**
Existing Lane Length	*1*	*167*	*200*	*2*	*857*	*Cont*		*1*	*1*	*120*
PM NO BUILD Queue	1	566	700	2	1,684	>1,000	*	1	1	0
PM BUILD Queue	**1**	**566**	**700**	**2**	**1,765**	**>1,000**	*	**1**	**1**	**0**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

Intersection #3 – 19th Ave. (Westside Blvd.) / Unser Blvd. - Pages A-100 thru A-107

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **19th Ave. / Unser Blvd.**

		2012 AM Peak Hour					2012 PM Peak Hour				
		BASE GEOMETRY			MIT. GEOM.		BASE GEOMETRY			MIT. GEOM.	
		NO BUILD		BUILD	BUILD		NO BUILD		BUILD	BUILD	
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay
EB	L	1	D - 37.4	E - 58.0	1	D - 52.9	1	D - 50.6	F - 807	1	D - 50.3
	T	1	D - 37.3	E - 55.6	2	E - 57.4	1	D - 45.9	C - 26.9	2	D - 51.9
	R	>	D - 37.3	E - 55.6	1	D - 53.8	>	D - 45.9	C - 26.9	1	D - 45.2
WB	L	1	E - 59.7	F - 91.0	2	F - 80.7	1	D - 43.6	D - 43.1	2	F - 130
	T	1	C - 28.9	D - 44.5	2	D - 54.2	1	F - 365	F - 244	2	D - 46.4
	R	>	C - 28.9	D - 44.5	2	D - 37.3	>	F - 365	F - 244	2	E - 63.7
NB	L	1	B - 15.2	F - 98.8	1	C - 23.7	1	F - 115	F - 227	1	B - 18.4
	T	2	C - 25.2	C - 20.5	3	B - 11.0	2	F - 301	F - 454	3	D - 53.0
	R	1	B - 10.5	A - 1.6	1	A - 1.3	1	B - 18.8	C - 22.9	1	A - 0.9
SB	L	1	C - 25.0	D - 54.1	2	D - 53.4	1	F - 305	F - 479	2	D - 40.8
	T	2	A - 6.0	B - 16.5	2	C - 22.1	2	C - 29.3	E - 63.2	2	C - 21.2
	R	1	A - 1.3	A - 4.9	1	A - 4.2	1	B - 12.3	C - 21.4	1	A - 5.9
Intersection:		***B - 17.5***	***C - 27.1***			***C - 25.5***		***F - 206***	***F - 266***		***D - 46.8***

The analysis of the intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. demonstrates that the projected levels-of-service and delays are excessive for the 2012 PM Peak Hour period. The initial analysis is based on an assumed base geometry since the intersection is virtually non-existent. The assumed base geometry consists of a left turn lane and a thru/right lane for the eastbound and westbound approach and a left turn lane, two thru lanes, and a right turn lane for the northbound and southbound approaches. Mitigation of the excessive delays at the intersection for the PM Peak Hour consists of a minimum geometry as demonstrated in the following table:

Mitigated Geometry (19th Ave.-Westside Blvd. / Unser Blvd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB 19th Ave.	1	0	2	0	1
WB Westside Blvd.	2	0	2	0	2*
NB Unser Blvd.	1	0	3	0	1
SB Unser Blvd.	2	0	2	0	1

* or a free right turn with an add-lane

Since this intersection is located at the corner of the proposed development, mitigation of the long delays will be likely be required to provide an intersection with acceptable levels-of-service and delays (i.e., LOS "D" or better).

It should be noted, though, that previous land development projects have committed to construct three northbound and three southbound thru lanes on Unser Blvd. as well as a westbound free right turn lane on Westside Blvd. at the intersection. Construction of these improvements exceeds those recommended in this report. Since the requirements for improvements to the intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. in the Cabazon report exceed the indicated mitigation needs in this report, no recommendations are made with regard to measures to increase capacity at the existing signalized intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. associated with this project. It should be the case that the Cabazon Community developer will build the needed improvements at Southern Blvd. / Unser Blvd.

NOTE: The Cabazon Community Traffic Impact Reassessment (dated September 22, 2007) recommends a westbound free right turn lane on Westside Blvd. at Unser Blvd. The westbound free right turn lane will work provided that there is an add-lane on Unser Blvd. Otherwise, dual westbound right turn lanes should be constructed with the signal designed to provide a westbound right turn overlap phase arrow concurrent with the southbound protected left turn.

The results of the queuing analysis for the intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. are summarized in the following table:

Queueing Analysis Summary Sheet

Project: X-Ray Associates (19th Ave / Unser Blvd)

Intersection: 19th Av SE / Unser Blvd

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*9*	*N/A*	*2*	*0*	*Cont*		*1*	*34*	*N/A*
AM NO BUILD Queue	1	9	25	2	0	0		1	34	75
AM BUILD Queue	**1**	**43**	**100**	**2**	**21**	**50**		**1**	**44**	**100**
Existing Lane Length	*1*	*14*	*N/A*	*2*	*0*	*Cont*		*1*	*20*	*N/A*
PM NO BUILD Queue	1	14	**50**	2	0	**0**		1	20	**50**
PM BUILD Queue	**1**	**126**	**200**	**2**	**71**	**100**		**1**	**56**	**125**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*0*	*N/A*	*2*	*0*	*Cont*		*2*	*0*	*N/A*
AM NO BUILD Queue	1	200	275	2	0	0		2	130	125
AM BUILD Queue	**1**	**219**	**300**	**2**	**56**	**75**		**2**	**130**	**125**
Existing Lane Length	*1*	*0*	*N/A*	*2*	*0*	*Cont*		*2*	*0*	*N/A*
PM NO BUILD Queue	1	360	**475**	2	0	**0**		2	980	675
PM BUILD Queue	**1**	**373**	**500**	**2**	**38**	**50**		**2**	**980**	**675**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*9*	*N/A*	*3*	*783*	*Cont*		*1*	*0*	*N/A*
AM NO BUILD Queue	1	10	25	3	1,114	525		1	100	175
AM BUILD Queue	**1**	**40**	**75**	**3**	**1,127**	**525**		**1**	**107**	**175**
Existing Lane Length	*1*	*44*	*N/A*	*3*	*1,320*	*Cont*		*1*	*0*	*N/A*
PM NO BUILD Queue	1	50	**100**	3	2,120	>1,000	*	1	310	**425**
PM BUILD Queue	**1**	**68**	**125**	**3**	**2,161**	**>1,000**	*	**1**	**335**	**450**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*2*	*0*	*N/A*	*3*	*1,300*	*Cont*		*1*	*4*	*N/A*
AM NO BUILD Queue	2	340	275	3	2,008	850		1	5	25
AM BUILD Queue	**2**	**340**	**275**	**3**	**2,037**	**875**		**1**	**93**	**150**
Existing Lane Length	*2*	*0*	*N/A*	*3*	*1,098*	*Cont*		*1*	*12*	*N/A*
PM NO BUILD Queue	2	500	375	3	1,630	775		1	14	**50**
PM BUILD Queue	**2**	**500**	**375**	**3**	**1,653**	**775**		**1**	**83**	**150**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

Since the intersection is virtually non-existent, no existing auxiliary lane lengths are provided. The auxiliary lanes should be constructed to a minimum length recommended in the preceding

table to meet requirements for queuing for the projected implementation year volumes. Calculated right turn queue lengths in the preceding table may be reduced by 50% to account for right-turns-on red and overlap phasing.

Intersection #4 – Wellspring Rd. (Rhonda Ave.) / Unser Blvd. - Pages A-108 thru A-115

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **Wellspring (Rhonda Ave.) / Unser Blvd.**

		2012 AM Peak Hour					**2012 PM Peak Hour**				
		BASE GEOMETRY			MIT. GEOM.		BASE GEOMETRY			MIT. GEOM.	
		NO BUILD		BUILD	BUILD		NO BUILD		BUILD	BUILD	
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay
EB	L	2	A - 0.0	E - 59.4	2	E - 59.4	2	A - 0.0	E - 61.9	2	E - 55.1
	T	1	A - 0.0	E - 57.5	1	E - 57.5	1	A - 0.0	D - 54.0	1	D - 52.6
	R	1	A - 0.0	C - 34.2	1	C - 34.2	1	A - 0.0	E - 74.7	1	E - 66.0
WB	L	2	D - 35.7	E - 55.4	2	E - 55.4	2	E - 57.2	F - 108	2	F - 85.2
	T	1	A - 0.0	D - 50.8	1	D - 50.1	1	A - 0.0	D - 54.2	1	D - 38.5
	R	>	C - 22.0	D - 50.8	1	D - 37.1	>	D - 38.8	D - 54.2	1	D - 39.7
NB	L	1	A - 0.0	D - 45.6	1	E - 60.4	1	A - 0.0	D - 41.7	1	C - 33.9
	T	2	B - 10.2	A - 7.1	3	A - 3.5	2	B - 18.6	C - 25.2	3	B - 17.4
	R	1	A - 3.9	A - 9.1	1	A - 1.7	1	A - 2.1	A - 4.6	1	A - 2.7
SB	L	2	C - 34.4	D - 54.7	2	E - 56.8	2	E - 56.8	E - 62.3	2	D - 45.8
	T	2	A - 4.2	D - 54.0	2	D - 52.4	2	A - 7.8	C - 25.1	2	D - 37.5
	R	1	A - 0.0	B - 12.6	1	A - 9.7	1	A - 0.0	A - 0.4	1	B - 16.3
Intersection:		***B - 10.3***	***D - 39.3***		***D - 38.3***		***C - 22.5***	***D - 42.3***		***D - 37.7***	

The analyses of the intersection of Wellspring (Rhonda Ave.) / Unser are acceptable for the overall intersection conditions, but there is a turning movement issue which should be addressed. The westbound left turn movement during the 2012 PM Peak Hour BUILD period is projected to operate at level-of-service "F" with an associated 108 second average control delay. Also, the increase in delay at the intersection by implementing the fourth leg on the west is significant (19 seconds). Mitigation of the increase in delay and the long delay projected for the westbound left turn movement can be attained by constructing a third northbound thru lane on Unser Blvd. as in the case at the intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. Construction of a third northbound thru lane on Unser Blvd. at Wellspring (Rhonda Ave.) will improve the intersection operation reducing the overall delay and eliminating the LOS "F" for the westbound left turn movement during the 2012 PM Peak Hour period.

Again, it should be noted that a previous land development project has committed to construct three northbound and three southbound thru lanes on Unser Blvd. at the intersection. Construction of these improvements exceeds those recommended in this report with the exception of constructing a westbound right turn lane on Wellspring Rd. The developer of Cabazon Community as well as the author of the Traffic Impact Reassessment assumed that Wellspring Rd. (known as Arroyo Rd. in the Traffic Impact Reassessment) would be a signalized tee intersection. Thus the westbound approach was recommended to be dual westbound left turn lanes and a right turn lane. There was no plan for a future westbound thru lane to accommodate a fourth leg of the intersection. It should be the case that the Cabazon Community developer will build the third northbound and third southbound thru lane improvements at Wellspring Rd. (Rhonda Ave.) / Unser Blvd. This study recommends that the westbound leg be designed to include dual westbound left turn lanes, a single westbound thru lane, and a single westbound right turn lane w/overlap signal phasing.

The results of the queuing analysis for the intersection of Wellspring Rd. (Rhonda Ave.) / Unser Blvd. are summarized in the following table:

Queueing Analysis Summary Sheet

Project: X-Ray Associates (19th Ave / Unser Blvd)

Intersection: **Rhonda Av SE / Unser Blvd**

2012

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*2*	*0*	*N/A*	*1*	*0*	*Cont*	*1*	*0*	*N/A*
AM NO BUILD Queue	2	0	0	1	0	0	1	0	0
AM BUILD Queue	**2**	**33**	**50**	**1**	**0**	**0**	**1**	**115**	**175**
Existing Lane Length	*2*	*0*	*N/A*	*1*	*0*	*Cont*	*1*	*0*	*N/A*
PM NO BUILD Queue	2	0	**0**	1	0	0	1	0	**0**
PM BUILD Queue	**2**	**114**	**125**	**1**	**0**	**0**	**1**	**364**	**475**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*2*	*170*	*N/A*	*1*	*0*	*Cont*	*1*	*90*	*N/A*
AM NO BUILD Queue	2	170	150	1	0	0	1	90	150
AM BUILD Queue	**2**	**170**	**150**	**1**	**0**	**0**	**1**	**90**	**150**
Existing Lane Length	*2*	*620*	*N/A*	*1*	*0*	*Cont*	*1*	*270*	*N/A*
PM NO BUILD Queue	2	620	450	1	0	0	1	270	375
PM BUILD Queue	**2**	**620**	**450**	**1**	**0**	**0**	**1**	**270**	**375**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*0*	*N/A*	*3*	*760*	*Cont*	*1*	*300*	*N/A*
AM NO BUILD Queue	1	0	0	3	662	325	1	261	350
AM BUILD Queue	**1**	**286**	**375**	**3**	**677**	**350**	**1**	**261**	**350**
Existing Lane Length	*1*	*0*	*N/A*	*3*	*2,040*	*Cont*	*1*	*290*	*N/A*
PM NO BUILD Queue	1	0	**0**	3	1,777	825	1	253	350
PM BUILD Queue	**1**	**213**	**325**	**3**	**1,747**	**825**	**1**	**253**	**350**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*2*	*280*	*N/A*	*3*	*1,750*	*Cont*	*1*	*0*	*N/A*
AM NO BUILD Queue	2	244	200	3	1,524	675	1	0	0
AM BUILD Queue	**2**	**244**	**200**	**3**	**1,505**	**675**	**1**	**77**	**125**
Existing Lane Length	*2*	*110*	*N/A*	*3*	*1,510*	*Cont*	*1*	*0*	*N/A*
PM NO BUILD Queue	2	96	100	3	1,315	**625**	1	0	**0**
PM BUILD Queue	**2**	**96**	**100**	**3**	**1,317**	**650**	**1**	**70**	**125**

	AM	PM
Cycle Length:	**120**	**130**

NOTE: Queue lengths are in feet.

Since the intersection is virtually non-existent, no existing auxiliary lane lengths are provided. The auxiliary lanes should be constructed to a minimum length recommended in the preceding

table to meet requirements for queuing for the projected implementation year volumes. Calculated right turn queue lengths in the preceding table may be reduced by 50% to account for right-turns-on red and overlap phasing.

Intersection #5 – McMahon Blvd. / Unser Blvd. - Pages A-116 thru A-121

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **McMahon Blvd. / Unser Blvd.**

		2012 AM Peak Hour					**2012 PM Peak Hour**				
		BASE GEOMETRY			MIT. GEOM.		BASE GEOMETRY			MIT. GEOM.	
		NO BUILD		BUILD	BUILD		NO BUILD		BUILD	BUILD	
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay
EB	L	1	F - 83.3	F - 98.2	1	F - 102	1	F - 147	F - 192	1	F - 205
	T	2	E - 56.6	E - 55.7	2	E - 56.3	2	D - 51.2	D - 51.2	2	D - 46.8
	R	1	D - 40.7	D - 40.6	1	D - 40.8	1	D - 39.5	D - 39.6	1	D - 35.7
WB	L	1	E - 62.7	E - 60.2	1	E - 61.8	1	D - 52.1	D - 52.1	1	E - 57.0
	T	2	D - 50.9	D - 50.7	2	D - 51.0	2	D - 46.8	D - 46.8	2	D - 45.6
	R	1	C - 28.5	C - 32.4	1	C - 21.0	1	F - 255	F - 269	1	F - 274
NB	L	1	C - 28.0	C - 28.2	1	E - 55.7	1	C - 30.2	C - 30.1	1	C - 27.1
	T	1	F - 180	F - 297	2	F - 95.0	1	F - 359	F - 436	2	D - 52.0
	R	1	B - 14.4	B - 12.8	1	C - 21.2	1	A - 7.3	A - 7.7	1	A - 7.9
SB	L	1	F - 267	F - 387	1	F - 110	1	F - 396	F - 408	1	F - 346
	T	1	E - 71.4	E - 80.0	1	E - 78.4	1	F - 324	F - 459	1	F - 455
	R	1	A - 4.7	A - 1.0	1	A - 1.0	1	A - 4.9	A - 6.0	1	A - 2.9
Intersection:		***F - 118***	***F - 173***			***E - 77.1***		***F - 258***	***F - 328***		***F - 223***

The projected delays at the intersection of McMahon Blvd. / Unser Blvd. for the forecast 2012 AM and PM Peak Hour periods are excessive. The proposed X-Ray Associates of New Mexico development does have a significant impact on the operation of this intersection. Mitigation of this impact is fully achieved by constructing a new second northbound thru lane on Unser Blvd. at the intersection as demonstrated in the table above. Construction of the second northbound thru lane on Unser Blvd. at the intersection will reduce the 2012 BUILD conditions overall intersection delay to significantly better than that of the 2012 NO BUILD conditions.

The Traffic Impact Reassessment for the Cabazon Community development stipulates that the developer will be required to construct additional northbound and southbound thru lanes on Unser Blvd. at McMahon for a total of three thru lanes northbound and southbound.

The results of the queuing analysis for the intersection of McMahon Blvd. / Unser Blvd. are summarized in the following table:

Queueing Analysis Summary Sheet

Project: X-Ray Associates (19th Ave / Unser Blvd)

Intersection: **McMahon Blvd / Unser Blvd**

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*162*	*200*	*2*	*274*	*Cont*		*1*	*67*	*150*
AM NO BUILD Queue	1	192	275	2	274	225		1	67	125
AM BUILD Queue	**1**	**211**	**300**	**2**	**274**	**225**		**1**	**67**	**125**
Existing Lane Length	*1*	*162*	*200*	*2*	*201*	*Cont*		*1*	*31*	*150*
PM NO BUILD Queue	1	212	300	2	201	200		1	31	75
PM BUILD Queue	**1**	**236**	**350**	**2**	**201**	**200**		**1**	**31**	**75**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*91*	*175*	*2*	*103*	*Cont*		*1*	*127*	*175*
AM NO BUILD Queue	1	113	175	2	128	125		1	258	350
AM BUILD Queue	**1**	**113**	**175**	**2**	**128**	**125**		**1**	**280**	**375**
Existing Lane Length	*1*	*204*	*175*	*2*	*326*	*Cont*		*1*	*486*	*175*
PM NO BUILD Queue	1	254	350	2	405	325		1	744	900
PM BUILD Queue	**1**	**254**	**350**	**2**	**405**	**325**		**1**	**774**	**>1,000**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*18*	*250*	*2*	*352*	*Cont*		*1*	*134*	*225*
AM NO BUILD Queue	1	22	50	2	936	600		1	162	225
AM BUILD Queue	**1**	**22**	**50**	**2**	**1,196**	**750**		**1**	**162**	**225**
Existing Lane Length	*1*	*46*	*250*	*2*	*678*	*Cont*		*1*	*101*	*225*
PM NO BUILD Queue	1	56	125	2	1,550	>1,000	*	1	122	200
PM BUILD Queue	**1**	**56**	**125**	**2**	**1,679**	**>1,000**	*	**1**	**122**	**200**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*512*	*275*	*1*	*690*	*Cont*		*1*	*87*	*150*
AM NO BUILD Queue	1	648	750	1	1,219	>1,000	*	1	158	225
AM BUILD Queue	**1**	**662**	**750**	**1**	**1,295**	**>1,000**	*	**1**	**170**	**250**
Existing Lane Length	*1*	*287*	*275*	*1*	*532*	*Cont*		*1*	*185*	*150*
PM NO BUILD Queue	1	404	525	1	1,711	>1,000	*	1	269	375
PM BUILD Queue	**1**	**439**	**575**	**1**	**2,013**	**>1,000**	*	**1**	**298**	**400**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

Intersection #6 –Driveway 'A' / Rhonda Ave. - Pages A-122 thru A-123

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **Rhonda Ave. / Driveway "A"**

		2012 AM Peak Hour			2012 PM Peak Hour		
		BASE GEOMETRY			BASE GEOMETRY		
		NO BUILD		BUILD	NO BUILD		BUILD
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	LOS-Delay
EB	L	1	A - 0.0	A - 4.0	1	A - 0.0	A - 3.9
	T	1	A - 0.0	A - 0.0	1	A - 0.0	A - 0.0
SB	L	1	A - 0.0	B - 10.1	1	A - 0.0	B - 13.4
	R	1	A - 0.0	B - 10.1	1	A - 0.0	B - 13.4

Driveway "A" on Rhonda Ave. is proposed as a full access unsignalized intersection. The delays in the preceding table indicate that the projected delays at the unsignalized driveway are acceptable. The calculated queue length for the eastbound left turn movement is minimal. Therefore, it is recommended that a future left turn lane 100 feet long plus transition be planned at Driveway "A" on Rhonda Ave. Driveway "A" should be located at least 500 feet from Unser Blvd. It is currently proposed at a location approximately 800 feet west of Unser Blvd.

Intersection #7 –Driveway 'B' / 19th Ave. - Pages A-124 thru A-125

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **Driveway "B" / 19th Ave.**

		2012 AM Peak Hour			2012 PM Peak Hour		
		BASE GEOMETRY			BASE GEOMETRY		
		NO BUILD		BUILD	NO BUILD		BUILD
		Lanes	LOS-Delay	LOS-Delay	Lanes	LOS-Delay	LOS-Delay
WB	L	1	A - 0.0	A - 7.6	1	A - 0.0	A - 7.4
	T	1	A - 0.0	A - 0.0	1	A - 0.0	A - 0.0
NB	L	1	A - 0.0	A - 9.0	1	A - 0.0	A - 9.3
	R	1	A - 0.0	A - 9.0	1	A - 0.0	A - 9.3

Driveway "B" on 19th Ave. is proposed as a full access unsignalized intersection. The delays in the preceding table indicate that the projected delays at the unsignalized driveway are acceptable. The calculated queue length for the eastbound left turn movement is minimal.

Therefore, since 19th Ave. is a major roadway, it is recommended that a westbound left turn lane be constructed to a minimum length of 150 feet long plus transition on 19th Ave. at Driveway "B". Driveway "B" should be located at least 600 feet from stop bar on Unser Blvd. It is currently proposed to align with 119th St. to the north.

Location and access allowance for Driveway "B" is required to be approved by the Mid-Region Council of Governments (MRCOG) since 19th Ave. (Western Blvd.) is designated as a Limited Access Principal Arterial Roadway on the Long Range Roadway Map for the Albuquerque Metropolitan Area.

Access Design Specifications

Access along 19th Ave. (Westside Blvd.) and along Unser Blvd. will be required to comply with the Access Policy of the Mid-Region Council of Governments (MRCOG). The MRCOG Access Policy limits spacing of access along 19th Ave. (Westside Blvd.) with the following language:

> *Access shall be provided for full intersections at approximate one-half mile intervals and for T intersections and right-in/right-out driveways at approximate one-quarter mile intervals, except within the potential village center area of Unit 6. Here more frequent access is allowed provided that driveways are not located closer than approximately 400 feet from adjacent access points.*

The proposed driveway (Driveway "B") on 19th Ave. (Westside Blvd.) is located at least 600 feet west of Unser Blvd. Even though they may not be warranted at this time, it is suggested that Driveway "B" be designed and constructed implementing an eastbound right turn deceleration lane and a westbound left turn deceleration lane. Also, there should be separate northbound right and left turn lanes in the driveway to accommodate future volumes when Rio Rancho has developed significantly to the west of this project.

Access along Unser Blvd. currently permits a signalized full access tee intersection at Arroyo Rd. (now called Wellspring). The developer of this project desires to construct and implement a west leg of the intersection to provide access to the new development to the west.

Findings and Conclusions

The proposed medical office / retail commercial development at the southwest corner of 19th Ave. (Westside Blvd.) / Unser Blvd. is a moderately large size project. As such, it has small to moderate impact on major intersections along Unser Blvd. from McMahon Blvd. to Southern Blvd. The capacity problems occurring along Unser Blvd. are regional issues mostly attributable to large background traffic volumes forecast for the year 2012 and largely due to traffic

generated by the recently approved Cabazon Community development. The impact of the Cabazon Community development is verified by the language in the September 22, 2007 Traffic Impact Reassessment for the project which contains the following language on page 21 under paragraph 5.3:

> *"Mitigation will be required for the Unser Blvd. corridor based upon operational deficiencies identified in Section 5.2. The proposed improvements include widening Unser Blvd. from 4-lane to 6-lanes, and channelization improvements at the intersections. ..."*

Upon construction of the widening of Unser Blvd. to a six lane facility as recommended in the Cabazon study, most of the operational issues at the intersection in the study area for this report become acceptable. Therefore, this report finds that the proposed X-Ray Associates of New Mexico development will have no significant adverse impact to the adjacent transportation system provided that the following recommendations are implemented.

Recommendations

All constructed improvements to proposed driveways and existing intersections shall be designed and built to maintain adequate safe sight distances to the degree possible.

Recommendations for improvements to the adjacent transportation system include:

19th Ave. (Westside Blvd.) / Unser Blvd. – The intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. should be designed and constructed in accordance with the findings on Page 13 through 16 of this report. Those findings are consistent with the findings in the Cabazon report with the exception of the westbound right turn lane. This report recommends dual westbound right turn lanes with overlap right turn signal indication while the Cabazon report recommends a free right turn lane. A free right turn lane will work only if there is an add-lane on Unser Blvd. for a sufficient distance that the right turn traffic can accelerate and merge in with the Unser traffic.

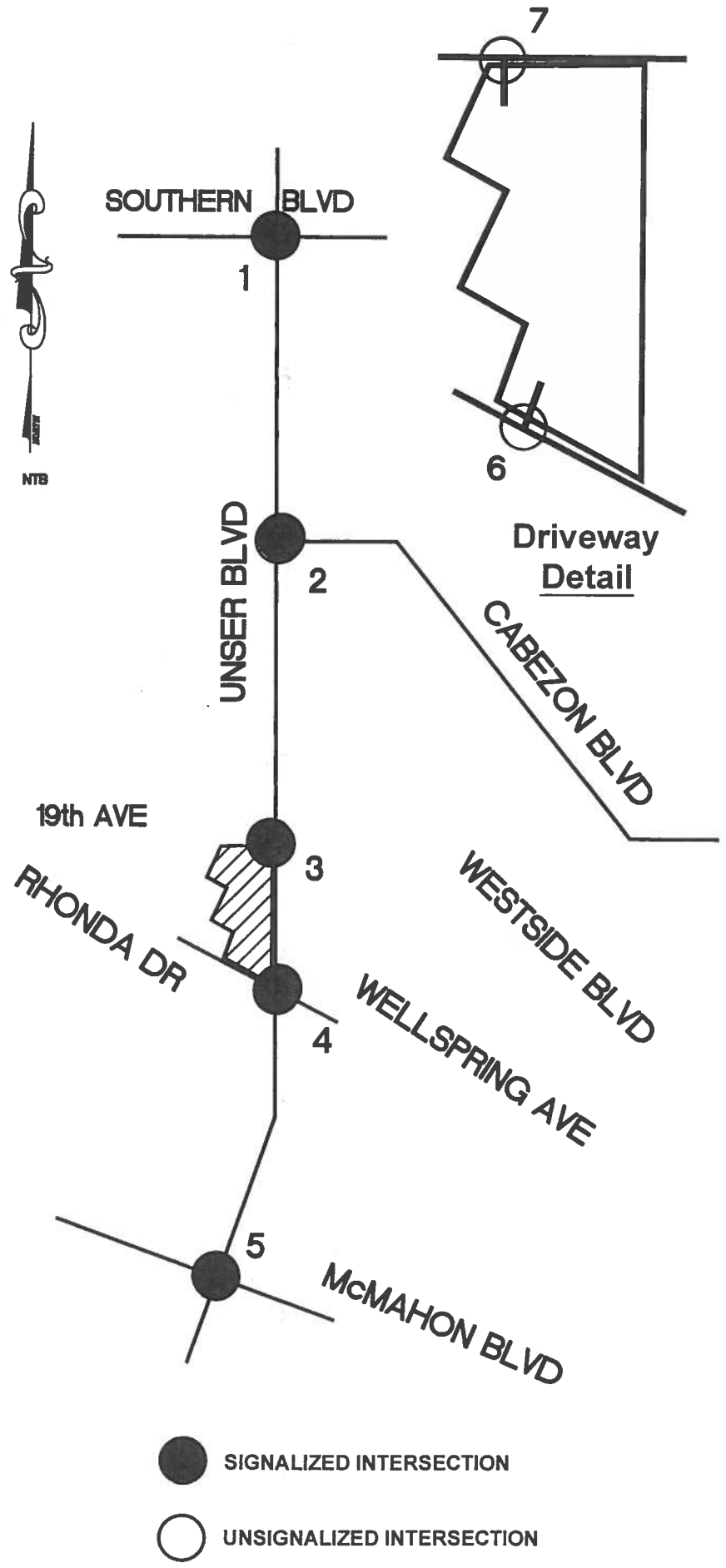
Wellspring (Rhonda Ave.) / Unser Blvd. – The intersection of Wellspring (Rhonda Ave.) / Unser Blvd. should be designed and constructed in accordance with the findings on Page 16 through 19 of this report. Those findings are consistent with the findings in the Cabazon report with the exception of the implementation of the west leg of the intersection. This report recommends dual eastbound left turn lanes, one eastbound thru lane, and one eastbound right turn lane with right turn overlap phasing for the new west leg of the intersection. Additionally, a new northbound left turn lane on Unser Blvd. will be required as well as a westbound thru lane on the east leg (Wellspring).

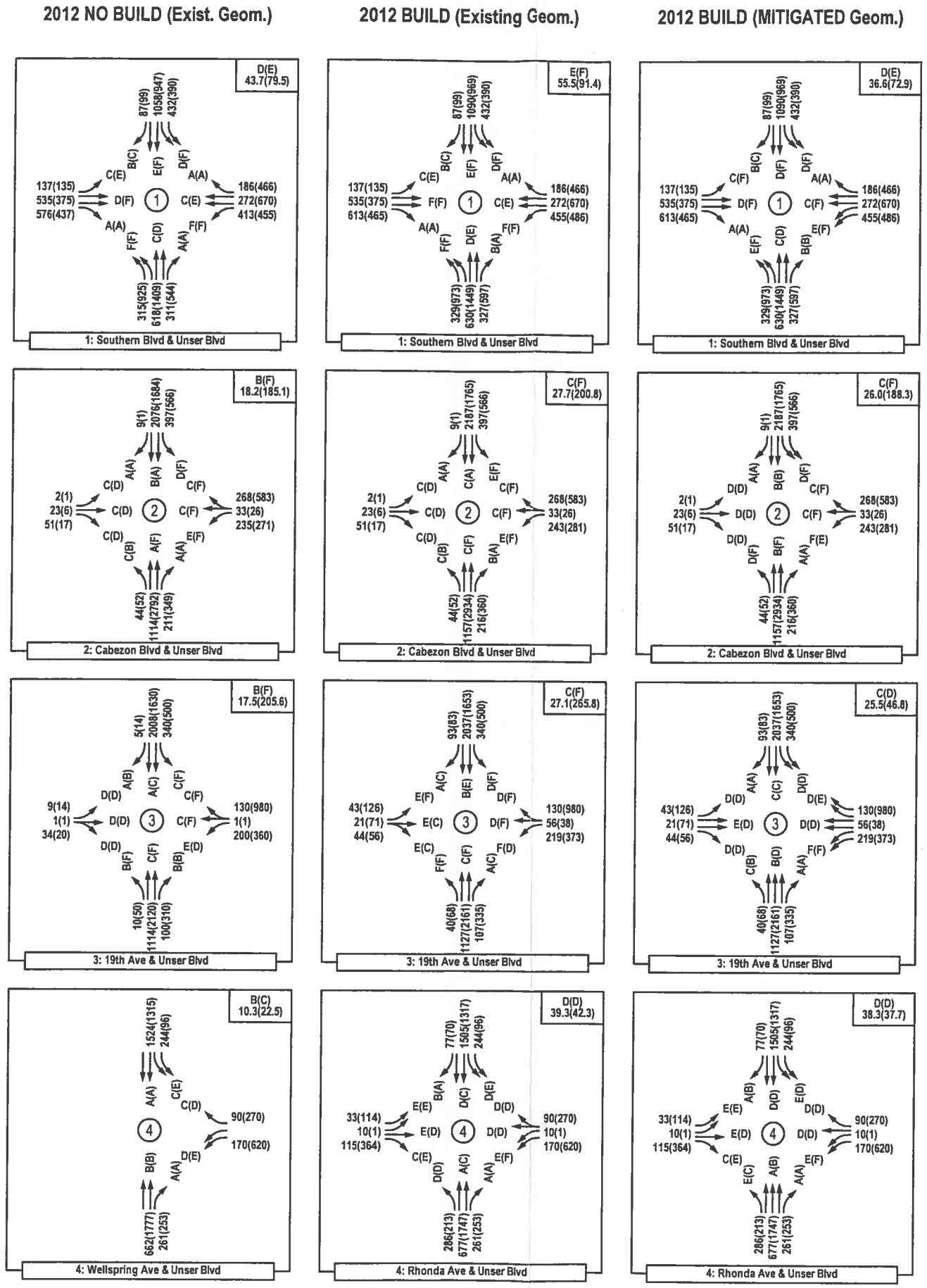
Access – it is recommended that access to this project be obtained from each of the two major streets fronting the property. Since the proposed development is a medical office / retail project, access from the arterial roadways is very important. In order to access the major roadways fronting the project, approval of the Mid-Region Council of Governments' Transportation Coordinating Committee will be required. A companion Access Justification Study accompanies this Traffic Impact Study making the case for the proposed new access on Unser Blvd. and on 19th Ave. / Westside Blvd.

Driveway "A" / Rhonda Ave. – construct Driveway "A" as a full access unsignalized driveway approximately 500 feet west of Unser Blvd. if possible. An eastbound left turn deceleration lane and a westbound right turn deceleration lane should be designed and constructed on Rhonda Ave. at Driveway "A". The right turn and left turn deceleration lanes should each be 100 feet long plus a 150'-150' radii reverse curve transition.

Driveway "B" / 19th Ave. (Westside Blvd.) – construct Driveway "B" as a full access unsignalized driveway approximately 800 feet west of Unser Blvd. A westbound left turn deceleration lane and an eastbound right turn deceleration lane should be designed and constructed on 19th Ave. (Westside Blvd.) at Driveway "A". The right turn and left turn deceleration lanes should each be 150 feet long plus a 300'-300' radii reverse curve transition.

Improvements on Rhonda Ave. and on 19th Ave. (Westside Blvd.) will be required to meet the minimum requirements of the City of Rio Rancho.



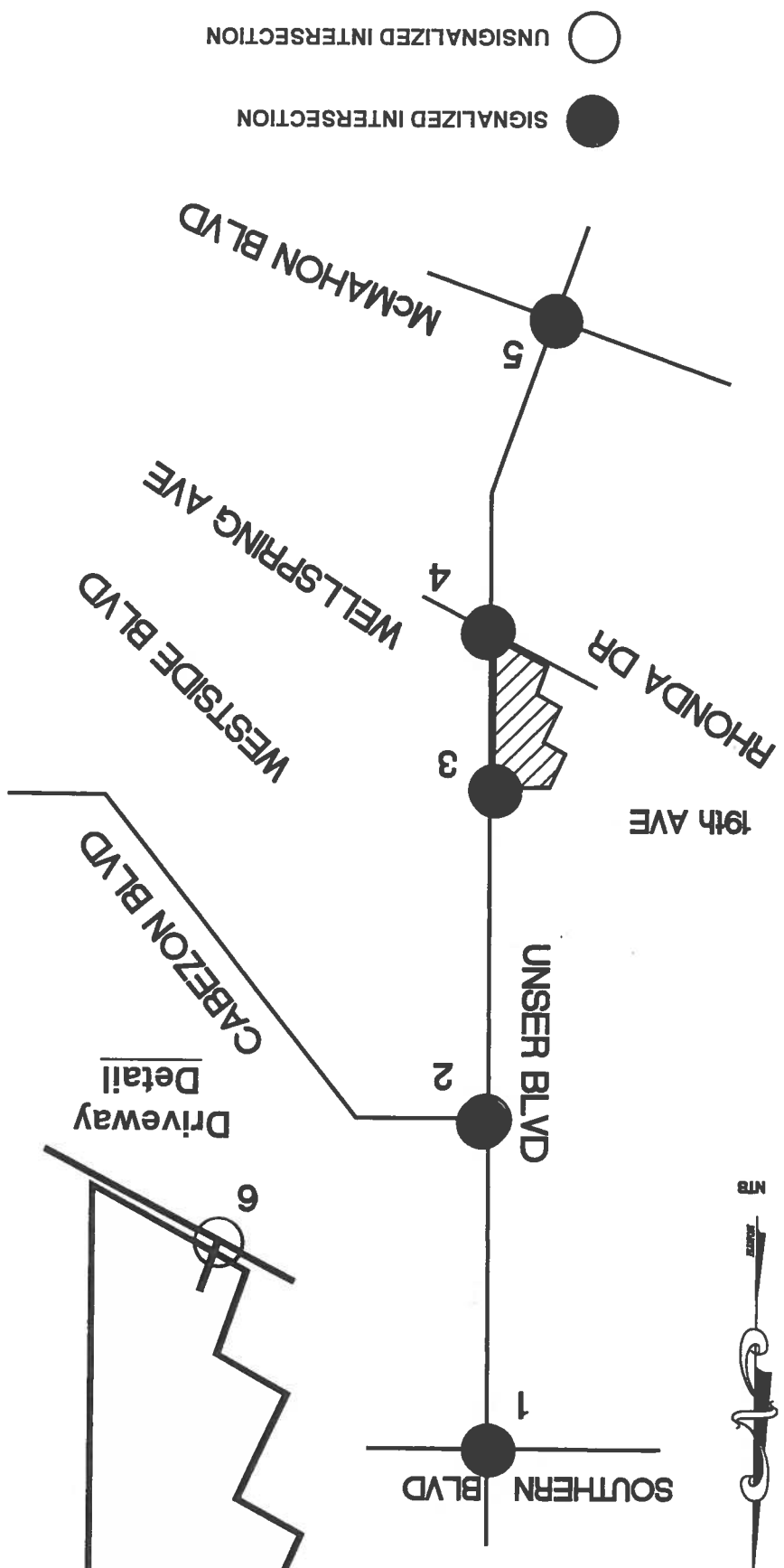


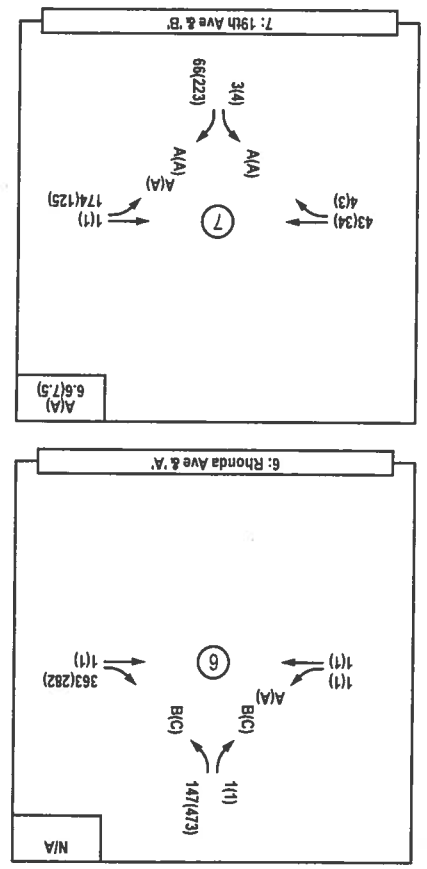
X-Ray Associates of New Mexico

19th Ave. (Westside Blvd.) / Unser Blvd.

X-Ray Associates of New Mexico

19th Ave. (Westside Blvd.) / Unser Blvd.





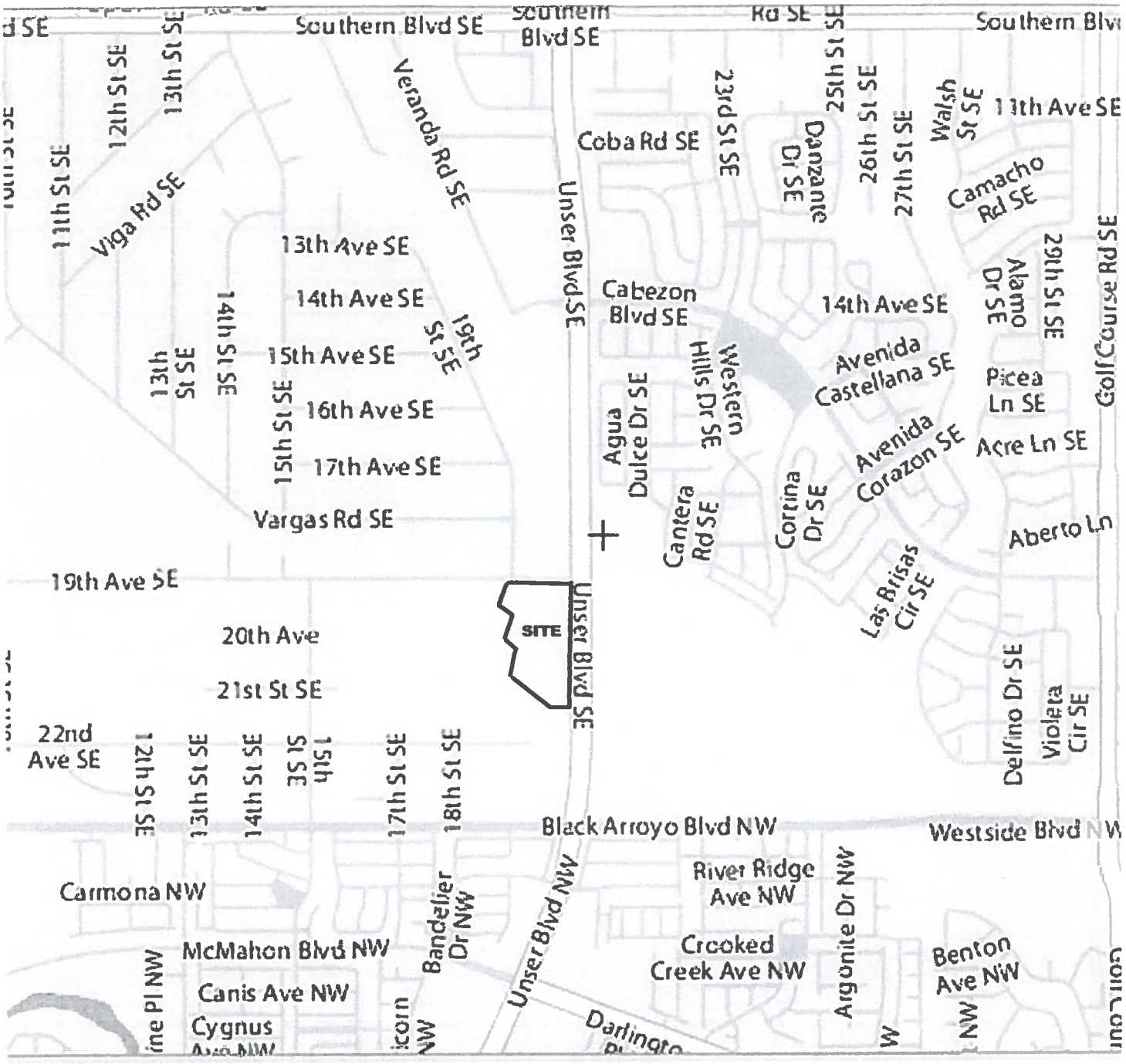
2012 BUILD (MITIGATED Geom.)

2012 BUILD (Existing Geom.)

2012 NO BUILD (Exist. Geom.)

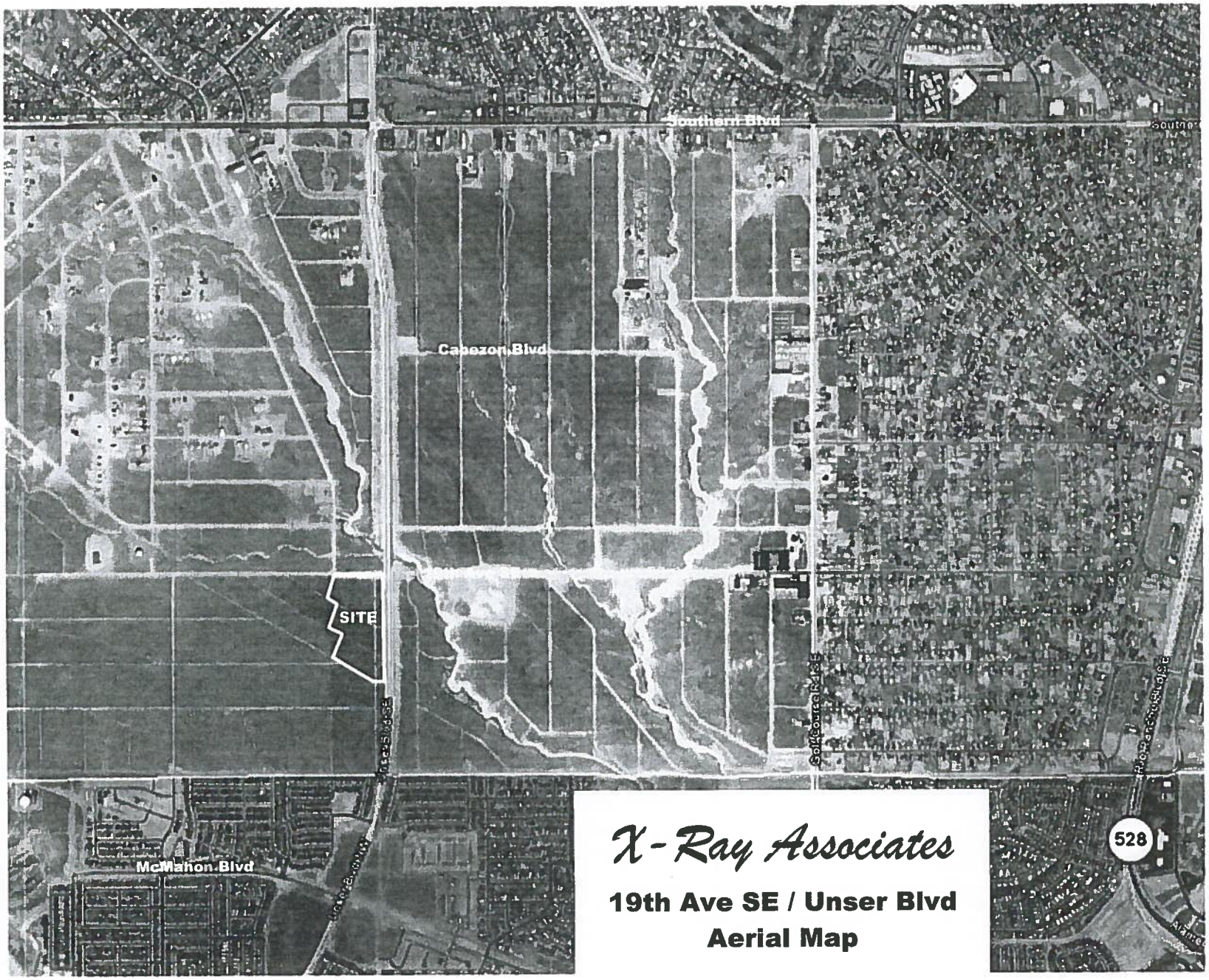
Appendix

APPENDIX



X- Ray Associates

19th Ave SE / Unser Blvd
Vicinity Map



X-Ray Associates

19th Ave SE / Unser Blvd
Aerial Map

8/20/2009 4:14 PM

P:\0908 XRANM\10-Drawings\1-PREDES\09xx-AS-101-a.dwg

LJACKSON

1,100 PROVIDED PARKING SPACES
PHASE TWO EMPLOYEE PARKING AN
ADDITIONAL 100 PARKING SPACES

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

CONSULTANTS

Architect Engineer

XRANM
RIO RANCHO

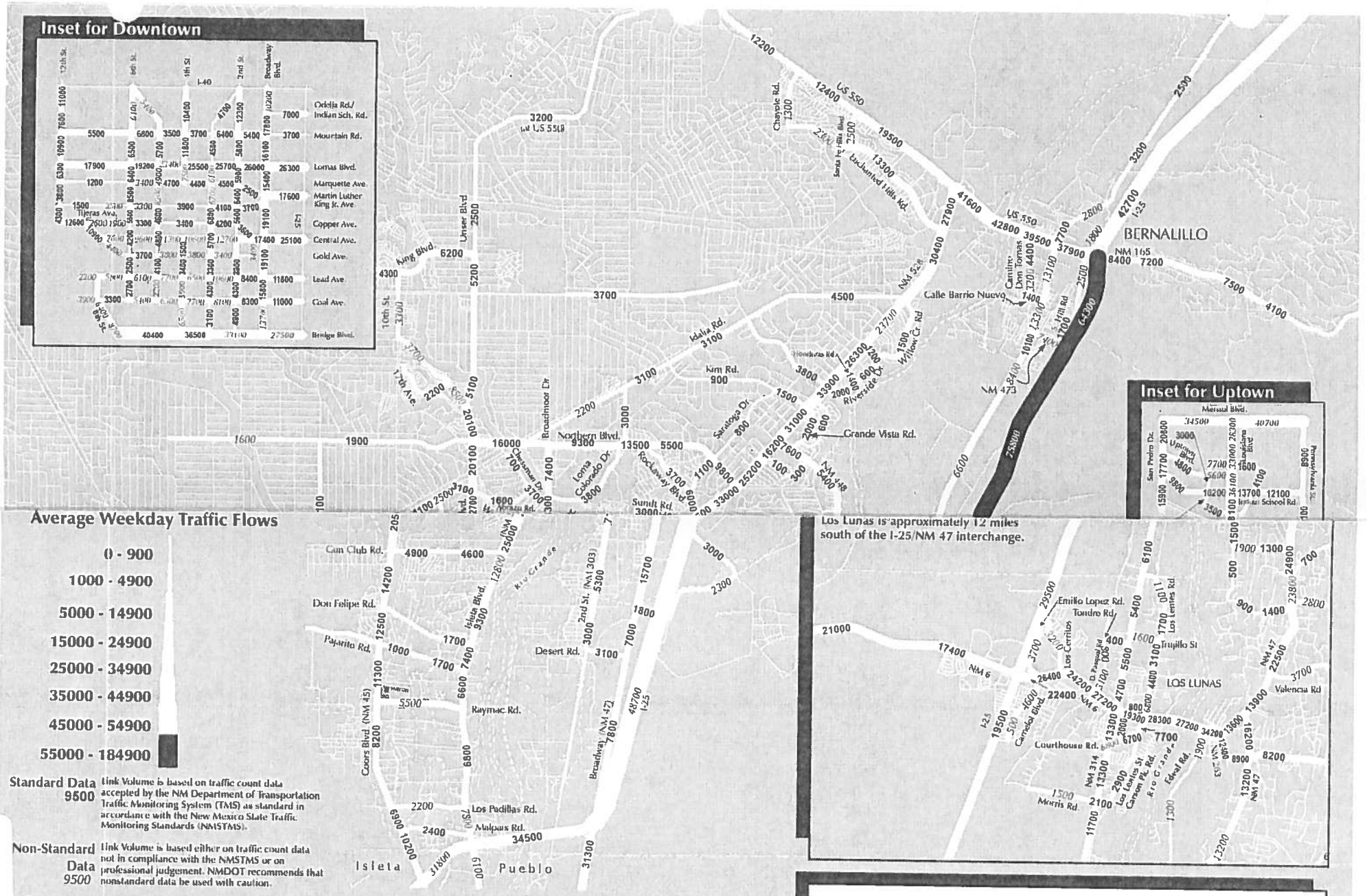
Key Plan
NTS

MARK	DATE	DESCRIPTION
ISSUE:		SCHEMATIC DESIGN
PROJECT NO:		0908
CAD DWG FILE:		09xx-AS-101.DWG
DRAWN BY:		LAJ
CHECKED BY:		DD
DATE:		06/24/2009

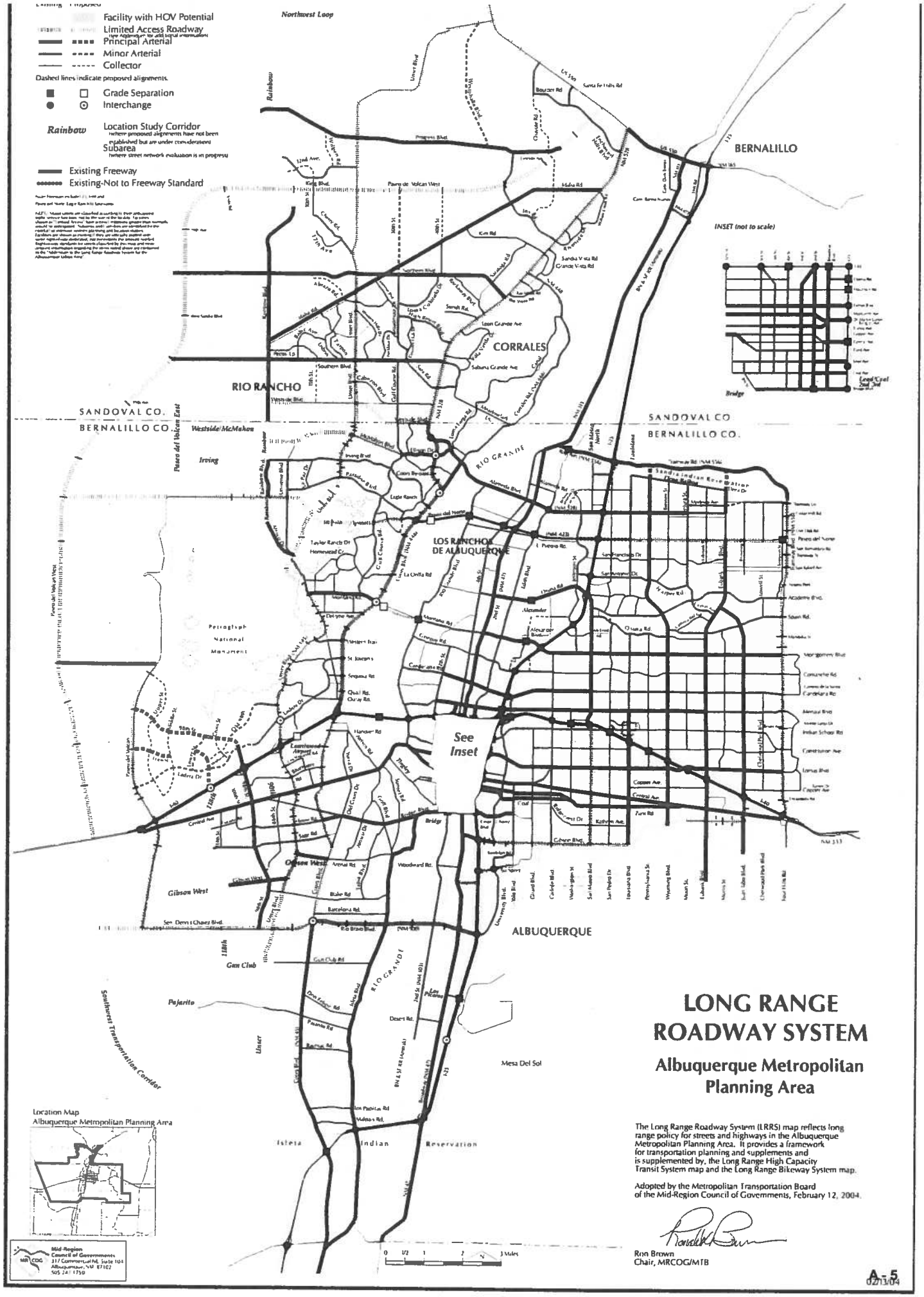
SHEET TITLE

SITE PLAN

AS-101



2008 Traffic Flows
for the Greater Albuquerque Area



LONG RANGE ROADWAY SYSTEM

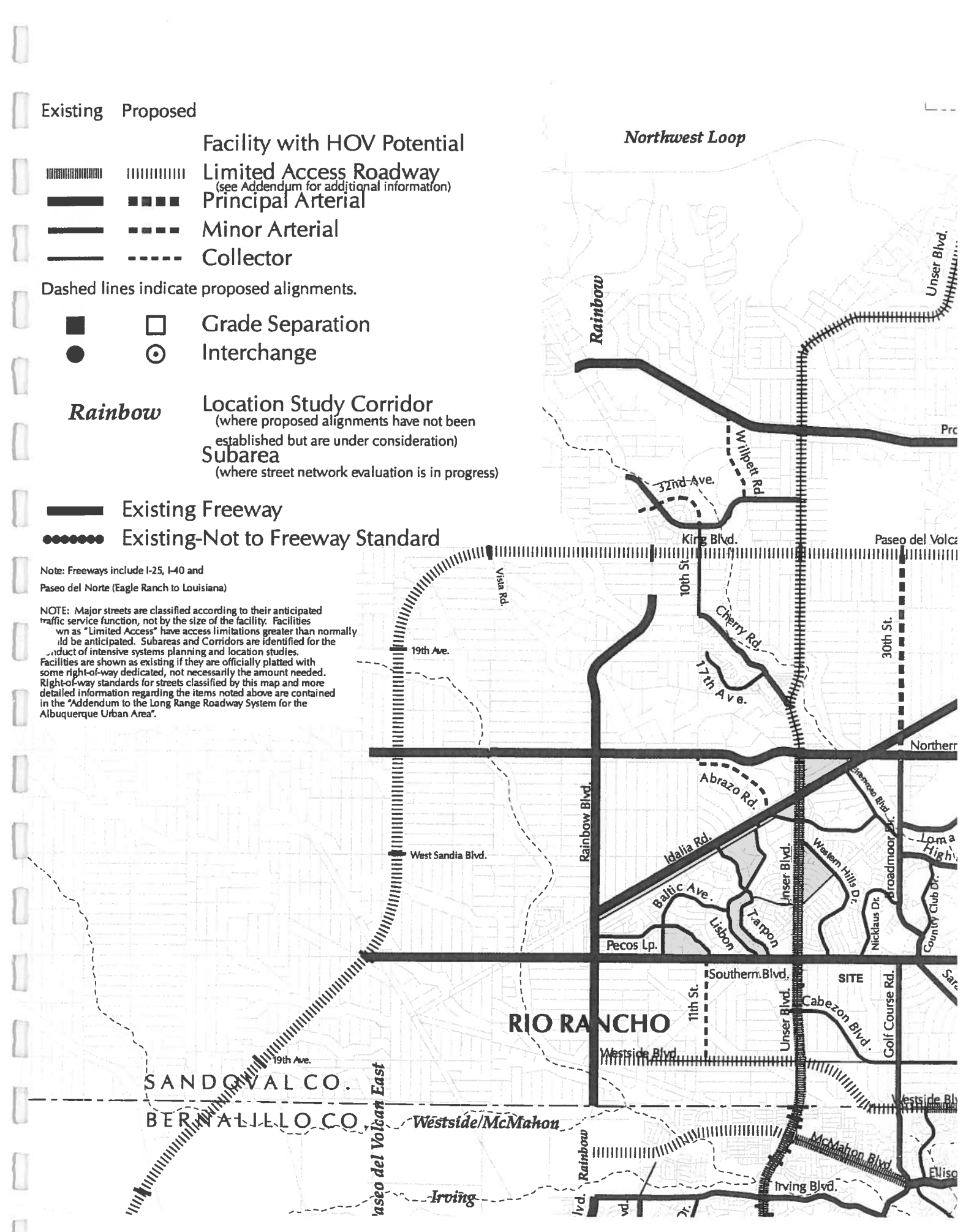
Albuquerque Metropolitan Planning Area

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
Chair, MRCOG/MTB

A-5
02/13/04


Existing Proposed
Facility with HOV Potential
Limited Access Roadway
(see Addendum for additional information)
Principal Arterial
Minor Arterial
Collector
Dashed lines indicate proposed alignments.
Grade Separation
Interchange
Rainbow
Location Study Corridor
(where proposed alignments have not been established but are under consideration)
Subarea
(where street network evaluation is in progress)
Existing Freeway
Existing-Not to Freeway Standard
Note: Freeways include I-25, I-40 and Paseo del Norte (Eagle Ranch to Louisiana)
NOTE: Major streets are classified according to their anticipated traffic service function, not by the size of the facility. Facilities shown as "Limited Access" have access limitations greater than normally would be anticipated. Subareas and Corridors are identified for the conduct of intensive systems planning and location studies. Facilities are shown as existing if they are officially platted with some right-of-way dedicated, not necessarily the amount needed. Right-of-way standards for streets classified by this map and more detailed information regarding the items noted above are contained in the "Addendum to the Long Range Roadway System for the Albuquerque Urban Area".
Northwest Loop
Rainbow
Unser Blvd.
Wilpett Rd.
32nd Ave.
King Blvd.
Paseo del Volca
Vista Rd.
10th St.
Cherry Rd.
30th St.
19th Ave.
17th Ave.
Northern
Abrazo Rd.
Rainbow Blvd.
Idalia Rd.
West Sandia Blvd.
Inser Blvd.
Western Hills Dr.
Broadmoor Blvd.
Loma High
Baltic Ave.
Lisbon
Tarpon
Nicklaus Dr.
Country Club Dr.
Pecos Lp.
Southern Blvd.
SITE
11th St.
Cabezon Blvd.
Golf Course Rd.
RIO RANCHO
Westside Blvd.
Unser Blvd.
19th Ave.
SANDOVAL CO.
BERNALILLO CO.
Paseo del Volcan East
Westside/McMahon
Irving
McMahon Blvd.
Irving Blvd.

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

COMMENT	USE (ITE CODE) / DESCRIPTION		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER	EXIT
	Summary Sheet	Units					
Tract No.	Medical-Dental Office Building (720)	161.12	6,373	293	78	116	313
Tract No.	General Office Building (710)	56.20	856	104	14	24	118
Tr. 4-8 & 10	Shopping Center (820)	28.70	3,017	45	29	135	141
Tract 2	High Turnover (Sit-Down) Restaurant (932)	4.60	585	28	25	30	21
Tract 9	Gasoline / Service Station w/ Convenience Market (945)	12	1,953	61	61	80	80
Tract 3	Drive-In Bank (912)	2	279	11	8	27	28
	Subtotal		**13,063**	**542**	**215**	**412**	**701**
	Office / Medical Office Trips		**7,229**	**397**	**92**	**140**	**431**
	Retail Commercial Trips		**5,834**	**145**	**123**	**272**	**270**
	Pass-by Reduction for Commercial Trips	30%	(1,750)	(44)	(37)	(82)	(81)
	Adjusted Retail Commercial Trips		**4,084**	**101**	**86**	**190**	**189**

Note: All Units are 1,000's S.F. except Gasoline / Service Station is number of fueling positions and Drive-in Bank is number of windows.

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Medical-Dental Office Building (720)	*161.12*	6,373	293	78	116	313
	1,000 S.F.					

ITE Trip Generation Equations:

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

T = *40.89* (X) + *-214.97*

50% Enter, *50%* Exit

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

T = *2.3* (X) + *0*

79% Enter, *21%* Exit

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

Ln(T) = *0.88* Ln(X) + *1.59*

27% Enter, *73%* Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 8th Edition

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
General Office Building (710)	*56.20*	856	104	14	24	118
	1,000 S.F.					

ITE Trip Generation Equations:

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

Ln(T) = *0.77* Ln(X) + *3.65*
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) = *0.8* Ln(X) + *1.55*
88% Enter, *12%* 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 = *1.12* (X) + *78.81*
17% Enter, *83%* Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 8th Edition

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Shopping Center (820)	*28.70*	3,017	45	29	135	141
	1,000 S.F.					

ITE Trip Generation Equations:

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

Ln(T) = *0.65* Ln(X) + *5.83*
50% Enter, *50%* Exit

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

Ln(T) = *0.59* Ln(X) + *2.32*
61% Enter, *39%* Exit

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

Ln(T) = *0.67* Ln(X) + *3.37*
49% Enter, *51%* Exit

Comments:
Tr. 4-8 & 10

Based on ITE Trip Generation Manual - 8th Edition

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
High Turnover (Sit-Down) Restaurant (932)	*4.60*	585	28	25	30	21
	1,000 S.F.					

ITE Trip Generation Equations:

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

T = *127.15* (X) + *0*
50% Enter, *50%* Exit

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

T = *11.52* (X) + *0*
52% Enter, *48%* 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 = *11.15* (X) + *0*
59% Enter, *41%* Exit

Comments:
Tract 2

Based on ITE Trip Generation Manual - 8th Edition

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Gasoline / Service Station w/ Convenience Market (945)	*12.00*	1,953	61	61	80	80
	Fueling Positions					

ITE Trip Generation Equations:

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

T = *162.78* (X) + *0*
50% Enter, *50%* Exit

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

T = *10.16* (X) + *0*
50% Enter, *50%* Exit

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

T = *13.38* (X) + *0*
50% Enter, *50%* Exit

Comments:
Tract 9

Based on ITE Trip Generation Manual - 8th Edition

A-9 b

X-Ray Associates (19th Ave. / Unser Blvd.) - Rio Rancho

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Drive-In Bank (912)	*2.00*	279	11	8	27	28
	Drive-In Lanes					

ITE Trip Generation Equations:

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

T = *139.25* (X) + *0*

50% Enter, *50%* Exit

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

T = *9.44* (X) + *0*

58% Enter, *42%* Exit

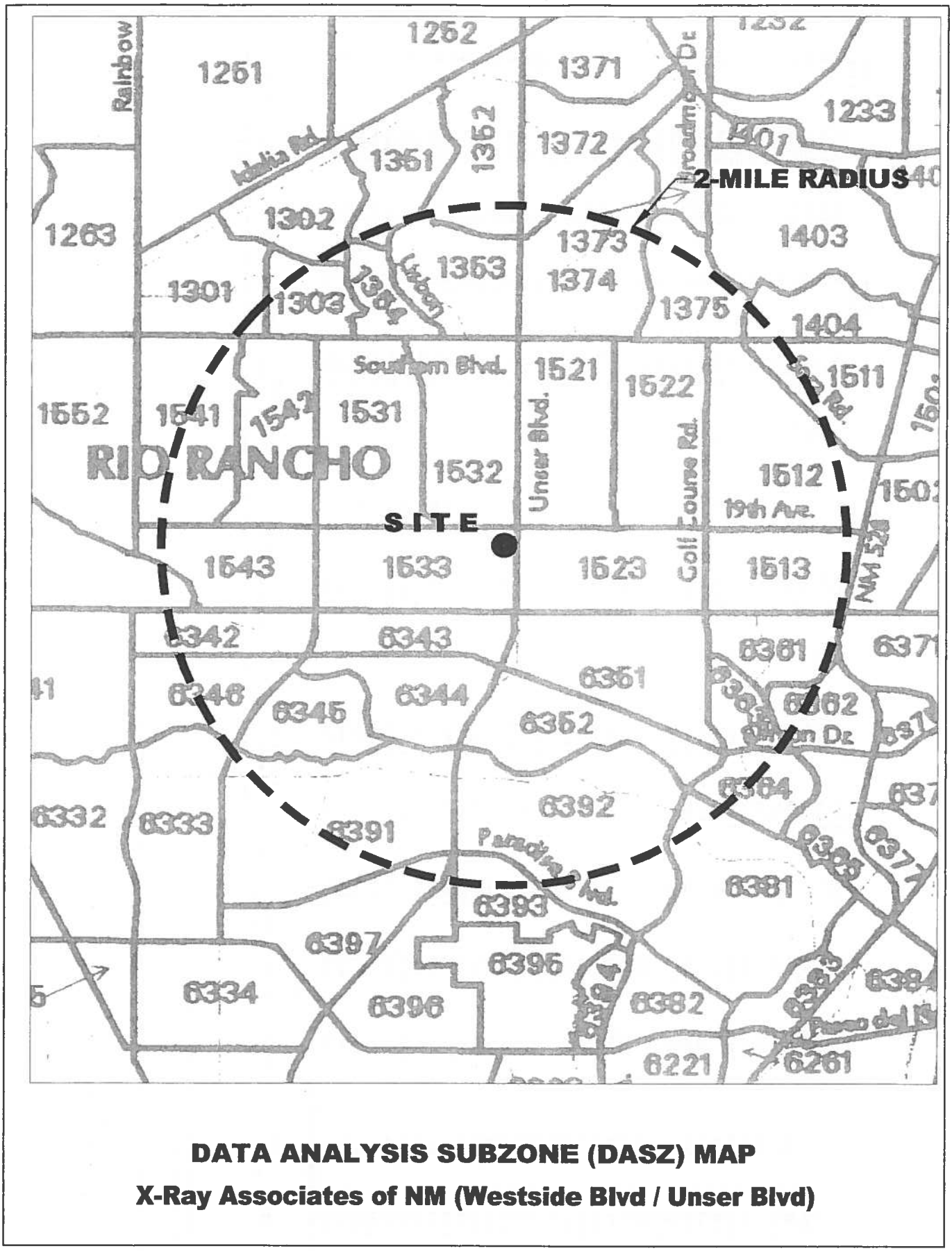
Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

T = *27.41* (X) + *0*

49% Enter, *51%* Exit

Comments:
Tract 3

Based on ITE Trip Generation Manual - 8th Edition



DATA ANALYSIS SUBZONE (DASZ) MAP

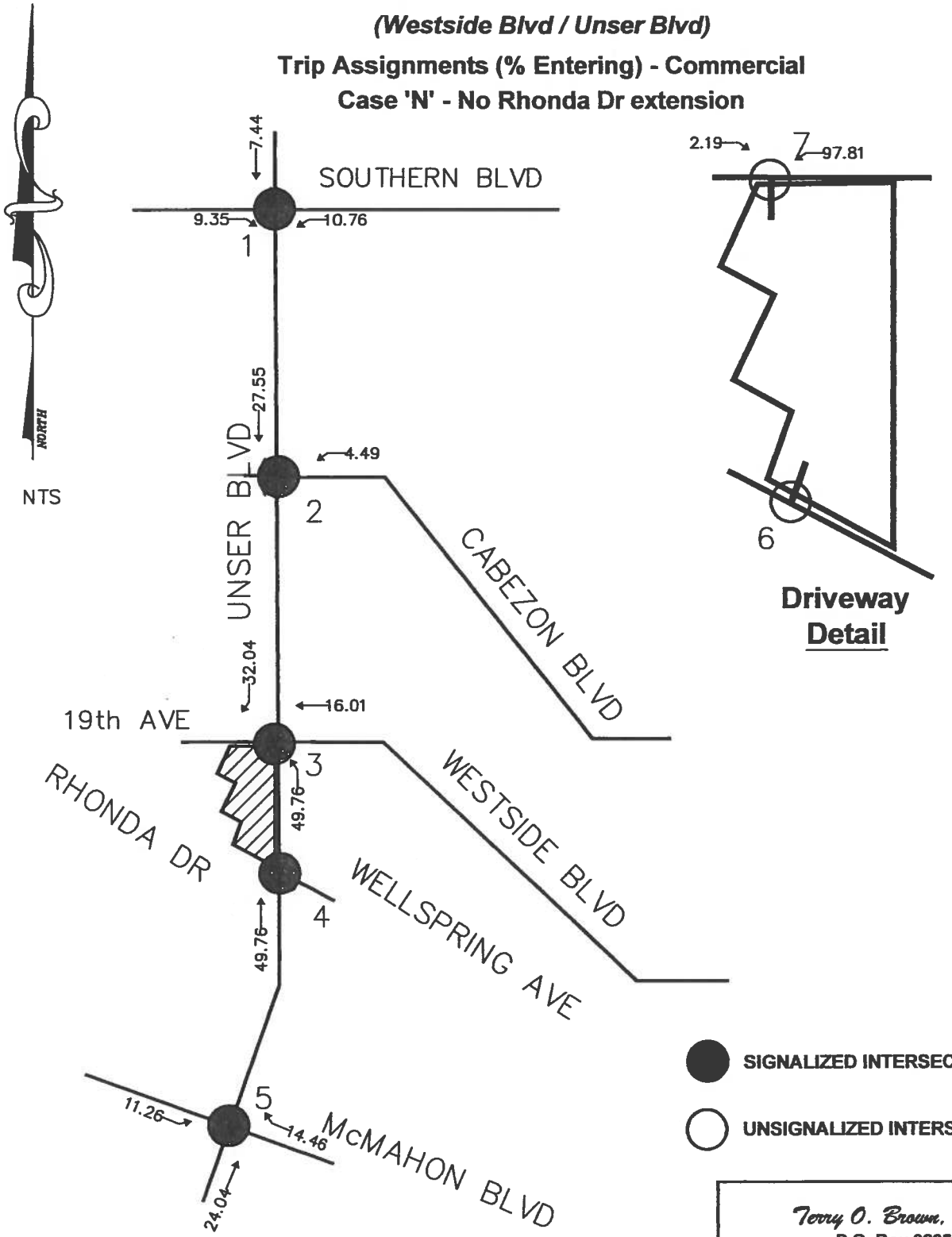
X-Ray Associates of NM (Westside Blvd / Unser Blvd)

X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Entering) - Commercial

Case 'N' - No Rhonda Dr extension



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

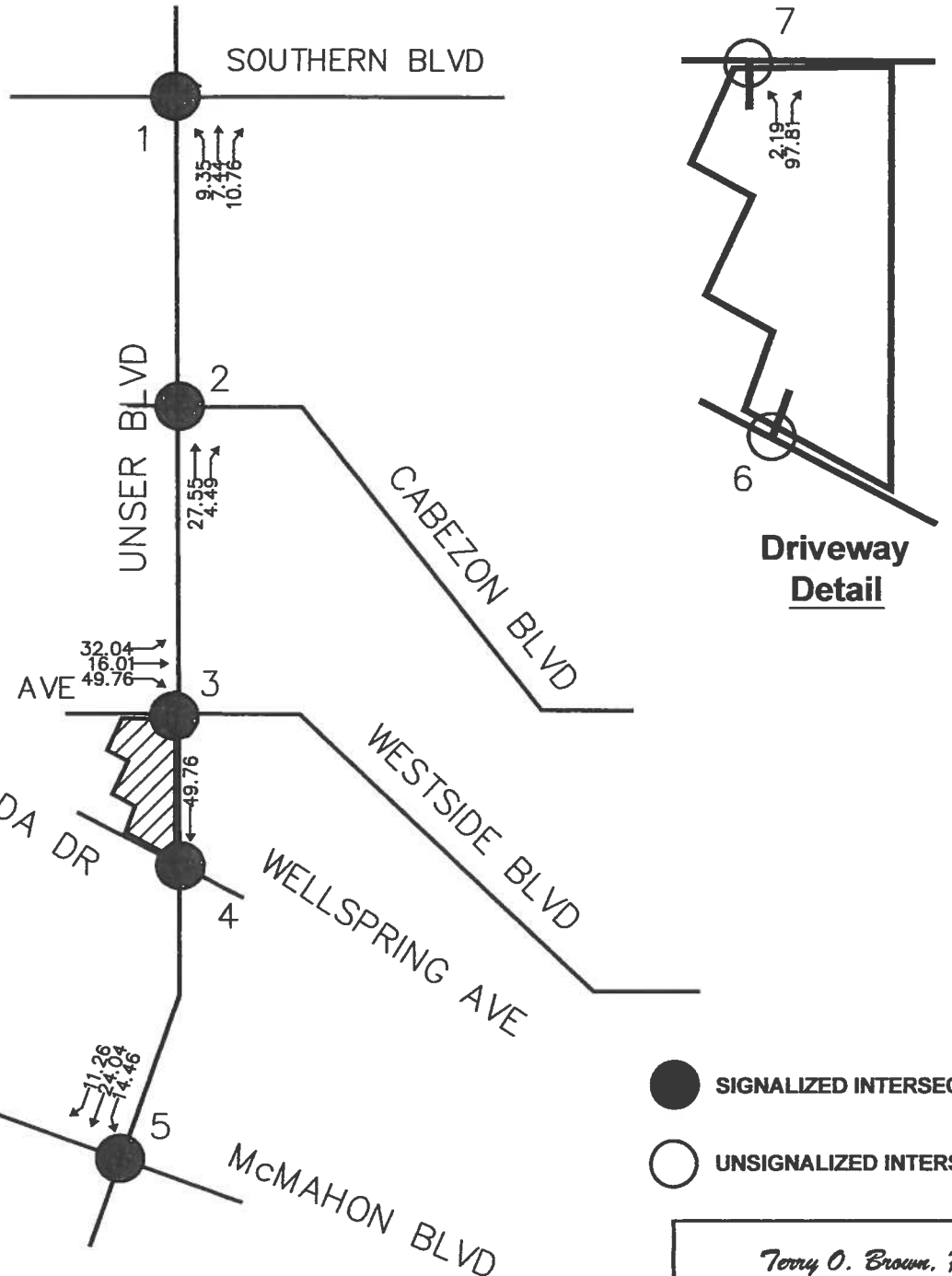
X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Exiting) - Commercial

Case 'N' - No Rhonda Dr extension

NTS

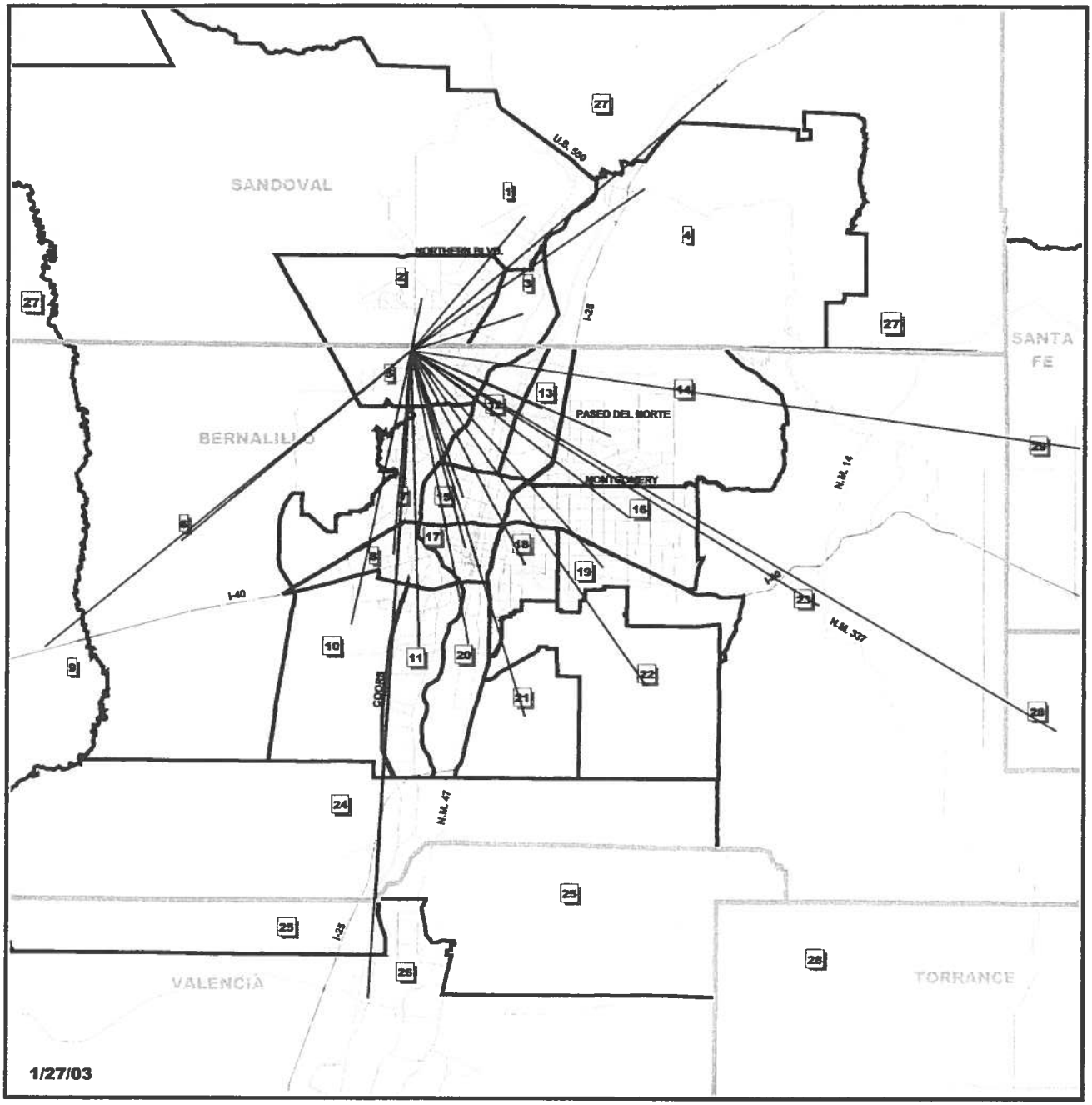


Driveway Detail

SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

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



22 Subarea Identification Number

Figure 6

Subareas of the MRCOG Region

Mid-Region
Council of Governments
317 Commercial NE, Suite 104
Albuquerque, NM 87102
505-247-1750

Subarea boundaries extend to county boundary where full extent of subarea not shown except for Subarea 29 which only includes southern Santa Fe County.

XRay Associates of New Mexico
(Westside Blvd / Unser Blvd)
Trip Distribution Subarea Map

Trip Distribution Table

X-Ray Associates of New Mexico

Sub Area Population Data:

For determination of Trip Distribution for Proposed **Office Development Trips**

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

									(UN) Unser Blvd North			(SE) Southern Blvd East			(CE) Cabezon Blvd East		
Sub Area I.D.#	% Sub Area In Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Dist. (Mi.)	Population / Distance	% Population / Distance	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population
		2004	2030	2012													
1	100%	26,972	39,738	30,900	30,900	7.0	4,414	3.92%	0%	0.00%	0	25%	0.98%	1,104	0%	0.00%	0
2*	100%	39,348	40,610	39,736	39,736	1.6	24,835	22.07%	22%	4.96%	5,580	31%	6.79%	7,639	3%	0.72%	815
3	100%	7,865	8,728	8,131	8,131	4.8	1,694	1.51%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	13,387	14,936	13,864	13,864	11.8	1,175	1.04%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	35,968	44,203	38,502	38,502	1.9	20,264	18.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	2,784	3,950	3,143	3,143	13.2	238	0.21%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	48,565	59,615	51,965	51,965	6.6	7,873	7.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	27,546	28,553	27,856	27,856	9.5	2,932	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,678	1,888	1,743	1,743	20.6	85	0.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	39,532	4,822	28,852	28,852	12.7	2,272	2.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	32,051	33,202	32,405	32,405	13.4	2,418	2.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	16,144	16,146	16,145	16,145	5.0	3,229	2.87%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	8,715	10,146	9,155	9,155	6.4	1,431	1.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	93,104	94,279	93,466	93,466	9.6	9,736	8.65%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	24,691	25,262	24,867	24,867	7.3	3,406	3.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	108,882	108,353	108,719	108,719	12.2	8,911	7.92%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	20,920	21,196	21,005	21,005	9.4	2,235	1.99%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	42,078	41,670	41,952	41,952	11.0	3,814	3.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	59,027	58,888	58,984	58,984	12.9	4,572	4.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	9,482	9,699	9,549	9,549	13.5	707	0.63%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	6	6	6	6	17.1	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	4,231	3,629	4,046	4,046	18.1	224	0.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	18,140	20,390	18,832	18,832	21.0	897	0.80%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	2,393	2,554	2,443	2,443	21.9	112	0.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	1,009	1,062	1,025	1,025	24.3	42	0.04%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	75,506	85,654	78,628	78,628	28.6	2,749	2.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	20,955	22,276	21,361	21,361	17.3	1,235	1.10%	100%	1.10%	1,235	0%	0.00%	0	0%	0.00%	0
28	100%	19,524	21,690	20,190	20,190	32.5	621	0.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	11,360	13,771	12,102	12,102	29.0	417	0.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		811,863	836,916	819,572	819,572		112,539	100.00%		6.06%	6,815		7.77%	8,743		0.72%	815
											6.06%			7.77%			0.72%

* - Subarea in which the site it located.

Trip Distribution Table

X-Ray Associates of New Mexico

Sub Area Population Data:

For determination of Trip Distribution for Proposed**Office Development Trips**

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

								(WE) Westside Blvd East			(ME) McMahon Blvd East			(US) Unser Blvd South		
Sub Area I.D.#	% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Dist. (Mi.)	Population / Distance	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population
		2004	2030	2012												
1	100%	26,972	39,738	30,900	30,900	7.0	4,414	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2*	100%	39,348	40,610	39,736	39,736	1.6	24,835	23%	4.99%	5,613	0%	0.00%	0	0%	0.00%	0
3	100%	7,865	8,728	8,131	8,131	4.8	1,694	100%	1.51%	1,694	0%	0.00%	0	0%	0.00%	0
4	100%	13,387	14,936	13,864	13,864	11.8	1,175	100%	1.04%	1,175	0%	0.00%	0	0%	0.00%	0
5	100%	35,968	44,203	38,502	38,502	1.9	20,264	40%	7.20%	8,106	10%	1.80%	2,026	40%	7.20%	8,106
6	100%	2,784	3,950	3,143	3,143	13.2	238	0%	0.00%	0	0%	0.00%	0	100%	0.21%	238
7	100%	48,565	59,615	51,965	51,965	6.6	7,873	0%	0.00%	0	0%	0.00%	0	100%	7.00%	7,873
8	100%	27,546	28,553	27,856	27,856	9.5	2,932	0%	0.00%	0	0%	0.00%	0	100%	2.61%	2,932
9	100%	1,678	1,888	1,743	1,743	20.6	85	0%	0.00%	0	0%	0.00%	0	100%	0.08%	85
10	100%	39,532	4,822	28,852	28,852	12.7	2,272	0%	0.00%	0	0%	0.00%	0	100%	2.02%	2,272
11	100%	32,051	33,202	32,405	32,405	13.4	2,418	0%	0.00%	0	0%	0.00%	0	100%	2.15%	2,418
12	100%	16,144	16,146	16,145	16,145	5.0	3,229	0%	0.00%	0	0%	0.00%	0	100%	2.87%	3,229
13	100%	8,715	10,146	9,155	9,155	6.4	1,431	0%	0.00%	0	0%	0.00%	0	100%	1.27%	1,431
14	100%	93,104	94,279	93,466	93,466	9.6	9,736	0%	0.00%	0	0%	0.00%	0	100%	8.65%	9,736
15	100%	24,691	25,262	24,867	24,867	7.3	3,406	0%	0.00%	0	0%	0.00%	0	100%	3.03%	3,406
16	100%	108,882	108,353	108,719	108,719	12.2	8,911	0%	0.00%	0	0%	0.00%	0	100%	7.92%	8,911
17	100%	20,920	21,196	21,005	21,005	9.4	2,235	0%	0.00%	0	0%	0.00%	0	100%	1.99%	2,235
18	100%	42,078	41,670	41,952	41,952	11.0	3,814	0%	0.00%	0	0%	0.00%	0	100%	3.39%	3,814
19	100%	59,027	58,888	58,984	58,984	12.9	4,572	0%	0.00%	0	0%	0.00%	0	100%	4.06%	4,572
20	100%	9,482	9,699	9,549	9,549	13.5	707	0%	0.00%	0	0%	0.00%	0	100%	0.63%	707
21	100%	6	6	6	6	17.1	0	0%	0.00%	0	0%	0.00%	0	100%	0.00%	0
22	100%	4,231	3,629	4,046	4,046	18.1	224	0%	0.00%	0	0%	0.00%	0	100%	0.20%	224
23	100%	18,140	20,390	18,832	18,832	21.0	897	0%	0.00%	0	0%	0.00%	0	100%	0.80%	897
24	100%	2,393	2,554	2,443	2,443	21.9	112	0%	0.00%	0	0%	0.00%	0	100%	0.10%	112
25	100%	1,009	1,062	1,025	1,025	24.3	42	0%	0.00%	0	0%	0.00%	0	100%	0.04%	42
26	100%	75,506	85,654	78,628	78,628	28.6	2,749	0%	0.00%	0	0%	0.00%	0	100%	2.44%	2,749
27	100%	20,955	22,276	21,361	21,361	17.3	1,235	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	19,524	21,690	20,190	20,190	32.5	621	0%	0.00%	0	0%	0.00%	0	100%	0.55%	621
29	100%	11,360	13,771	12,102	12,102	29.0	417	0%	0.00%	0	0%	0.00%	0	100%	0.37%	417
		811,863	836,916	819,572	819,572		112,539		14.74%	16,587		1.80%	2,026		59.56%	67,028
										14.74%			1.80%			59.56%

* - Subarea in which the site it located.

Trip Distribution Table

X-Ray Associates of New Mexico

Sub Area Population Data:

For determination of Trip Distribution for Proposed**Office Development Trips**

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

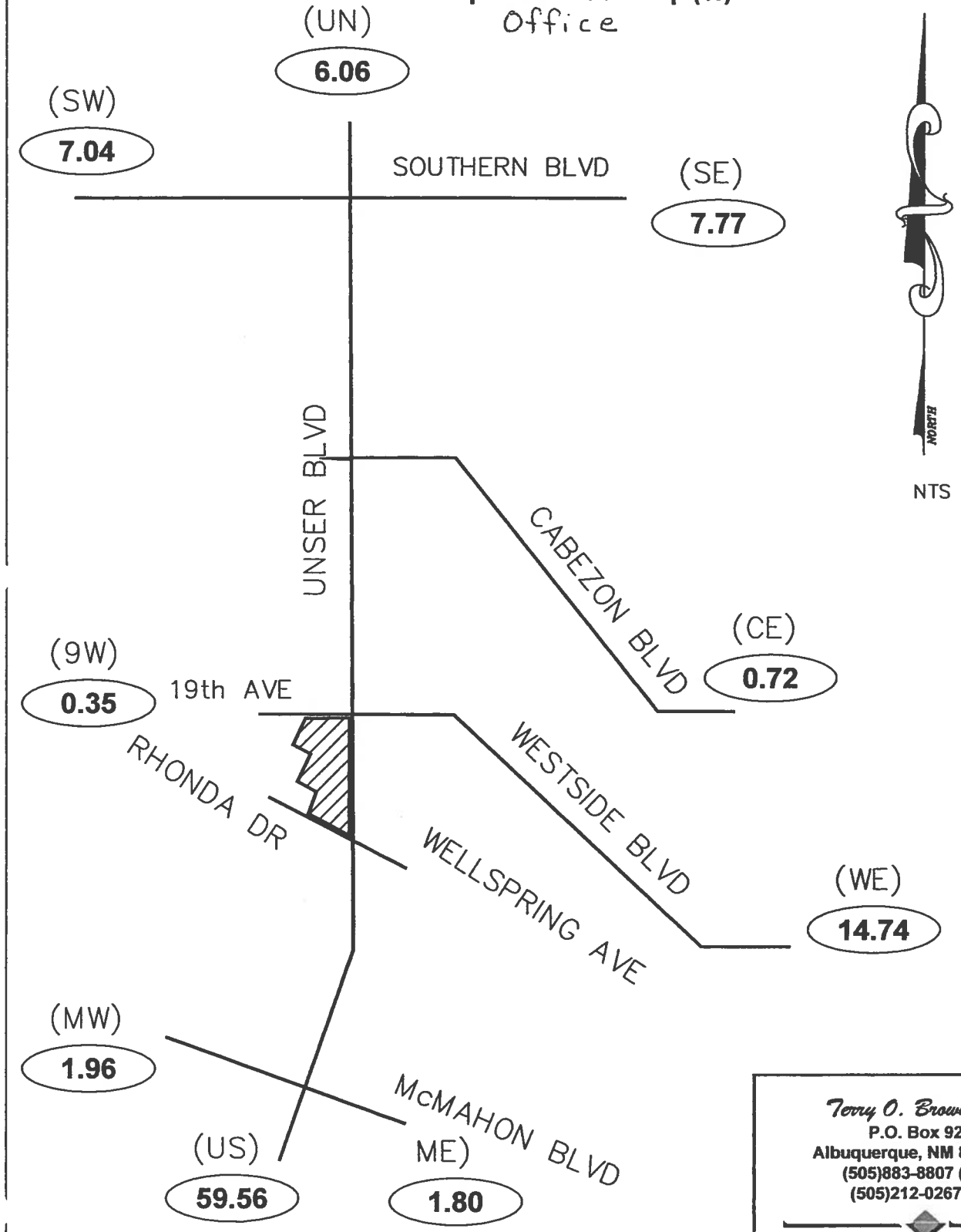
								(MW) McMahon Blvd West			(9W) 19th St West			(SW) Southern Blvd West		
Sub Area I.D.#	% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Dist. (Mi.)	Population / Distance	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population	% Utilizing	% Population / Dist. Utilizing	Population
		2004	2030	2012												
1	100%	26,972	39,738	30,900	30,900	7.0	4,414	0%	0.00%	0	0%	0.00%	0	75%	2.94%	3,311
2*	100%	39,348	40,610	39,736	39,736	1.6	24,835	1%	0.16%	184	2%	0.35%	397	19%	4.09%	4,607
3	100%	7,865	8,728	8,131	8,131	4.8	1,694	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	13,387	14,936	13,864	13,864	11.8	1,175	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	35,968	44,203	38,502	38,502	1.9	20,264	10%	1.80%	2,026	0%	0.00%	0	0%	0.00%	0
6	100%	2,784	3,950	3,143	3,143	13.2	238	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	48,565	59,615	51,965	51,965	6.6	7,873	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	27,546	28,553	27,856	27,856	9.5	2,932	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,678	1,888	1,743	1,743	20.6	85	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	39,532	4,822	28,852	28,852	12.7	2,272	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	32,051	33,202	32,405	32,405	13.4	2,418	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	16,144	16,146	16,145	16,145	5.0	3,229	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	8,715	10,146	9,155	9,155	6.4	1,431	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	93,104	94,279	93,466	93,466	9.6	9,736	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	24,691	25,262	24,867	24,867	7.3	3,406	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	108,882	108,353	108,719	108,719	12.2	8,911	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	20,920	21,196	21,005	21,005	9.4	2,235	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	42,078	41,670	41,952	41,952	11.0	3,814	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	59,027	58,888	58,984	58,984	12.9	4,572	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	9,482	9,699	9,549	9,549	13.5	707	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	6	6	6	6	17.1	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	4,231	3,629	4,046	4,046	18.1	224	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	18,140	20,390	18,832	18,832	21.0	897	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	2,393	2,554	2,443	2,443	21.9	112	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	1,009	1,062	1,025	1,025	24.3	42	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	75,506	85,654	78,628	78,628	28.6	2,749	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	20,955	22,276	21,361	21,361	17.3	1,235	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	19,524	21,690	20,190	20,190	32.5	621	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	11,360	13,771	12,102	12,102	29.0	417	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		811,863	836,916	819,572	819,572		112,539		1.96%	2,210		0.35%	397		7.04%	7,918
										1.96%			0.35%			7.04%

* - Subarea in which the site it located.

X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Distribution Map (%)



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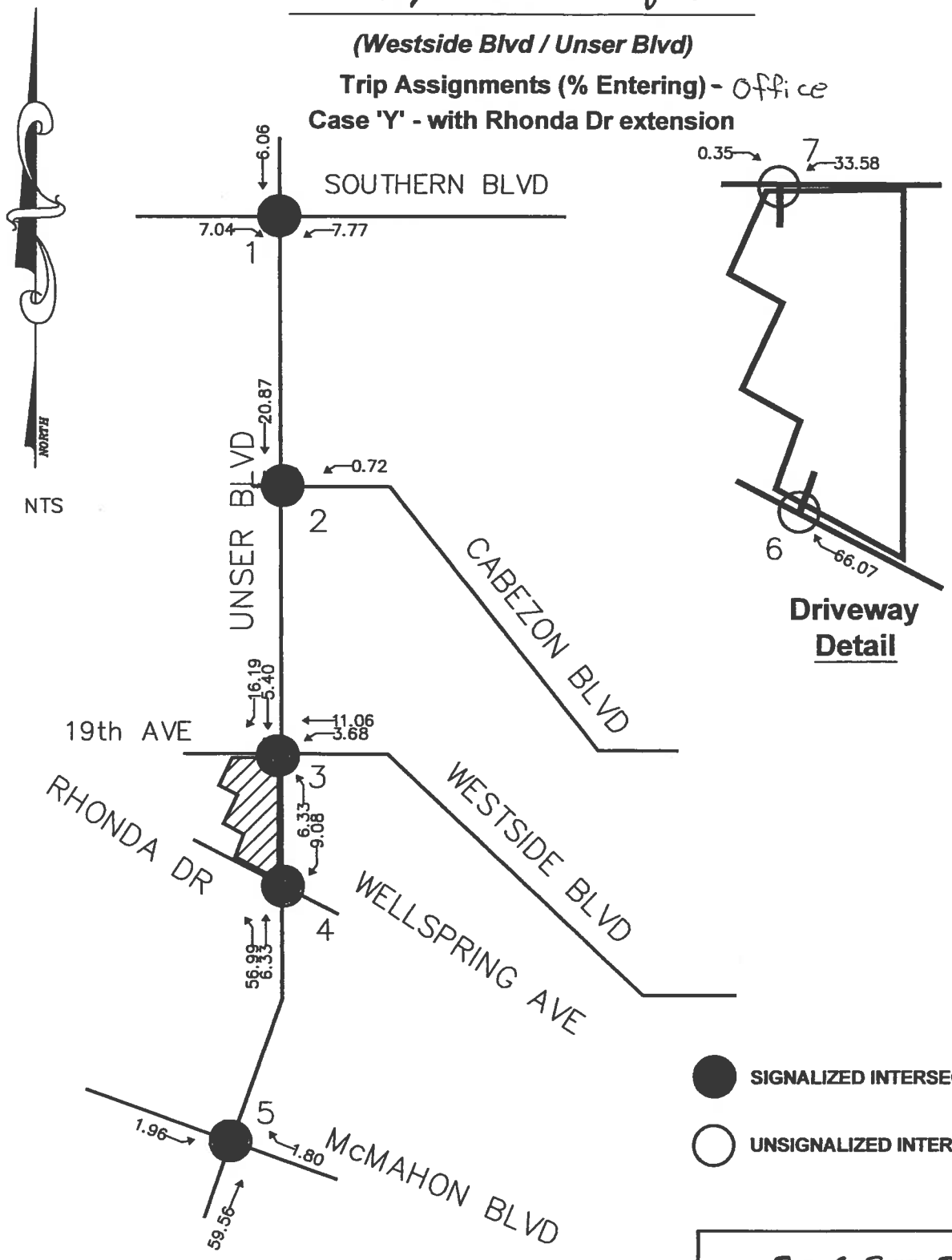
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Entering) - Office

Case 'Y' - with Rhonda Dr extension



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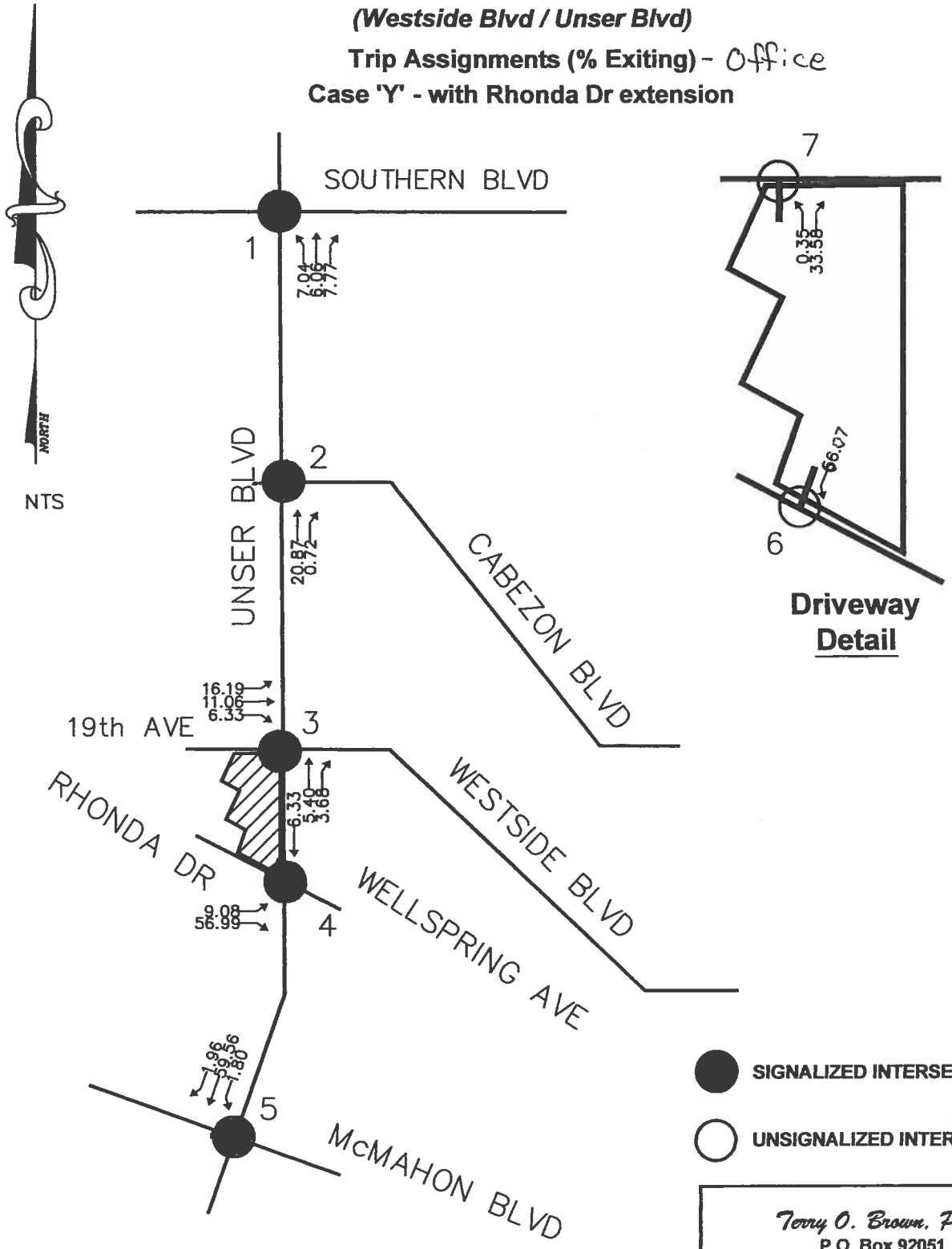
X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Exiting) - Office

Case 'Y' - with Rhonda Dr extension



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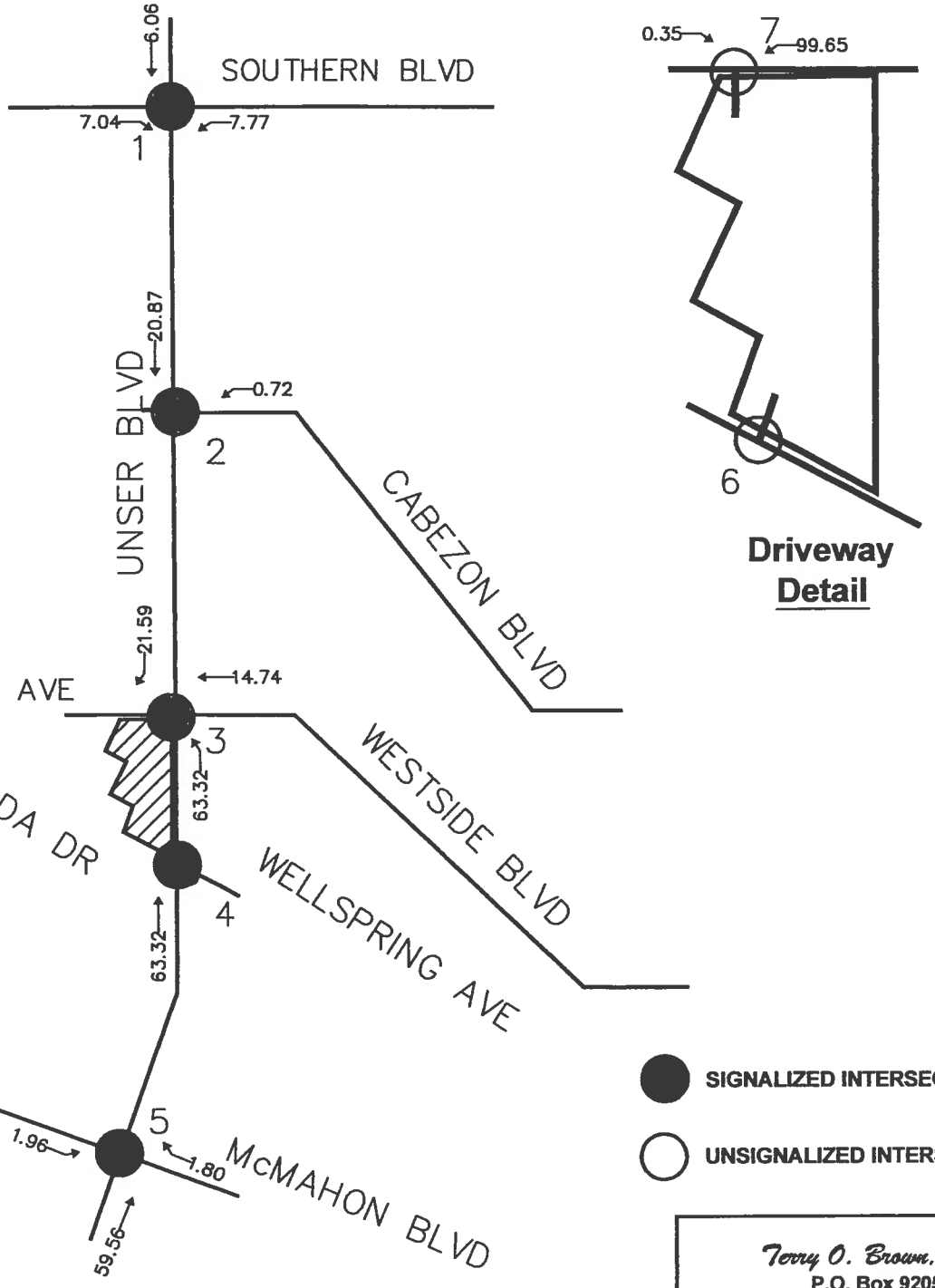
X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Entering) - Office

Case 'N' - No Rhonda Dr extension

NTS



Driveway Detail

SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

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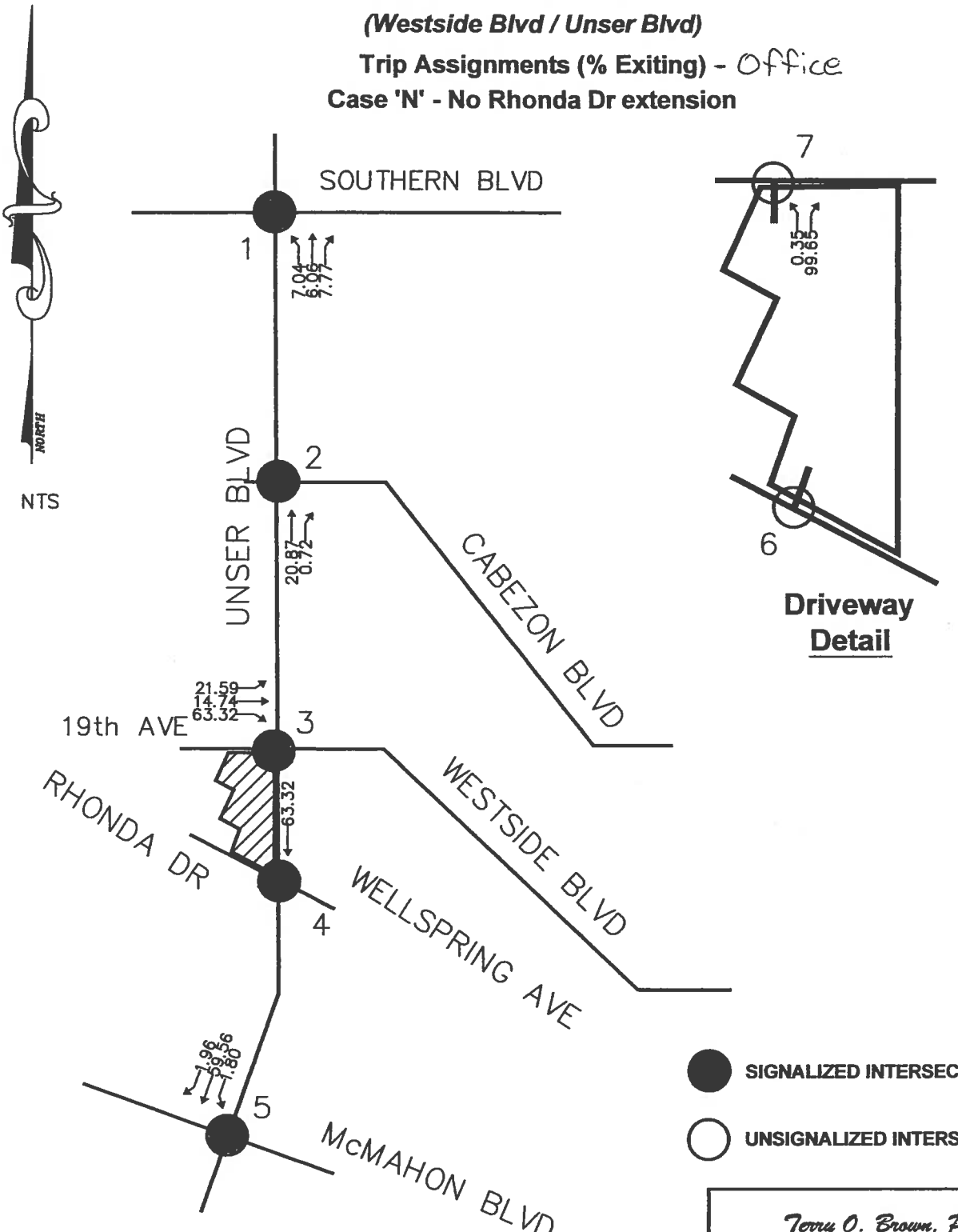
X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Trip Assignments (% Exiting) - Office

Case 'N' - No Rhonda Dr extension



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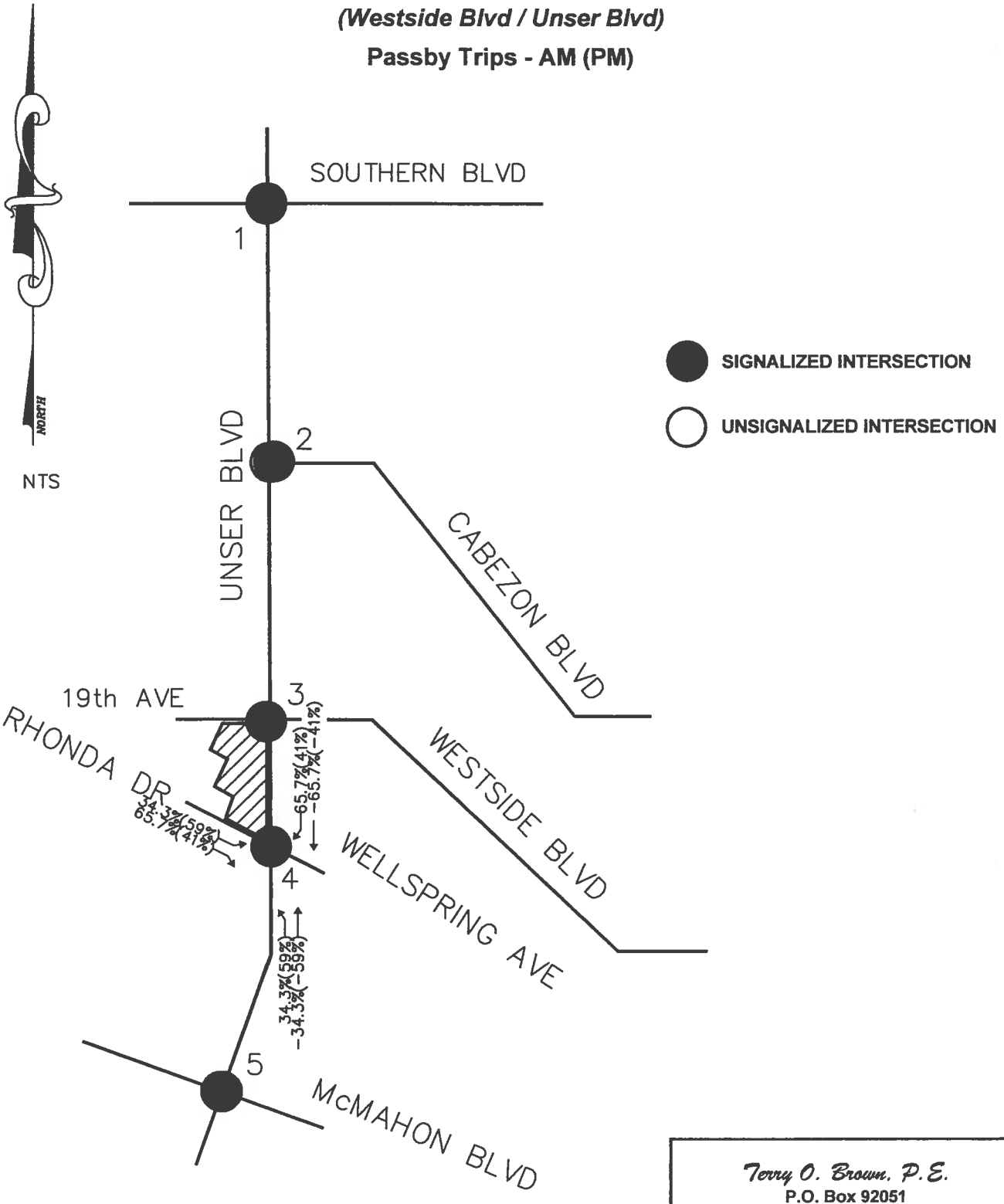
X-Ray Associates of NM

(Westside Blvd / Unser Blvd)

Passby Trips - AM (PM)



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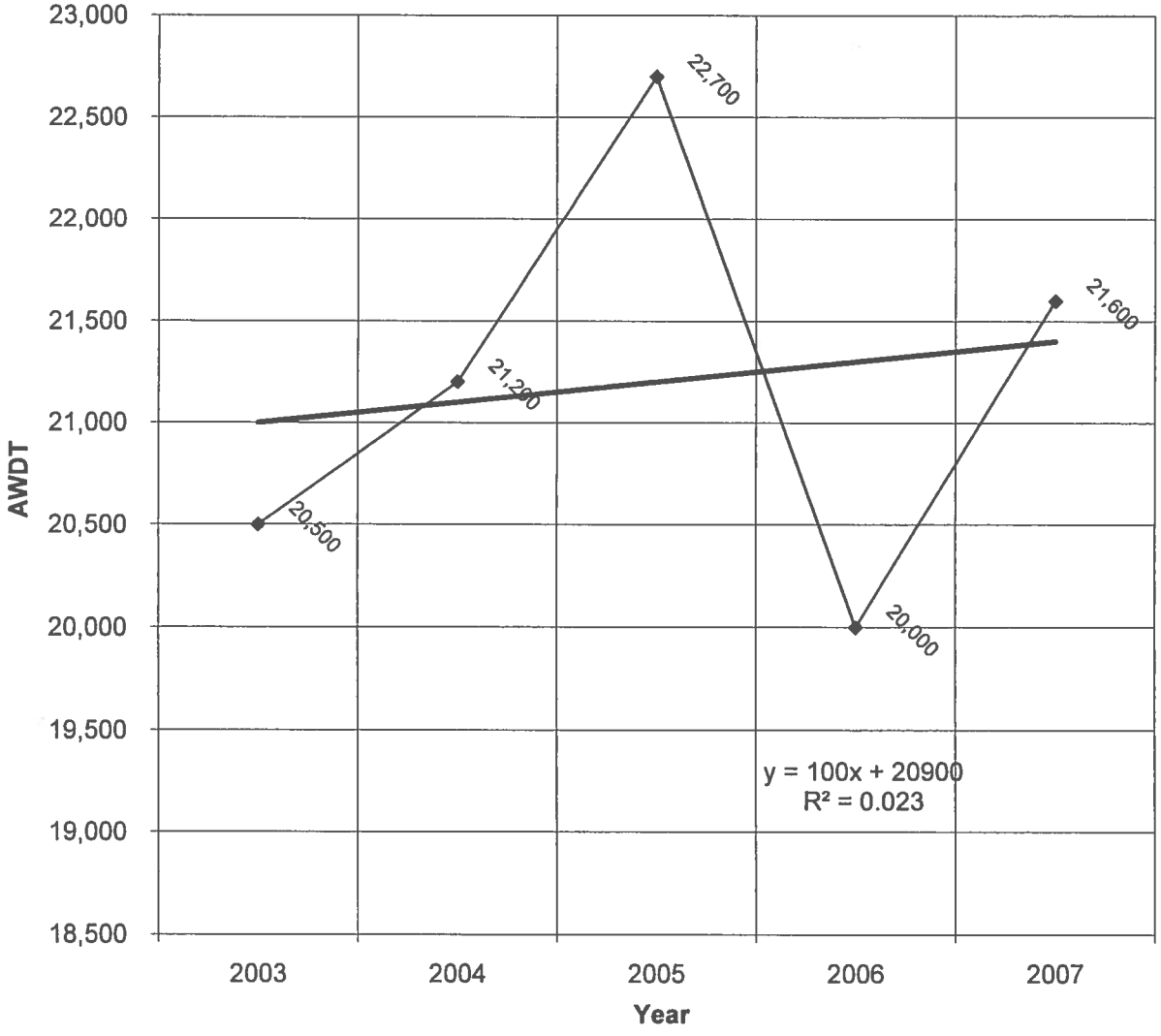
X-Ray Associates of NM (Westside Blvd / Unser Blvd)

Historic Growth Rate Table

Traffic Flows from MRCOG Map

	2003	2004	2005	2006	2007
Unser Blvd North of Southern Blvd	20,500	21,200	22,700	20,000	21,600
Southern Blvd East of Unser Blvd	24,200	25,000	25,900	16,500	16,900
Unser Blvd btwn Southern & Westside	17,500	18,100	18,700	19,100	23,800
Unser Blvd South of Westside Blvd	23,200	24,000	24,900	27,000	27,700
Unser Blvd North of McMahon Blvd	16,100	17,200	17,800	18,200	18,700
McMahon Blvd East of Unser Blvd	14,300	14,800	19,100	19,500	20,000
Unser Blvd South of McMahon Blvd	18,500	25,300	26,200	26,700	27,400
Southern Blvd West of Unser Blvd	18,700	19,400	20,000	24,600	25,200

Historic Growth Chart Unser Blvd North of Southern Blvd (2003-2007)



Annual Increase (Trendline) = 100 veh./day

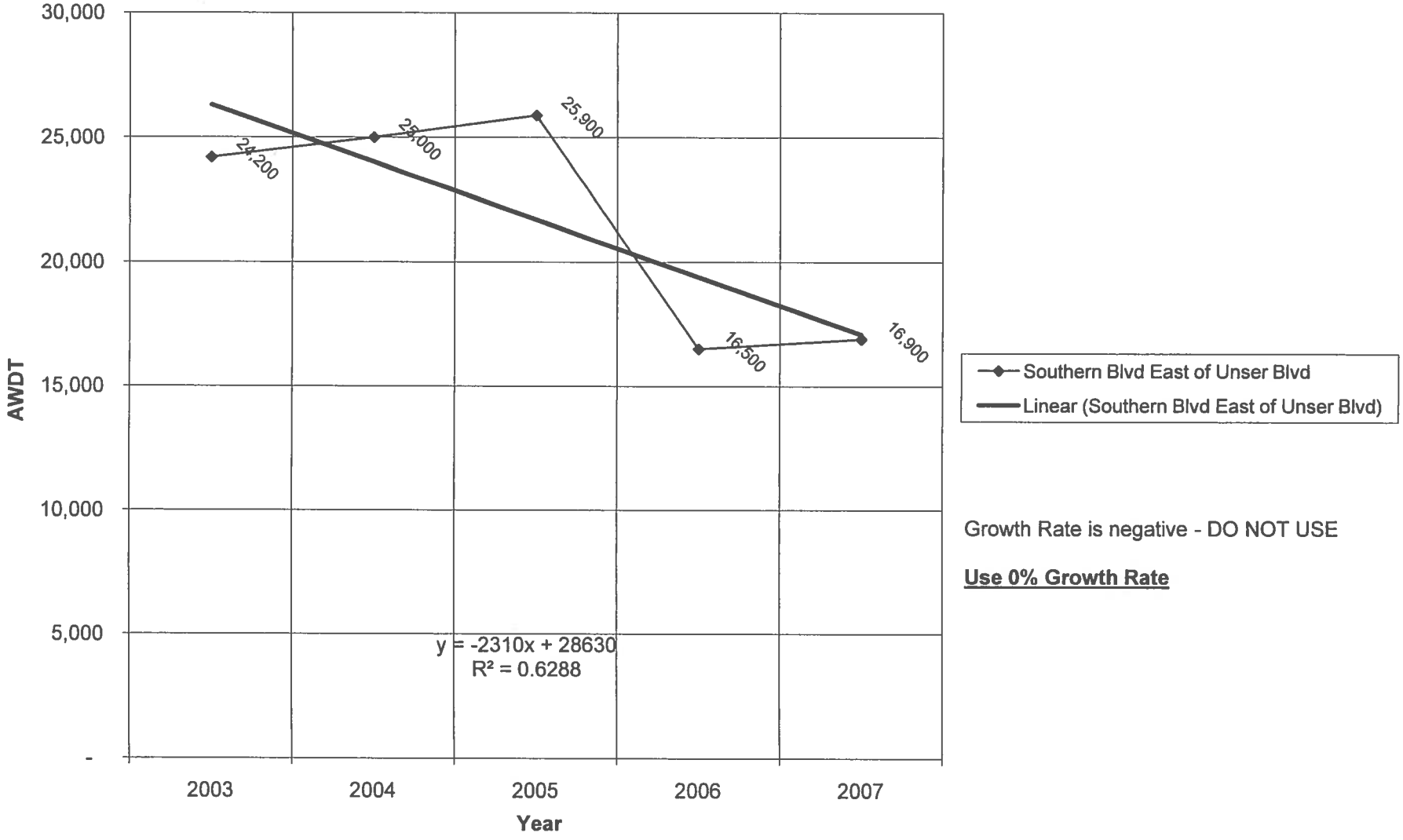
Growth Rate = 100 / 20900

Growth Rate = .0047

Use 0.5% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Southern Blvd East of Unser Blvd (2003-2007)

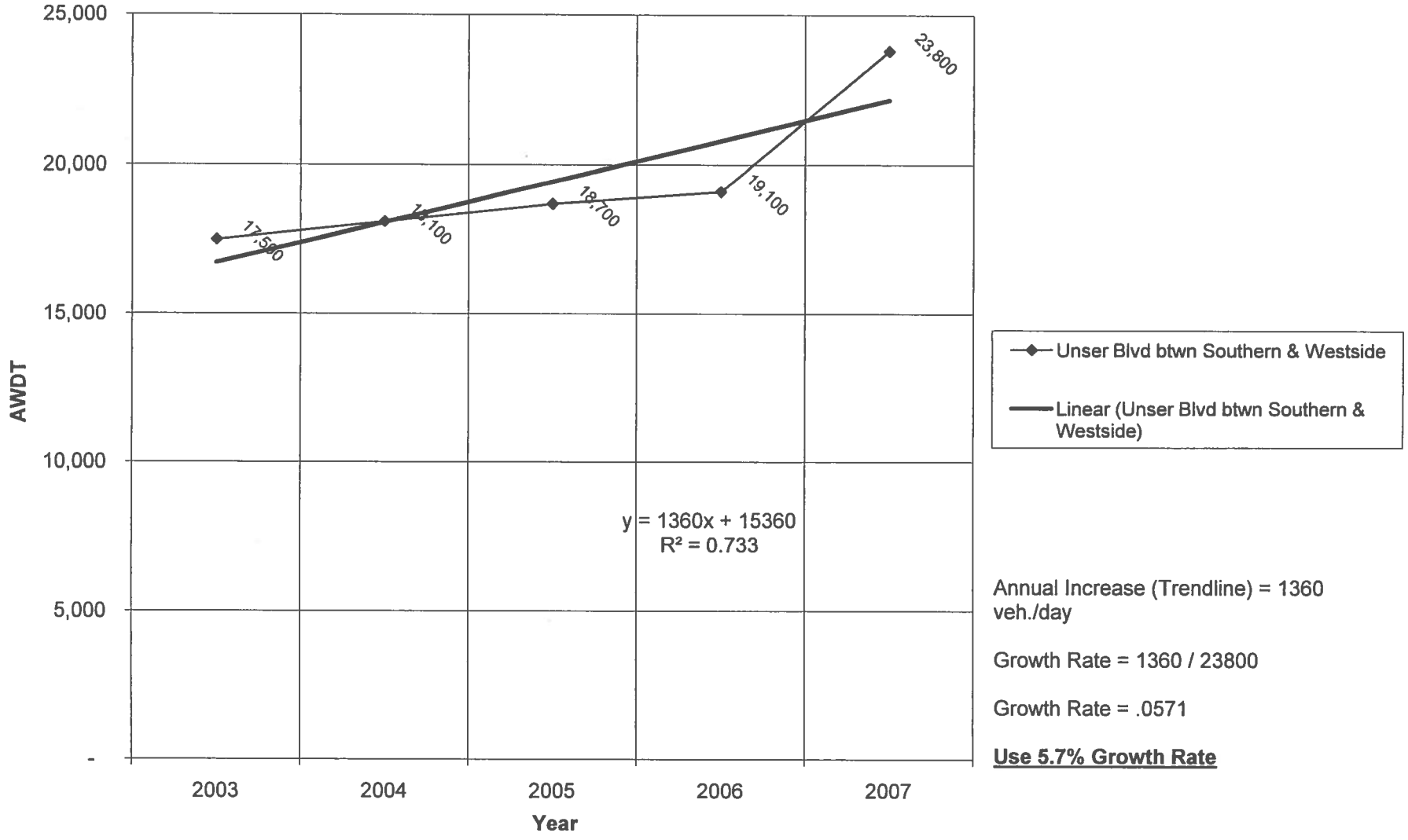


Growth Rate is negative - DO NOT USE

Use 0% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Unser Blvd btwn Southern & Westside (2003-2007)



Annual Increase (Trendline) = 1360 veh./day

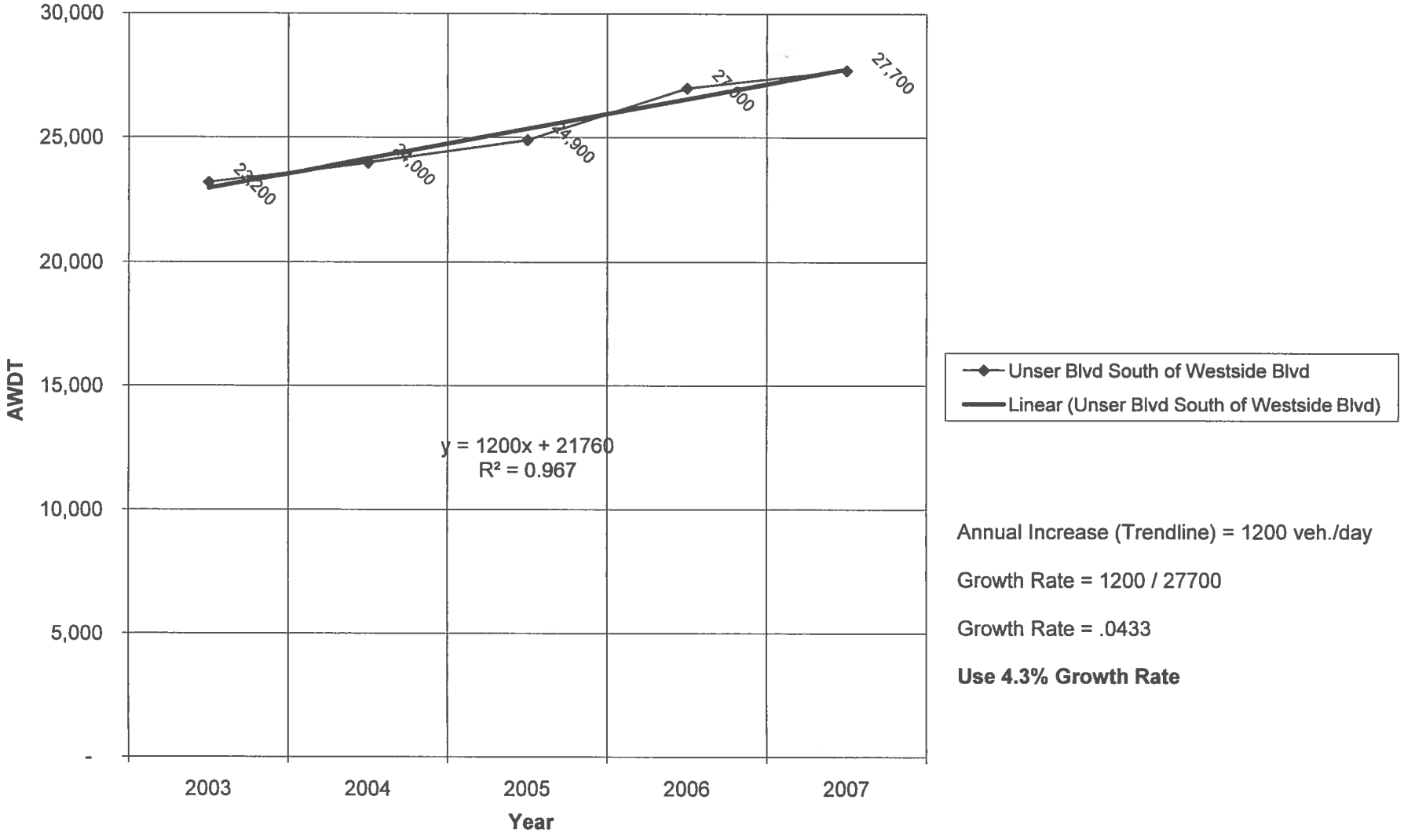
Growth Rate = 1360 / 23800

Growth Rate = .0571

Use 5.7% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Unser Blvd South of Westside Blvd (2003-2007)



Annual Increase (Trendline) = 1200 veh./day

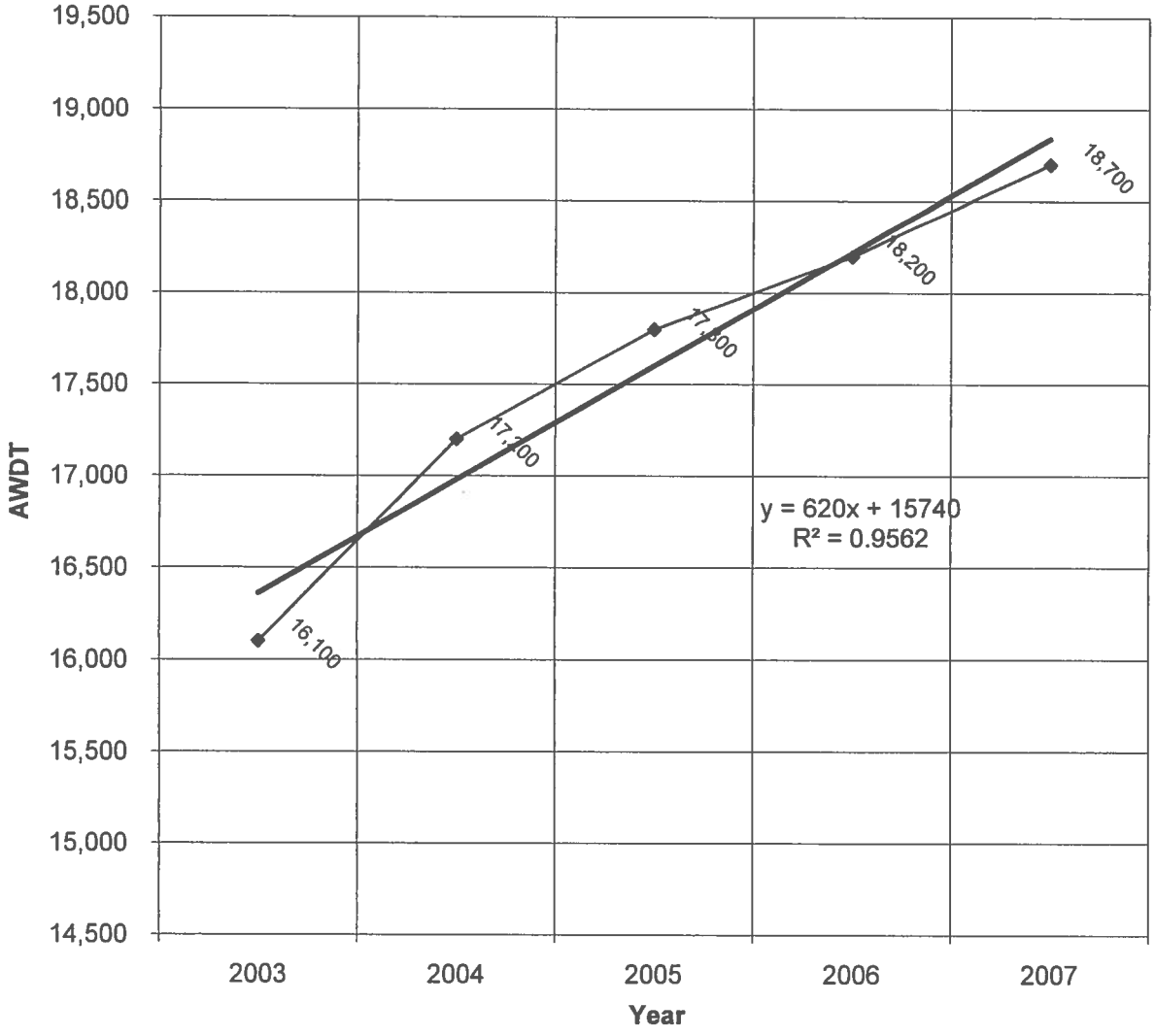
Growth Rate = 1200 / 27700

Growth Rate = .0433

Use 4.3% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Unser Blvd North of McMahon Blvd (2003-2007)



Annual Increase (Trendline) = 620 veh./day

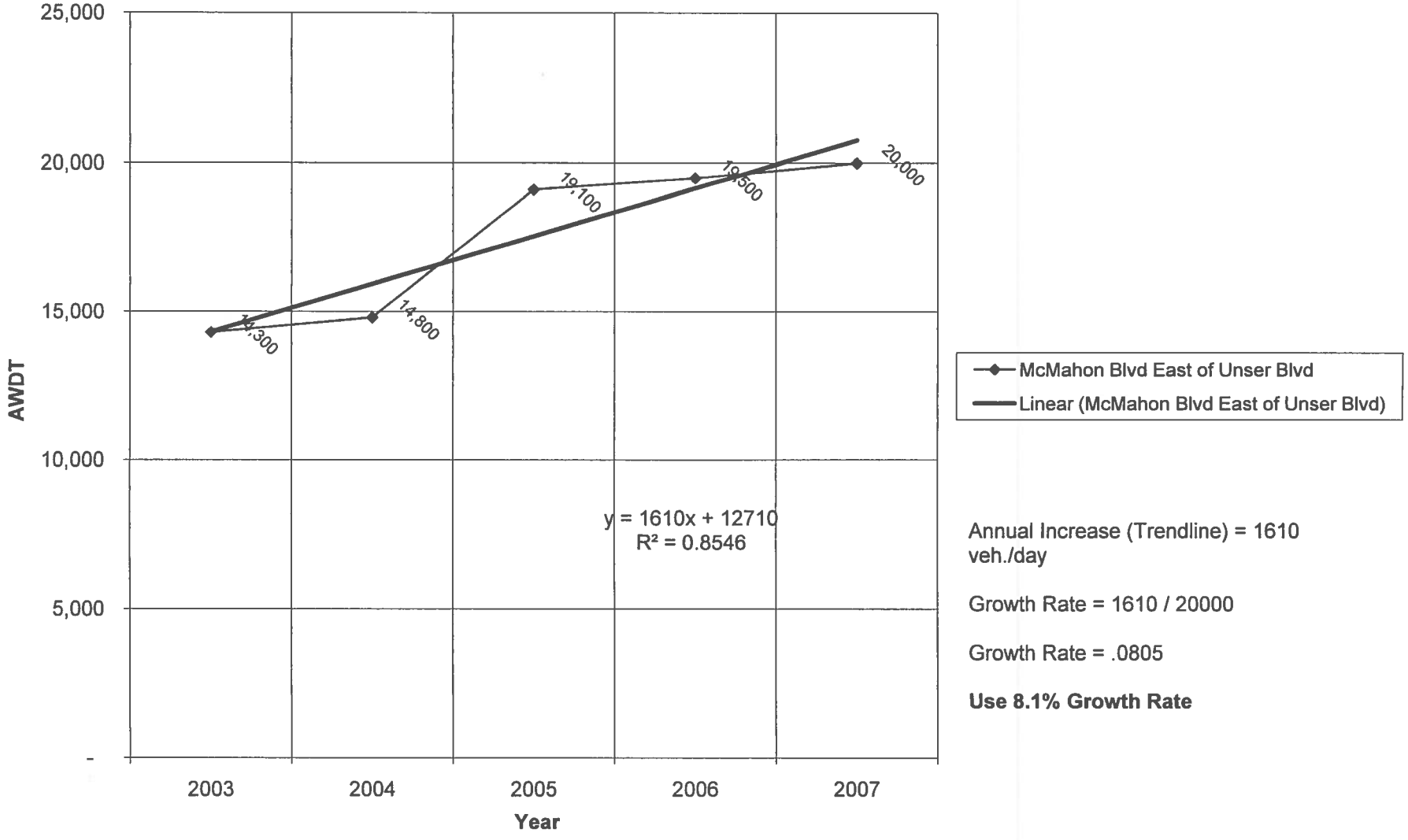
Growth Rate = 620 / 18700

Growth Rate = .0331

Use 3.3% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart McMahon Blvd East of Unser Blvd (2003-2007)



Annual Increase (Trendline) = 1610 veh./day

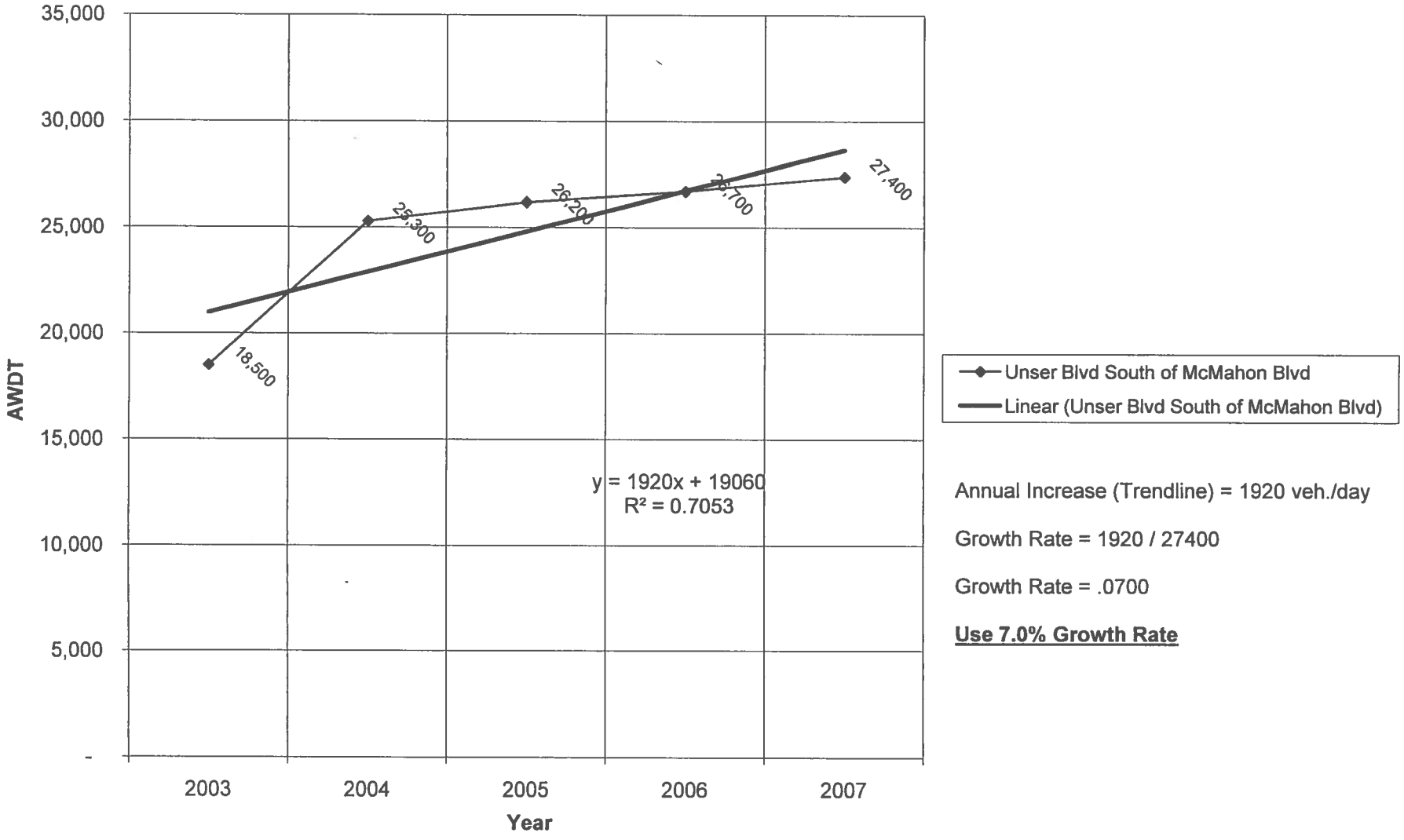
Growth Rate = 1610 / 20000

Growth Rate = .0805

Use 8.1% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Unser Blvd South of McMahon Blvd (2003-2007)



Annual Increase (Trendline) = 1920 veh./day

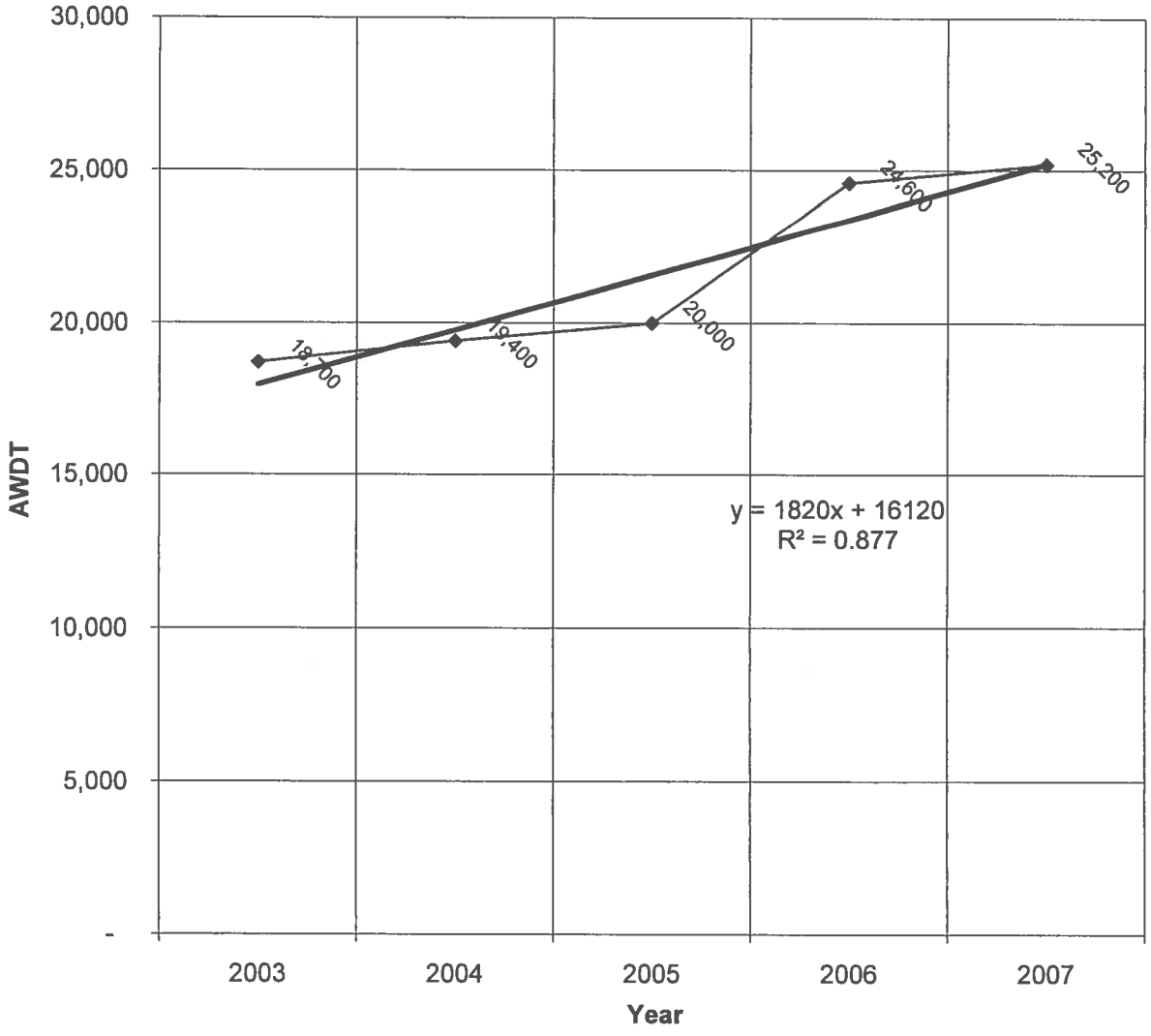
Growth Rate = 1920 / 27400

Growth Rate = .0700

Use 7.0% Growth Rate

Xray-Wside_Growth.xls

Historic Growth Chart Southern Blvd West of Unser Blvd (2003-2007)



Annual Increase (Trendline) = 1820 veh./day

Growth Rate = 1820 / 25200

Growth Rate = .0722

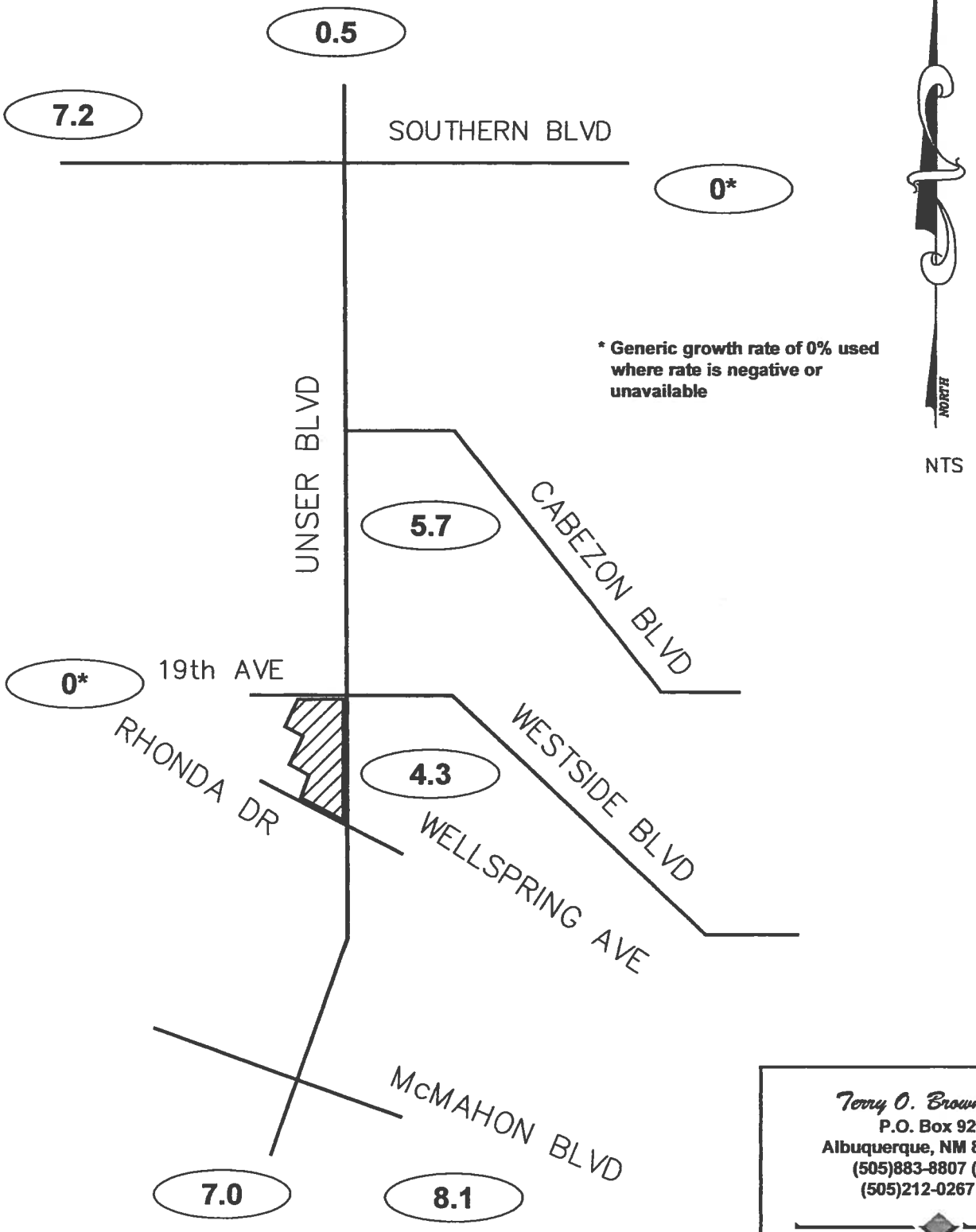
Use 7.2% Growth Rate

Xray-Wside_Growth.xls

X-Ray Associates of NM

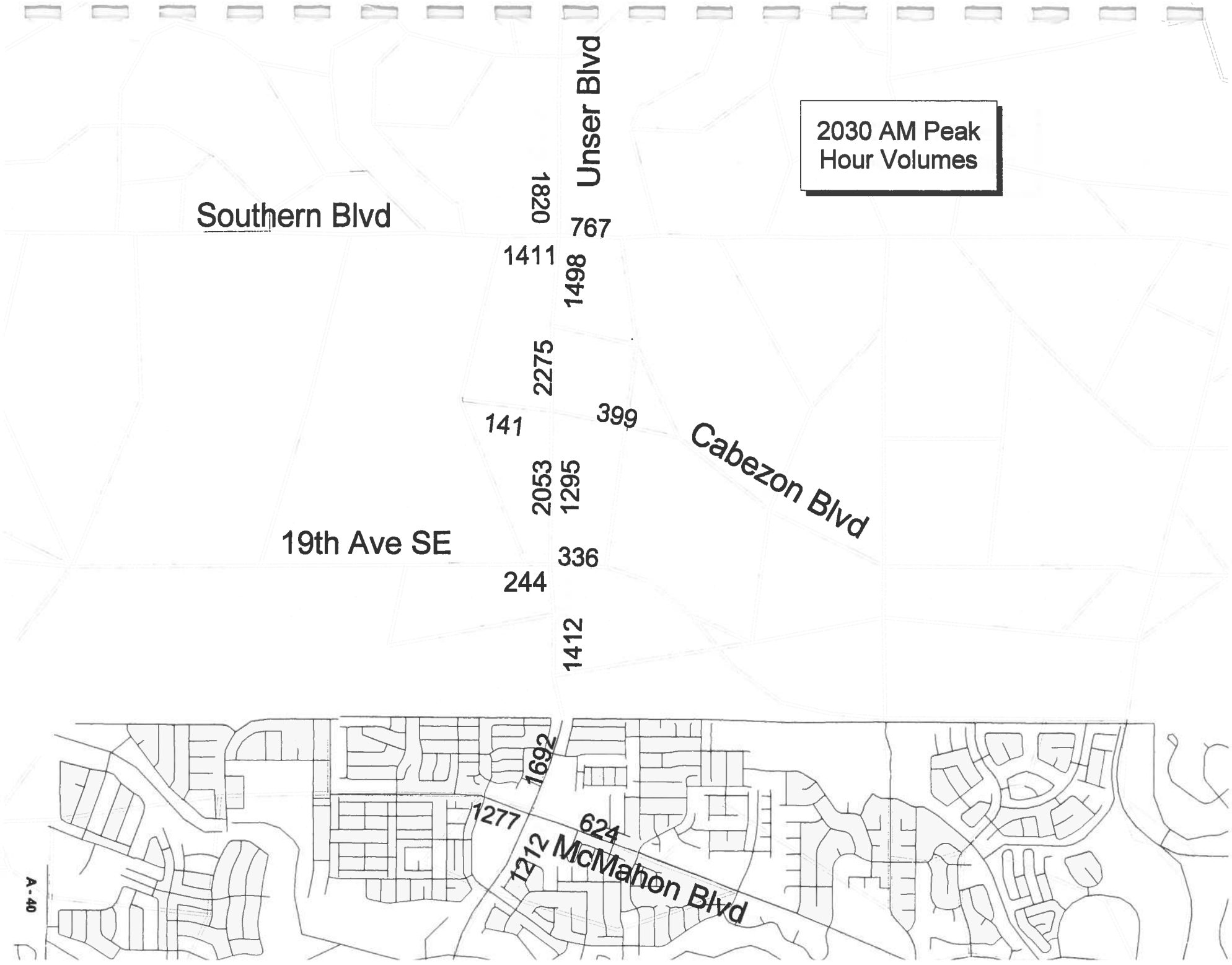
(Westside Blvd / Unser Blvd)

Growth Rate Map (%)



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


Unser Blvd
813
Southern Blvd
431
985
705
2004 AM Peak
Hour Volumes
874
19th Ave SE
43
738
915
225
658
McMahon Blvd
A-38


2030 AM Peak Hour Volumes
Unser Blvd
Southern Blvd
19th Ave SE
Cabezon Blvd
McMahon Blvd
1820
767
1411
1498
2275
141
399
2053
1295
336
244
1412
1692
1277
624
1212

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2012) - 100% Development

Case 'Y' - with Rhonda Dr extension

INTERSECTION: **Summary**

Southern Blvd / Unser Blvd

(1)

3.0% Truck

	0.83			0.76			0.82			0.89		PHF
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	113	440	309	113	262	146	158	357	163	416	678	86
2012 (NO BUILD - A.M.)	*137*	*535*	*576*	*413*	*272*	*186*	*315*	*618*	*311*	*432*	*1,058*	*87*
2012 (BUILD - A.M.)	***137***	***535***	***613***	***455***	***272***	***186***	***329***	***630***	***327***	***432***	***1,090***	***87***

	0.77			0.87			0.87			0.77		PHF
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	111	308	195	195	660	446	406	742	149	355	539	98
2012 (NO BUILD - P.M.)	*135*	*375*	*437*	*455*	*670*	*466*	*925*	*1,409*	*544*	*390*	*947*	*99*
2012 (BUILD - P.M.)	***135***	***375***	***465***	***486***	***670***	***466***	***973***	***1,449***	***597***	***390***	***969***	***99***

Cabezon Blvd / Unser Blvd

(2)

3.0% Truck

	0.75			0.86			0.83			0.93		PHF
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	2	23	51	45	33	88	38	729	69	177	1,184	8
2012 (NO BUILD - A.M.)	*2*	*23*	*51*	*235*	*33*	*268*	*44*	*1,114*	*211*	*397*	*2,076*	*9*
2012 (BUILD - A.M.)	***2***	***23***	***51***	***243***	***33***	***268***	***44***	***1,157***	***216***	***397***	***2,187***	***9***

	0.82			0.87			0.94			0.88		PHF
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	6	17	61	26	273	44	1,257	59	167	857	1
2012 (NO BUILD - P.M.)	*0*	*6*	*17*	*271*	*26*	*583*	*52*	*2,792*	*349*	*566*	*1,684*	*1*
2012 (BUILD - P.M.)	***0***	***6***	***17***	***281***	***26***	***583***	***52***	***2,934***	***360***	***566***	***1,765***	***1***

19th Av SE / Unser Blvd

(3)

3.0% Truck

	0.77			0.85			0.84			0.92		PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	9	0	34	0	0	0	9	783	0	0	1,300	4
2012 (NO BUILD - A.M.)	*9*	*0*	*34*	*200*	*0*	*130*	*10*	*1,114*	*100*	*340*	*2,008*	*5*
2012 (BUILD - A.M.)	***43***	***21***	***44***	***219***	***56***	***130***	***40***	***1,127***	***107***	***340***	***2,037***	***93***

	0.85			0.85			0.93			0.93		PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	14	0	20	0	0	0	44	1,320	0	0	1,098	12
2012 (NO BUILD - P.M.)	*14*	*0*	*20*	*360*	*0*	*980*	*50*	*2,120*	*310*	*500*	*1,630*	*14*
2012 (BUILD - P.M.)	***126***	***71***	***56***	***373***	***38***	***980***	***68***	***2,161***	***335***	***500***	***1,653***	***83***

Rhonda Av SE / Unser Blvd

(4)

3.0% Truck

	0.85			0.85			0.84			0.84		PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	0	0	170	0	90	0	564	223	208	1,298	0
2012 (NO BUILD - A.M.)	*0*	*0*	*0*	*170*	*0*	*90*	*0*	*662*	*261*	*244*	*1,524*	*0*
2012 (BUILD - A.M.)	***33***	***0***	***115***	***170***	***0***	***90***	***286***	***677***	***261***	***244***	***1,505***	***77***

	0.85			0.85			0.93			0.93		PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	0	0	620	0	270	0	1,514	215	82	1,120	0
2012 (NO BUILD - P.M.)	*0*	*0*	*0*	*620*	*0*	*270*	*0*	*1,777*	*253*	*96*	*1,315*	*0*
2012 (BUILD - P.M.)	***114***	***0***	***364***	***620***	***0***	***270***	***213***	***1,747***	***253***	***96***	***1,317***	***70***

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2012) - 100% Development

Case 'Y' - with Rhonda Dr extension

INTERSECTION: Summary

McMahon Blvd / Unser Blvd

(5)

3.0% Truck

	0.89			0.91			0.81			0.92			PHF
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	162	274	67	91	103	127	18	352	134	512	690	87	
2012 (NO BUILD - A.M.)	*192*	*274*	*67*	*113*	*128*	*258*	*22*	*936*	*162*	*648*	*1,219*	*158*	
2012 (BUILD - A.M.)	***211***	***274***	***67***	***113***	***128***	***280***	***22***	***1,196***	***162***	***662***	***1,295***	***170***	

	0.91			0.93			0.92			0.95			PHF
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	162	201	31	204	326	486	46	678	101	287	532	185	
2012 (NO BUILD - P.M.)	*212*	*201*	*31*	*254*	*405*	*744*	*56*	*1,550*	*122*	*404*	*1,711*	*269*	
2012 (BUILD - P.M.)	***236***	***201***	***31***	***254***	***405***	***774***	***56***	***1,679***	***122***	***439***	***2,013***	***298***	

Rhonda Av / Driveway 'A'

(6)

3.0% Truck

	0.85			0.85			0.85			0.85			PHF
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***363***	***0***	***0***	***0***	***147***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***282***	***0***	***0***	***0***	***473***	***0***	***0***	

19th Av / Driveway 'B'

(7)

3.0% Truck

	0.77			0.77			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	43	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - A.M.)	*0*	*43*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - A.M.)	***0***	***43***	***3***	***174***	***0***	***0***	***2***	***0***	***66***	***0***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	34	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - P.M.)	*0*	*34*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - P.M.)	***0***	***34***	***4***	***125***	***0***	***0***	***6***	***0***	***223***	***0***	***0***	***0***	

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Southern Blvd / Unser Blvd

INTERSECTION: E-W Street: **Southern Blvd** (1)

N-S Street: **Unser Blvd**

Year of Existing Counts 2009

Implementation Year **2012**

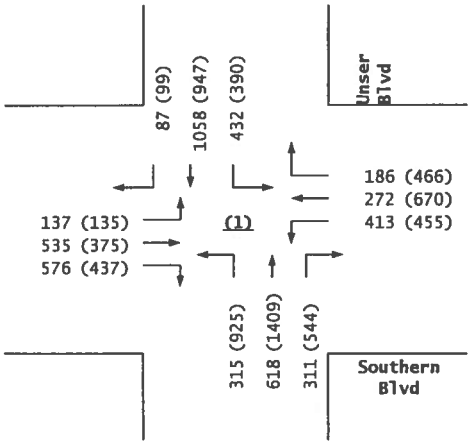
Growth Rates	7.20%			0.00%			5.70%			0.50%		
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	113	440	309	113	262	146	158	357	163	416	678	86
Background Traffic Growth	24	95	67	0	0	0	27	61	28	6	10	1
Subtotal	137	535	376	113	262	146	185	418	191	422	688	87
Cabezon Community	0	0	200	300	10	40	130	200	120	10	370	0
Subtotal (NO BUILD - A.M.)	***137***	***535***	***576***	***413***	***272***	***186***	***315***	***618***	***311***	***432***	***1,058***	***87***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*9.35%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.44%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.35%*	*7.44%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*7.04%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.06%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.04%*	*6.06%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	37	42	0	0	14	12	16	0	32	0
Total AM Peak Hour BUILD Volumes	**137**	**535**	**613**	**455**	**272**	**186**	**329**	**630**	**327**	**432**	**1,090**	**87**

	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	111	308	195	195	660	446	406	742	149	355	539	98
Background Traffic Growth	24	67	42	0	0	0	69	127	25	5	8	1
Subtotal	135	375	237	195	660	446	475	869	174	360	547	99
Cabezon Community	0	0	200	260	10	20	450	540	370	30	400	0
Subtotal (NO BUILD - P.M.)	***135***	***375***	***437***	***455***	***670***	***466***	***925***	***1,409***	***544***	***390***	***947***	***99***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*9.35%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.44%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.35%*	*7.44%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*7.04%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.06%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.04%*	*6.06%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	28	31	0	0	48	40	53	0	22	0
Total PM Peak Hour BUILD Volumes	**135**	**375**	**465**	**486**	**670**	**466**	**973**	**1,449**	**597**	**390**	**969**	**99**

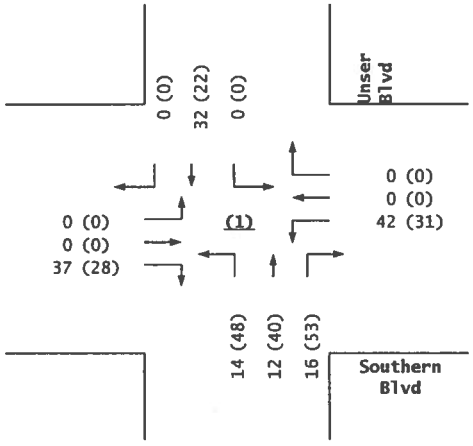
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	113	440	309	113	262	146	158	357	163	416	678	86
2009 PM Peak Hr. Volumes	111	308	195	195	660	446	406	742	149	355	539	98

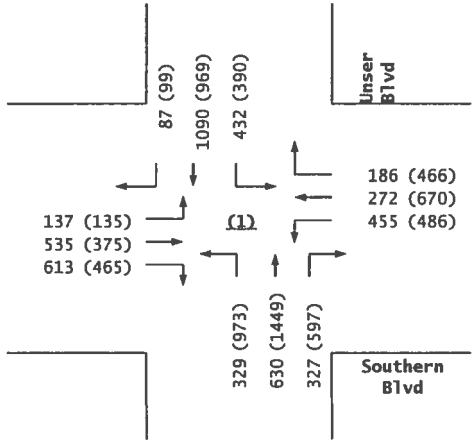
2012
NO BUILD



Trips



2012
BUILD



Southern Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Cabezon Blvd / Unser Blvd

INTERSECTION: E-W Street: **Cabezon Blvd** (2)

N-S Street: **Unser Blvd**

Year of Existing Counts 2009

Implementation Year **2012**

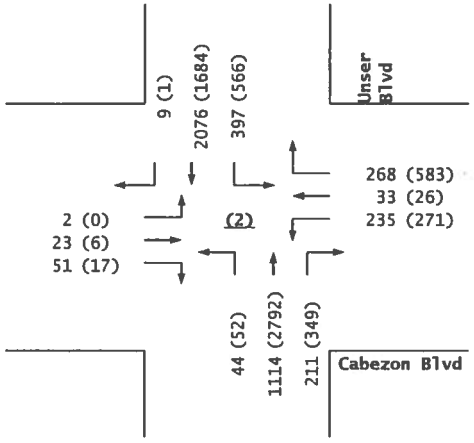
Growth Rates	0.00%			0.00%			5.70%			5.70%		
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	2	23	51	45	33	88	38	729	69	177	1,184	8
Background Traffic Growth	0	0	0	0	0	0	6	125	12	30	202	1
Subtotal	2	23	51	45	33	88	44	854	81	207	1,386	9
Cabezon Community	0	0	0	190	0	180	0	260	130	190	690	0
Subtotal (NO BUILD - A.M.)	***2***	***23***	***51***	***235***	***33***	***268***	***44***	***1,114***	***211***	***397***	***2,076***	***9***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	8	0	0	0	43	5	0	111	0
Total AM Peak Hour BUILD Volumes	**2**	**23**	**51**	**243**	**33**	**268**	**44**	**1,157**	**216**	**397**	**2,187**	**9**

	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	6	17	61	26	273	44	1,257	59	167	857	1
Background Traffic Growth	0	0	0	0	0	0	8	215	10	29	147	0
Subtotal	0	6	17	61	26	273	52	1,472	69	196	1,004	1
Cabezon Community	0	0	0	210	0	310	0	1,320	280	370	680	0
Subtotal (NO BUILD - P.M.)	***0***	***6***	***17***	***271***	***26***	***583***	***52***	***2,792***	***349***	***566***	***1,684***	***1***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	10	0	0	0	142	11	0	81	0
Total PM Peak Hour BUILD Volumes	**0**	**6**	**17**	**281**	**26**	**583**	**52**	**2,934**	**360**	**566**	**1,765**	**1**

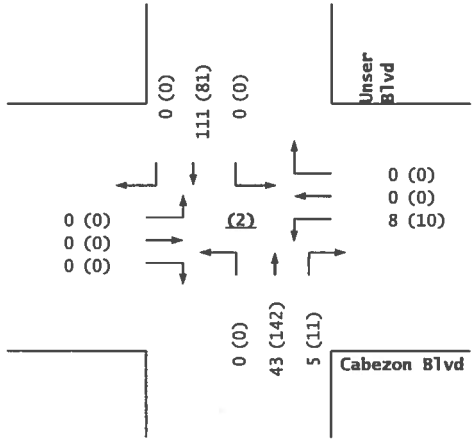
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	2	23	51	45	33	88	38	729	69	177	1,184	8
2009 PM Peak Hr. Volumes	0	6	17	61	26	273	44	1,257	59	167	857	1

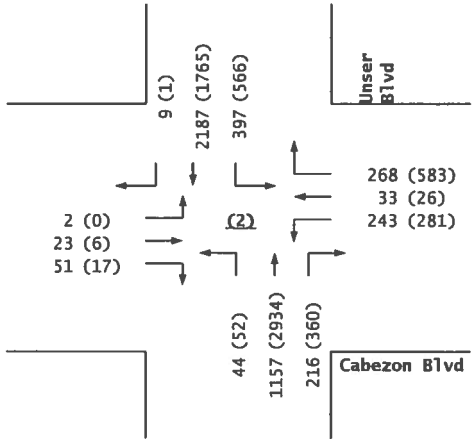
2012
NO BUILD



Trips



2012
BUILD



Cabezon Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av SE / Unser Blvd

INTERSECTION: E-W Street: **19th Av SE** (3)

N-S Street: **Unser Blvd**

Year of Existing Counts **2009**

Implementation Year **2012**

Growth Rates **0.00%** **0.00%** **4.30%** **4.30%**

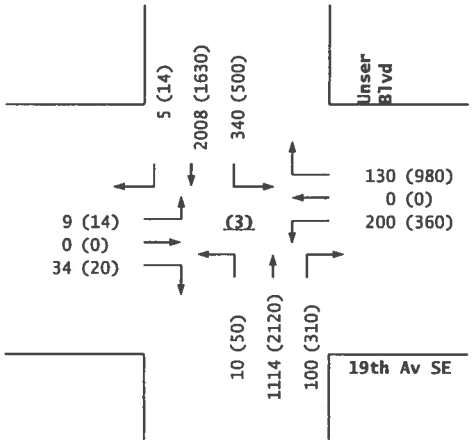
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
Background Traffic Growth	0	0	0	0	0	0	1	101	0	0	168	1
Subtotal	9	0	34	0	0	0	10	884	0	0	1,468	5
Cabezon Community	0	0	0	200	0	130	0	230	100	340	540	0
Subtotal (NO BUILD - A.M.)	***9***	***0***	***34***	***200***	***0***	***130***	***10***	***1,114***	***100***	***340***	***2,008***	***5***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.00%*	*12.01%*	*0.00%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*8.01%*	*24.03%*
Percent Commercial Trips Generated(Exiting)	*22.42%*	*11.21%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.62%*	*4.80%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*3.68%*	*11.06%*	*0.00%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*16.19%*
Percent Office Trips Generated(Exiting)	*16.19%*	*11.60%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*3.68%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	34	21	10	19	56	0	30	13	7	0	29	88
Total AM Peak Hour BUILD Volumes	**43**	**21**	**44**	**219**	**56**	**130**	**40**	**1,127**	**107**	**340**	**2,037**	**93**

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12
Background Traffic Growth	0	0	0	0	0	0	6	170	0	0	142	2
Subtotal	14	0	20	0	0	0	50	1,490	0	0	1,240	14
Cabezon Community	0	0	0	360	0	980	0	630	310	500	390	0
Subtotal (NO BUILD - P.M.)	***14***	***0***	***20***	***360***	***0***	***980***	***50***	***2,120***	***310***	***500***	***1,630***	***14***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.00%*	*12.01%*	*0.00%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*8.01%*	*24.03%*
Percent Commercial Trips Generated(Exiting)	*22.42%*	*11.21%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.62%*	*4.80%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*3.68%*	*11.06%*	*0.00%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*16.19%*
Percent Office Trips Generated(Exiting)	*16.19%*	*11.60%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*3.68%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	112	71	36	13	38	0	18	41	25	0	23	69
Total PM Peak Hour BUILD Volumes	**126**	**71**	**56**	**373**	**38**	**980**	**68**	**2,161**	**335**	**500**	**1,653**	**83**

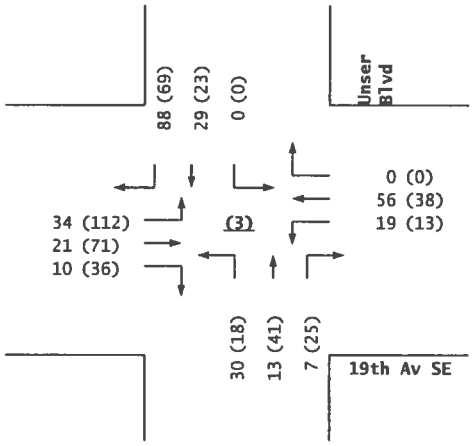
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
2009 PM Peak Hr. Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12

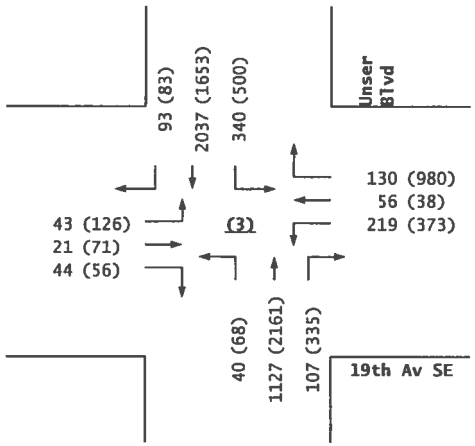
2012
NO BUILD



Trips



2012
BUILD



19th Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av SE / Unser Blvd

INTERSECTION: E-W Street: **Rhonda Av SE** (4)

N-S Street: **Unser Blvd**

Year of Existing Counts 2015

Implementation Year **2012**

Growth Rates	0.00%			0.00%			4.30%			4.30%		
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	170	0	90	0	760	300	280	1,750	0
Background Traffic Growth	0	0	0	0	0	0	0	-98	-39	-36	-226	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***170***	***0***	***90***	***0***	***662***	***261***	***244***	***1,524***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*44.78%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*12.01%*
Percent Commercial Trips Generated(Exiting)	*14.42%*	*0.00%*	*44.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*4.98%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.99%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*9.08%*
Percent Office Trips Generated(Exiting)	*9.08%*	*0.00%*	*56.99%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.33%*	*0.00%*
Total Trips Generated	20	0	91	0	0	0	271	30	0	0	10	48
Subtotal AM Pk Hr. BUILD Volumes	**20**	**0**	**91**	**170**	**0**	**90**	**271**	**692**	**261**	**244**	**1,534**	**48**
Pass-by Trip Adjustments	*13*	*0*	*24*	*0*	*0*	*0*	*15*	*-15*	*0*	*0*	*-29*	*29*
Total AM Peak Hour BUILD Volumes	**33**	**0**	**115**	**170**	**0**	**90**	**286**	**677**	**261**	**244**	**1,505**	**77**

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0
Background Traffic Growth	0	0	0	0	0	0	0	-263	-37	-14	-195	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***1,777***	***253***	***96***	***1,315***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*44.78%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*12.01%*
Percent Commercial Trips Generated(Exiting)	*14.42%*	*0.00%*	*44.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*4.98%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.99%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*9.08%*
Percent Office Trips Generated(Exiting)	*9.08%*	*0.00%*	*56.99%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.33%*	*0.00%*
Total Trips Generated	66	0	331	0	0	0	165	18	0	0	36	36
Subtotal PM Pk Hr. BUILD Volumes	**66**	**0**	**331**	**620**	**0**	**270**	**165**	**1,795**	**253**	**96**	**1,351**	**36**
Pass-by Trip Adjustments	*48*	*0*	*33*	*0*	*0*	*0*	*48*	*-48*	*0*	*0*	*-34*	*34*
Total PM Peak Hour BUILD Volumes	**114**	**0**	**364**	**620**	**0**	**270**	**213**	**1,747**	**253**	**96**	**1,317**	**70**

	Entering	Exiting		
Number of Commercial Trips Generated	101	86	A.M.	100% Commercial Development
	190	189	P.M.	
Number of Office Trips Generated	397	92	A.M.	100% Office Development
	140	431	P.M.	

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	0	0	0	170	0	90	0	564	223	208	1,298	0
2009 PM Peak Hr. Volumes	0	0	0	620	0	270	0	1,514	215	82	1,120	0

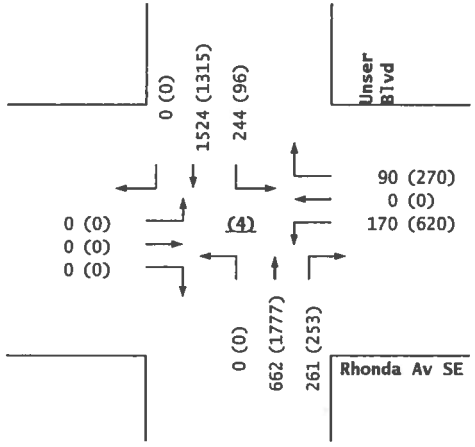
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Rhonda Av SE)***			***Westbound (Rhonda Av SE)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*34.30%*	*-34.30%*	*0.00%*	*0.00%*	*-65.70%*	*65.70%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*15*	*-15*	*0*	*0*	*-29*	*29*
Percent Exiting	*34.30%*	*0.00%*	*65.70%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*13*	*0*	*24*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***13***	***0***	***24***	***0***	***0***	***0***	***15***	***-15***	***0***	***0***	***-29***	***29***

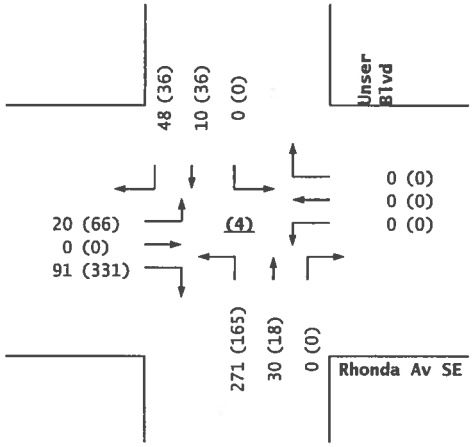
PM Pass-by Trips	***Eastbound (Rhonda Av SE)***			***Westbound (Rhonda Av SE)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*59.00%*	*-59.00%*	*0.00%*	*0.00%*	*-41.00%*	*41.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*48*	*-48*	*0*	*0*	*-34*	*34*
Percent Exiting	*59.00%*	*0.00%*	*41.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*48*	*0*	*33*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***48***	***0***	***33***	***0***	***0***	***0***	***48***	***-48***	***0***	***0***	***-34***	***34***

	Entering	*Exiting*	
Pass-by Trips	*44*	*37*	*AM*
	82	*81*	*PM*

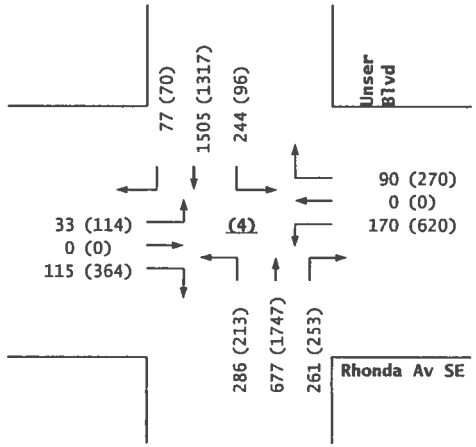
2012
NO BUILD



Trips



2012
BUILD



Rhonda Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

McMahon Blvd / Unser Blvd

INTERSECTION: E-W Street: **McMahon Blvd** (5)
N-S Street: **Unser Blvd**

Year of Existing Counts 2009
Implementation Year **2012**

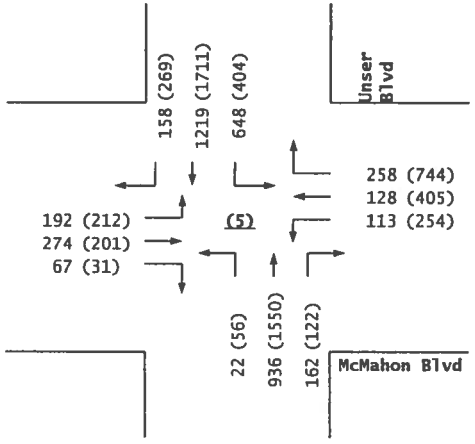
Growth Rates	0.00%			8.10%			7.00%			4.30%		
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	162	274	67	91	103	127	18	352	134	512	690	87
Background Traffic Growth	0	0	0	22	25	31	4	74	28	66	89	11
Subtotal	162	274	67	113	128	158	22	426	162	578	779	98
Cabezon Community	30	0	0	0	0	100	0	510	0	70	440	60
Subtotal (NO BUILD - A.M.)	***192***	***274***	***67***	***113***	***128***	***258***	***22***	***936***	***162***	***648***	***1,219***	***158***
Percent Commercial Trips Generated(Entering)	*11.26%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.46%*	*0.00%*	*24.04%*	*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%*	*14.46%*	*24.04%*	*11.26%*
Percent Office Trips Generated(Entering)	*1.96%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*0.00%*	*59.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*59.56%*	*1.96%*
Total Trips Generated	19	0	0	0	0	22	0	260	0	14	76	12
Total AM Peak Hour BUILD Volumes	**211**	**274**	**67**	**113**	**128**	**280**	**22**	**1,196**	**162**	**662**	**1,295**	**170**

	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	162	201	31	204	326	486	46	678	101	287	532	185
Background Traffic Growth	0	0	0	50	79	118	10	142	21	37	69	24
Subtotal	162	201	31	254	405	604	56	820	122	324	601	209
Cabezon Community	50	0	0	0	0	140	0	730	0	80	1,110	60
Subtotal (NO BUILD - P.M.)	***212***	***201***	***31***	***254***	***405***	***744***	***56***	***1,550***	***122***	***404***	***1,711***	***269***
Percent Commercial Trips Generated(Entering)	*11.26%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.46%*	*0.00%*	*24.04%*	*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%*	*14.46%*	*24.04%*	*11.26%*
Percent Office Trips Generated(Entering)	*1.96%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*0.00%*	*59.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*59.56%*	*1.96%*
Total Trips Generated	24	0	0	0	0	30	0	129	0	35	302	29
Total PM Peak Hour BUILD Volumes	**236**	**201**	**31**	**254**	**405**	**774**	**56**	**1,679**	**122**	**439**	**2,013**	**298**

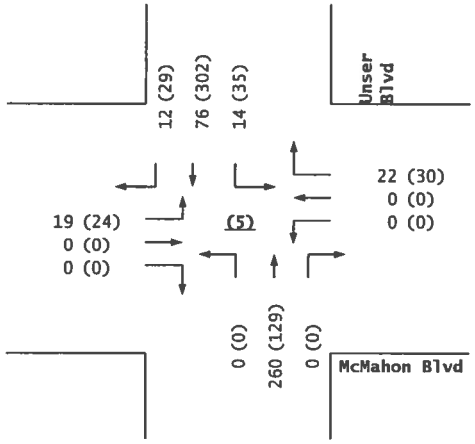
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	162	274	67	91	103	127	18	352	134	512	690	87
2009 PM Peak Hr. Volumes	162	201	31	204	326	486	46	678	101	287	532	185

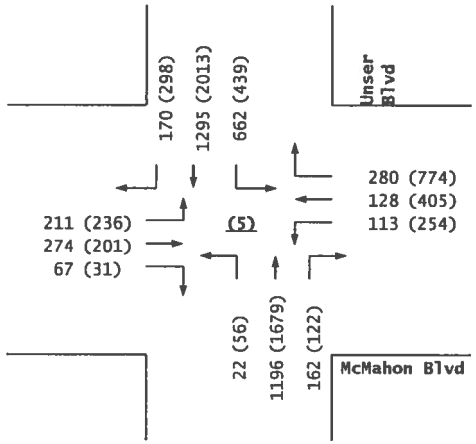
2012
NO BUILD



Trips



2012
BUILD



McMahon Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av / Driveway 'A'

INTERSECTION: E-W Street: **Rhonda Av** (6)

N-S Street: **Driveway 'A'**

Year of Existing Counts **2015**

Implementation Year **2012**

Growth Rates 0.00% 0.00% 0.00% 0.00%

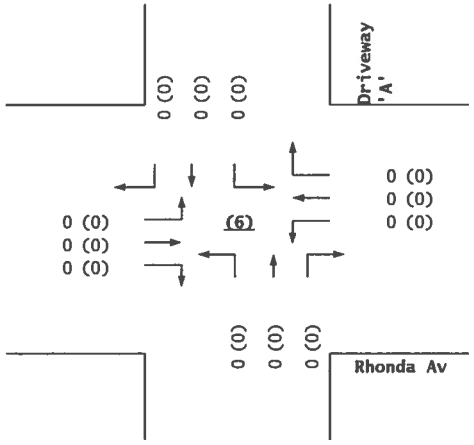
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.79%*	*0.00%*	*0.00%*	*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%*	*56.79%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	319	0	0	0	110	0	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**319**	**0**	**0**	**0**	**110**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*44*	*0*	*0*	*0*	*37*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**363**	**0**	**0**	**0**	**147**	**0**	**0**

	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.79%*	*0.00%*	*0.00%*	*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%*	*56.79%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	200	0	0	0	392	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**200**	**0**	**0**	**0**	**392**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*82*	*0*	*0*	*0*	*81*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**282**	**0**	**0**	**0**	**473**	**0**	**0**

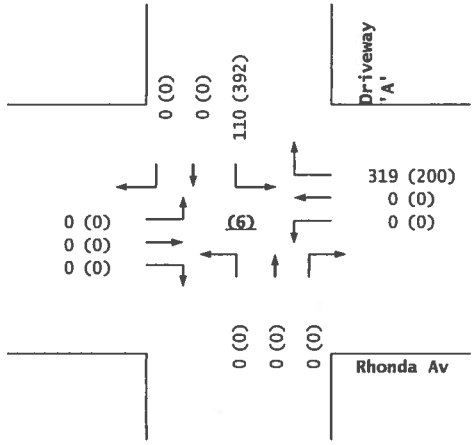
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
2009 AM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0
2009 PM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0

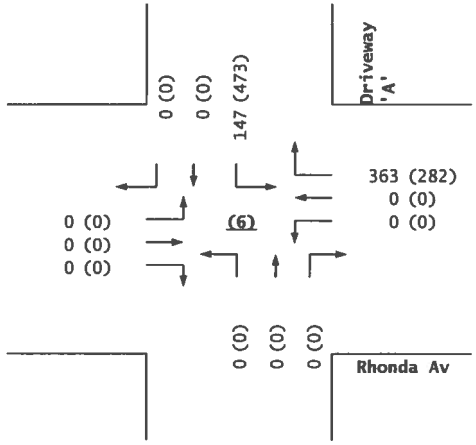
2012
NO BUILD



Trips



2012
BUILD



Rhonda Av / Driveway 'A'

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av / Driveway 'B'

INTERSECTION: E-W Street: **19th Av** (7)

N-S Street: **Driveway 'B'**

Year of Existing Counts 2009

Implementation Year **2012**

Growth Rates 0.00% 0.00% 0.00% 0.00%

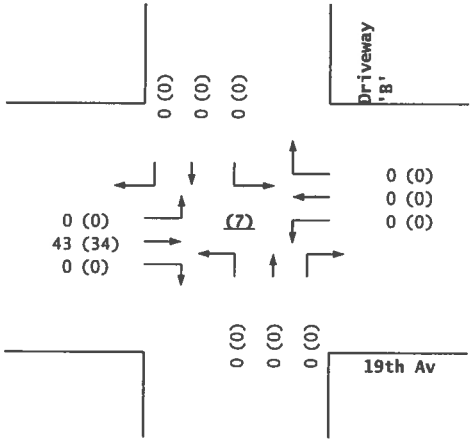
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	43	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***43***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	3	174	0	0	2	0	66	0	0	0
Total AM Peak Hour BUILD Volumes	**0**	**43**	**3**	**174**	**0**	**0**	**2**	**0**	**66**	**0**	**0**	**0**

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	34	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***34***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	4	125	0	0	6	0	223	0	0	0
Total PM Peak Hour BUILD Volumes	**0**	**34**	**4**	**125**	**0**	**0**	**6**	**0**	**223**	**0**	**0**	**0**

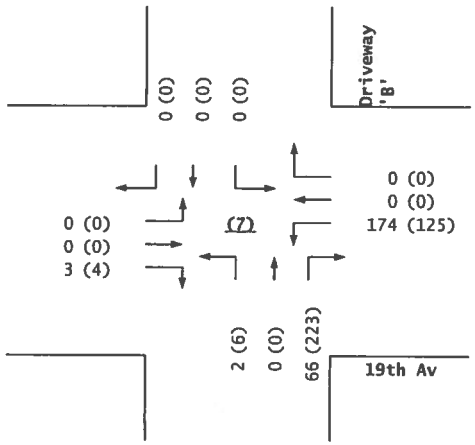
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
2009 AM Peak Hr. Volumes	0	43	0	0	0	0	0	0	0	0	0	0
2009 PM Peak Hr. Volumes	0	34	0	0	0	0	0	0	0	0	0	0

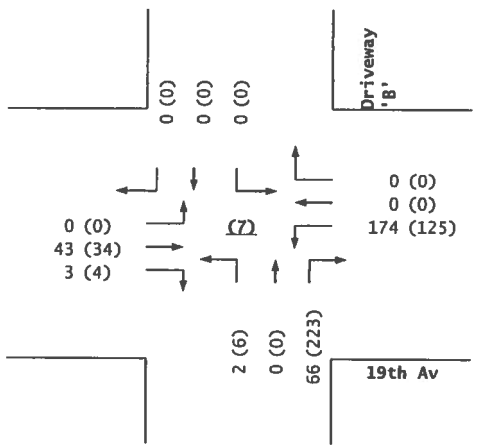
2012
NO BUILD



Trips



2012
BUILD



19th Av / Driveway 'B'

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2012) - 100% Development

Case 'N' - No Rhonda Av extension

INTERSECTION: Summary

19th Av SE / Unser Blvd

(3)

3.0% Truck

	0.77			0.85			0.84			0.92			PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	9	0	34	0	0	0	9	783	0	0	1,300	4	
2012 (NO BUILD - A.M.)	*9*	*0*	*34*	*200*	*0*	*130*	*10*	*1,114*	*100*	*340*	*2,008*	*5*	
2012 (BUILD - A.M.)	***70***	***28***	***159***	***200***	***75***	***130***	***326***	***1,099***	***100***	***340***	***1,979***	***152***	

	0.85			0.85			0.93			0.93			PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	14	0	20	0	0	0	44	1,320	0	0	1,098	12	
2012 (NO BUILD - P.M.)	*14*	*0*	*20*	*360*	*0*	*980*	*50*	*2,120*	*310*	*500*	*1,630*	*14*	
2012 (BUILD - P.M.)	***216***	***94***	***420***	***360***	***51***	***980***	***282***	***2,072***	***310***	***500***	***1,596***	***139***	

Rhonda Av SE / Unser Blvd

(4)

3.0% Truck

	0.85			0.85			0.84			0.84			PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	170	0	90	0	564	223	208	1,298	0	
2012 (NO BUILD - A.M.)	*0*	*0*	*0*	*170*	*0*	*90*	*0*	*662*	*261*	*244*	*1,524*	*0*	
2012 (BUILD - A.M.)	***0***	***0***	***0***	***170***	***0***	***90***	***0***	***963***	***261***	***244***	***1,625***	***0***	

	0.85			0.85			0.93			0.93			PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	620	0	270	0	1,514	215	82	1,120	0	
2012 (NO BUILD - P.M.)	*0*	*0*	*0*	*620*	*0*	*270*	*0*	*1,777*	*253*	*96*	*1,315*	*0*	
2012 (BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***1,961***	***253***	***96***	***1,682***	***0***	

19th Av / Driveway 'B'

(7)

3.0% Truck

	0.77			0.77			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	43	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - A.M.)	*0*	*43*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - A.M.)	***0***	***43***	***3***	***539***	***0***	***0***	***2***	***0***	***213***	***0***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	34	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - P.M.)	*0*	*34*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - P.M.)	***0***	***34***	***4***	***408***	***0***	***0***	***6***	***0***	***695***	***0***	***0***	***0***	

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av SE / Unser Blvd

INTERSECTION: E-W Street: **19th Av SE** (3)

N-S Street: **Unser Blvd**

Year of Existing Counts 2009

Implementation Year **2012**

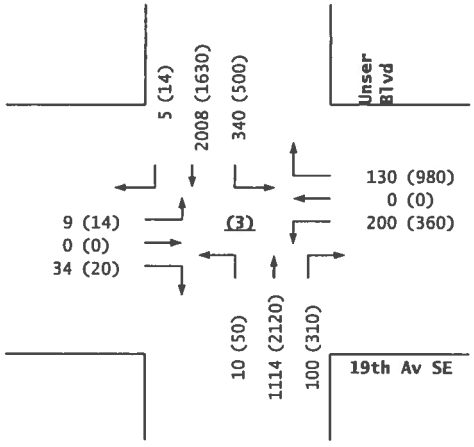
Growth Rates	0.00%			0.00%			4.30%			4.30%		
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
Background Traffic Growth	0	0	0	0	0	0	1	101	0	0	168	1
Subtotal	9	0	34	0	0	0	10	884	0	0	1,468	5
Cabezon Community	0	0	0	200	0	130	0	230	100	340	540	0
Subtotal (NO BUILD - A.M.)	***9***	***0***	***34***	***200***	***0***	***130***	***10***	***1,114***	***100***	***340***	***2,008***	***5***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.01%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*32.04%*
Percent Commercial Trips Generated(Exiting)	*32.04%*	*16.01%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.74%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*21.59%*
Percent Office Trips Generated(Exiting)	*21.59%*	*14.74%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	48	28	101	0	75	0	301	0	0	0	0	118
Subtotal AM Pk Hr. BUILD Volumes	**57**	**28**	**135**	**200**	**75**	**130**	**311**	**1,114**	**100**	**340**	**2,008**	**123**
Pass-by Trip Adjustments	*13*	*0*	*24*	*0*	*0*	*0*	*15*	*-15*	*0*	*0*	*-29*	*29*
Total AM Peak Hour BUILD Volumes	**70**	**28**	**159**	**200**	**75**	**130**	**326**	**1,099**	**100**	**340**	**1,979**	**152**

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12
Background Traffic Growth	0	0	0	0	0	0	6	170	0	0	142	2
Subtotal	14	0	20	0	0	0	50	1,490	0	0	1,240	14
Cabezon Community	0	0	0	360	0	980	0	630	310	500	390	0
Subtotal (NO BUILD - P.M.)	***14***	***0***	***20***	***360***	***0***	***980***	***50***	***2,120***	***310***	***500***	***1,630***	***14***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.01%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*32.04%*
Percent Commercial Trips Generated(Exiting)	*32.04%*	*16.01%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.74%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*21.59%*
Percent Office Trips Generated(Exiting)	*21.59%*	*14.74%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	154	94	367	0	51	0	184	0	0	0	0	91
Subtotal PM Pk Hr. BUILD Volumes	**168**	**94**	**387**	**360**	**51**	**980**	**234**	**2,120**	**310**	**500**	**1,630**	**105**
Pass-by Trip Adjustments	*48*	*0*	*33*	*0*	*0*	*0*	*48*	*-48*	*0*	*0*	*-34*	*34*
Total PM Peak Hour BUILD Volumes	**216**	**94**	**420**	**360**	**51**	**980**	**282**	**2,072**	**310**	**500**	**1,596**	**139**

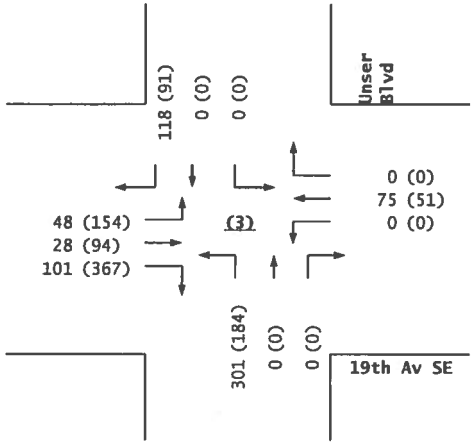
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
2009 PM Peak Hr. Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12

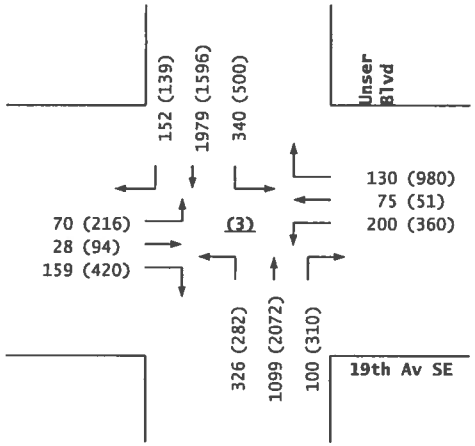
2012
NO BUILD



Trips



2012
BUILD



19th Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av SE / Unser Blvd

INTERSECTION: E-W Street: **Rhonda Av SE** (4)
N-S Street: **Unser Blvd**

Year of Existing Counts 2015
Implementation Year **2012**

	Growth Rates	0.00%			0.00%			4.30%			4.30%		
		Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	0	0	170	0	90	0	760	300	280	1,750	0
Background Traffic Growth		0	0	0	0	0	0	0	-98	-39	-36	-226	0
Subtotal (NO BUILD - A.M.)		***0***	***0***	***0***	***170***	***0***	***90***	***0***	***662***	***261***	***244***	***1,524***	***0***
Percent Commercial Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.76%*	*0.00%*
Percent Office Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*
Total Trips Generated		0	0	0	0	0	0	0	301	0	0	101	0
Total AM Peak Hour BUILD Volumes		**0**	**0**	**0**	**170**	**0**	**90**	**0**	**963**	**261**	**244**	**1,625**	**0**

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0
Background Traffic Growth	0	0	0	0	0	0	0	-263	-37	-14	-195	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***1,777***	***253***	***96***	***1,315***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.76%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	184	0	0	367	0
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**620**	**0**	**270**	**0**	**1,961**	**253**	**96**	**1,682**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	0	0	0	170	0	90	0	564	223	208	1,298	0
2009 PM Peak Hr. Volumes	0	0	0	620	0	270	0	1,514	215	82	1,120	0

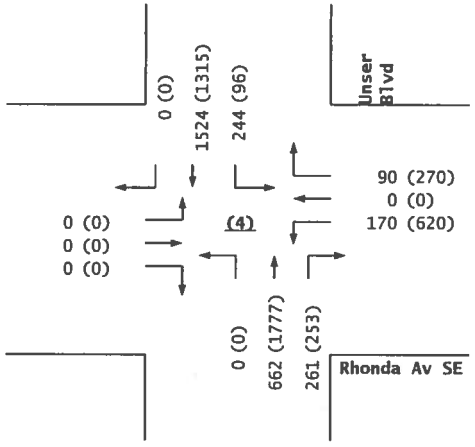
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Rhonda Av SE)***			***Westbound (Rhonda Av SE)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

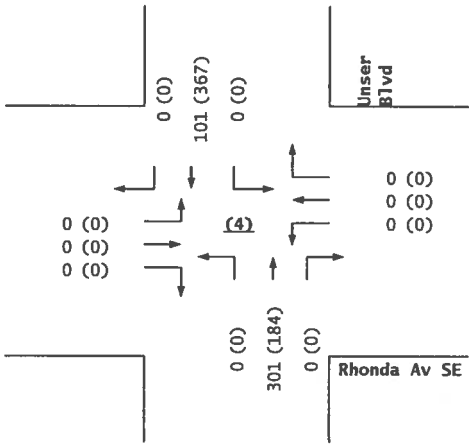
PM Pass-by Trips	***Eastbound (Rhonda Av SE)***			***Westbound (Rhonda Av SE)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

	Entering	*Exiting*	
Pass-by Trips	***44***	***37***	*AM*
	82	***81***	*PM*

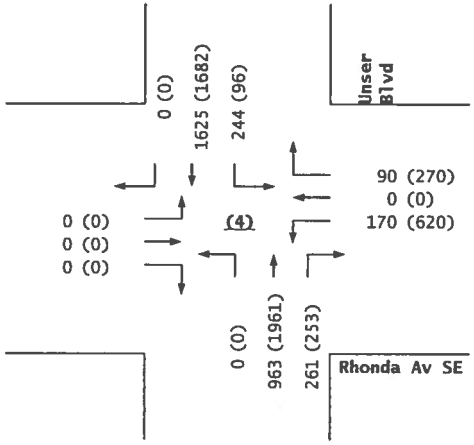
2012
NO BUILD



Trips



2012
BUILD



Rhonda Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av / Driveway 'B'

INTERSECTION: E-W Street: **19th Av** (7)

N-S Street: **Driveway 'B'**

Year of Existing Counts **2009**

Implementation Year **2012**

Growth Rates 0.00% 0.00% 0.00% 0.00%

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	43	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***43***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*97.81%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*97.81%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*99.65%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*99.65%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	3	495	0	0	2	0	176	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**43**	**3**	**495**	**0**	**0**	**2**	**0**	**176**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*44*	*0*	*0*	*0*	*0*	*37*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**43**	**3**	**539**	**0**	**0**	**2**	**0**	**213**	**0**	**0**	**0**

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	34	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***34***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*97.81%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*97.81%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*99.65%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*99.65%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	4	326	0	0	6	0	614	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**34**	**4**	**326**	**0**	**0**	**6**	**0**	**614**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*82*	*0*	*0*	*0*	*0*	*81*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**34**	**4**	**408**	**0**	**0**	**6**	**0**	**695**	**0**	**0**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
2009 AM Peak Hr. Volumes	0	43	0	0	0	0	0	0	0	0	0	0
2009 PM Peak Hr. Volumes	0	34	0	0	0	0	0	0	0	0	0	0

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2030) - 100% Development

Case 'Y' - with Rhonda Dr extension

INTERSECTION: **Summary**

Southern Blvd / Unser Blvd

(1)

3.0% Truck

	0.83			0.76			0.82			0.89		PHF
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	113	440	309	113	262	146	158	357	163	416	678	86
2030 (NO BUILD - A.M.)	*185*	*720*	*706*	*466*	*396*	*255*	*479*	*989*	*480*	*652*	*1,416*	*133*
2030 (BUILD - A.M.)	***185***	***720***	***743***	***508***	***396***	***255***	***493***	***1,001***	***496***	***652***	***1,448***	***133***

	0.77			0.87			0.87			0.77		PHF
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	111	308	195	195	660	446	406	742	149	355	539	98
2030 (NO BUILD - P.M.)	*201*	*557*	*553*	*462*	*692*	*481*	*1,177*	*1,868*	*637*	*624*	*1,301*	*164*
2030 (BUILD - P.M.)	***201***	***557***	***581***	***493***	***692***	***481***	***1,225***	***1,908***	***690***	***624***	***1,323***	***164***

Cabezon Blvd / Unser Blvd

(2)

3.0% Truck

	0.75			0.86			0.83			0.93		PHF
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	2	23	51	45	33	88	38	729	69	177	1,184	8
2030 (NO BUILD - A.M.)	*4*	*43*	*95*	*298*	*79*	*392*	*59*	*1,389*	*237*	*484*	*2,658*	*13*
2030 (BUILD - A.M.)	***4***	***43***	***95***	***306***	***79***	***392***	***59***	***1,432***	***242***	***484***	***2,769***	***13***

	0.82			0.87			0.94			0.88		PHF
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	6	17	61	26	273	44	1,257	59	167	857	1
2030 (NO BUILD - P.M.)	*0*	*56*	*158*	*271*	*26*	*583*	*57*	*2,939*	*356*	*678*	*2,259*	*2*
2030 (BUILD - P.M.)	***0***	***56***	***158***	***281***	***26***	***583***	***57***	***3,081***	***367***	***678***	***2,340***	***2***

19th Av SE / Unser Blvd

(3)

3.0% Truck

	0.77			0.85			0.84			0.92		PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	9	0	34	0	0	0	9	783	0	0	1,300	4
2030 (NO BUILD - A.M.)	*51*	*0*	*193*	*200*	*0*	*130*	*16*	*1,626*	*100*	*340*	*2,587*	*6*
2030 (BUILD - A.M.)	***85***	***21***	***203***	***219***	***56***	***130***	***46***	***1,639***	***107***	***340***	***2,616***	***94***

	0.85			0.85			0.93			0.93		PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	14	0	20	0	0	0	44	1,320	0	0	1,098	12
2030 (NO BUILD - P.M.)	*46*	*0*	*65*	*360*	*0*	*980*	*59*	*2,387*	*310*	*500*	*2,123*	*19*
2030 (BUILD - P.M.)	***158***	***71***	***101***	***373***	***38***	***980***	***77***	***2,428***	***335***	***500***	***2,146***	***88***

Rhonda Av SE / Unser Blvd

(4)

3.0% Truck

	0.85			0.85			0.84			0.84		PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	0	0	170	0	90	0	603	238	280	1,750	0
2030 (NO BUILD - A.M.)	*0*	*0*	*0*	*170*	*0*	*90*	*0*	*1,153*	*455*	*280*	*1,750*	*0*
2030 (BUILD - A.M.)	***31***	***0***	***115***	***170***	***0***	***90***	***286***	***1,168***	***455***	***280***	***1,731***	***77***

	0.85			0.85			0.93			0.93		PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2009)	0	0	0	620	0	270	0	2,040	290	110	1,510	0
2030 (NO BUILD - P.M.)	*0*	*0*	*0*	*620*	*0*	*270*	*0*	*2,040*	*290*	*110*	*1,510*	*0*
2030 (BUILD - P.M.)	***110***	***0***	***364***	***620***	***0***	***270***	***213***	***2,010***	***290***	***110***	***1,512***	***70***

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2030) - 100% Development

Case 'Y' - with Rhonda Dr extension

INTERSECTION: **Summary**

McMahon Blvd / Unser Blvd

(5)

3.0% Truck

	0.89			0.91			0.81			0.92			PHF
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	162	274	67	91	103	127	18	352	134	512	690	87	
2030 (NO BUILD - A.M.)	*441*	*696*	*170*	*177*	*200*	*347*	*43*	*1,356*	*322*	*742*	*1,346*	*174*	
2030 (BUILD - A.M.)	***460***	***696***	***170***	***177***	***200***	***369***	***43***	***1,616***	***322***	***756***	***1,422***	***186***	

	0.91			0.93			0.92			0.95			PHF
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	162	201	31	204	326	486	46	678	101	287	532	185	
2030 (NO BUILD - P.M.)	*638*	*730*	*113*	*257*	*410*	*752*	*89*	*2,044*	*196*	*583*	*2,043*	*384*	
2030 (BUILD - P.M.)	***662***	***730***	***113***	***257***	***410***	***782***	***89***	***2,173***	***196***	***618***	***2,345***	***413***	

Rhonda Av / Driveway 'A'

(6)

3.0% Truck

	0.85			0.85			0.85			0.85			PHF
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***363***	***0***	***0***	***0***	***147***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***282***	***0***	***0***	***0***	***473***	***0***	***0***	

19th Av / Driveway 'B'

(7)

3.0% Truck

	0.77			0.77			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	43	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - A.M.)	*0*	*43*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - A.M.)	***0***	***43***	***3***	***174***	***0***	***0***	***2***	***0***	***66***	***0***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	34	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - P.M.)	*0*	*34*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - P.M.)	***0***	***34***	***4***	***125***	***0***	***0***	***6***	***0***	***223***	***0***	***0***	***0***	

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Southern Blvd / Unser Blvd

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

Year of Existing Counts: 2009
Horizon Year: **2030**

Growth Rates

	3.03%			2.25%			5.76%			2.58%		
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	113	440	309	113	262	146	158	357	163	416	678	86
Background Traffic Growth	72	280	197	53	124	69	191	432	197	226	368	47
Subtotal	185	720	506	166	386	215	349	789	360	642	1,046	133
Cabezon Community	0	0	200	300	10	40	130	200	120	10	370	0
Subtotal (NO BUILD - A.M.)	***185***	***720***	***706***	***466***	***396***	***255***	***479***	***989***	***480***	***652***	***1,416***	***133***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*9.35%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.44%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.35%*	*7.44%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.06%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.04%*	*6.06%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	37	42	0	0	14	12	16	0	32	0
Total AM Peak Hour BUILD Volumes	**185**	**720**	**743**	**508**	**396**	**255**	**493**	**1,001**	**496**	**652**	**1,448**	**133**

	3.85%			0.16%			3.76%			3.20%		
	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	111	308	195	195	660	446	406	742	149	355	539	98
Background Traffic Growth	90	249	158	7	22	15	321	586	118	239	362	66
Subtotal	201	557	353	202	682	461	727	1,328	267	594	901	164
Cabezon Community	0	0	200	260	10	20	450	540	370	30	400	0
Subtotal (NO BUILD - P.M.)	***201***	***557***	***553***	***462***	***692***	***481***	***1,177***	***1,868***	***637***	***624***	***1,301***	***164***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*9.35%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.44%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.35%*	*7.44%*	*10.76%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*7.04%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.06%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*7.04%*	*6.06%*	*7.77%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	28	31	0	0	48	40	53	0	22	0
Total PM Peak Hour BUILD Volumes	**201**	**557**	**581**	**493**	**692**	**481**	**1,225**	**1,908**	**690**	**624**	**1,323**	**164**

	Entering	Exiting		
Number of Commercial Trips Generated	101	86	A.M.	100% Commercial Development
	190	189	P.M.	
Number of Office Trips Generated	397	92	A.M.	100% Office Development
	140	431	P.M.	

	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	113	440	309	113	262	146	158	357	163	416	678	86
2009 PM Peak Hr. Volumes	111	308	195	195	660	446	406	742	149	355	539	98

MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count

2009 AM Link Volume	862	521	678	1,180
2009 PM Link Volume	614	1,301	1,297	992

Based on MRCOG Model (2025 Data Set)

2004 AM Link Volume	985	431	705	813
2004 PM Link Volume	639	1338	1092	682
2030 AM Link Volume	1411	767	1498	1820
2030 PM Link Volume	1111	1345	2321	1659

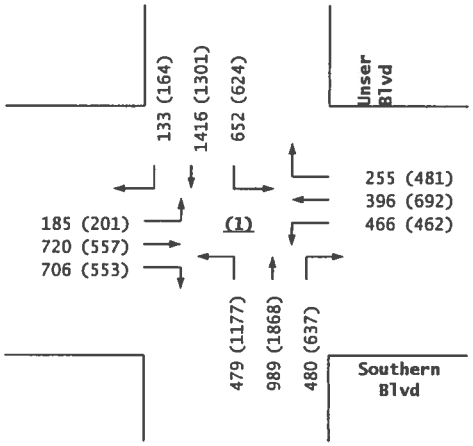
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts

2009-2030 AM Growth Rates	3.03%	2.25%	5.76%	2.58%
2009-2030 PM Growth Rates	3.85%	0.16%	3.76%	3.20%

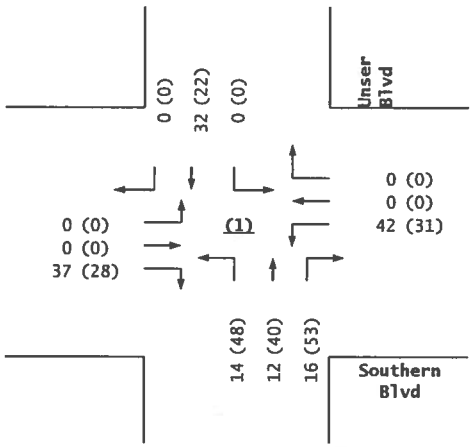
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts

2004-2030 AM Growth Rates	1.66%	3.00%	4.33%	4.76%
2004-2030 PM Growth Rates	2.84%	0.02%	4.33%	5.51%

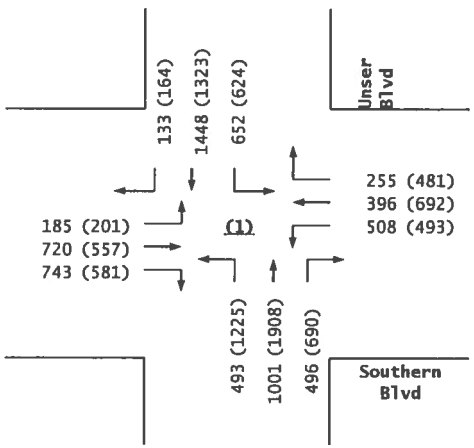
2030
NO BUILD



Trips



2030
BUILD



Southern Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Cabezon Blvd / Unser Blvd

INTERSECTION: E-W Street: **Cabezon Blvd** (2)
N-S Street: **Unser Blvd**

Year of Existing Counts 2009
Horizon Year **2030**

Growth Rates	4.07%			6.68%			2.61%			3.15%		
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	2	23	51	45	33	88	38	729	69	177	1,184	8
Background Traffic Growth	2	20	44	63	46	124	21	400	38	117	784	5
Subtotal	4	43	95	108	79	212	59	1,129	107	294	1,968	13
Cabezon Community	0	0	0	190	0	180	0	260	130	190	690	0
Subtotal (NO BUILD - A.M.)	***4***	***43***	***95***	***298***	***79***	***392***	***59***	***1,389***	***237***	***484***	***2,658***	***13***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	8	0	0	0	43	5	0	111	0
Total AM Peak Hour BUILD Volumes	**4**	**43**	**95**	**306**	**79**	**392**	**59**	**1,432**	**242**	**484**	**2,769**	**13**

	39.54%			0.00%			1.37%			4.01%		
	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	6	17	61	26	273	44	1,257	59	167	857	1
Background Traffic Growth	0	50	141	0	0	0	13	362	17	141	722	1
Subtotal	0	56	158	61	26	273	57	1,619	76	308	1,579	2
Cabezon Community	0	0	0	210	0	310	0	1,320	280	370	680	0
Subtotal (NO BUILD - P.M.)	***0***	***56***	***158***	***271***	***26***	***583***	***57***	***2,939***	***356***	***678***	***2,259***	***2***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*27.55%*	*4.49%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.87%*	*0.72%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	10	0	0	0	142	11	0	81	0
Total PM Peak Hour BUILD Volumes	**0**	**56**	**158**	**281**	**26**	**583**	**57**	**3,081**	**367**	**678**	**2,340**	**2**

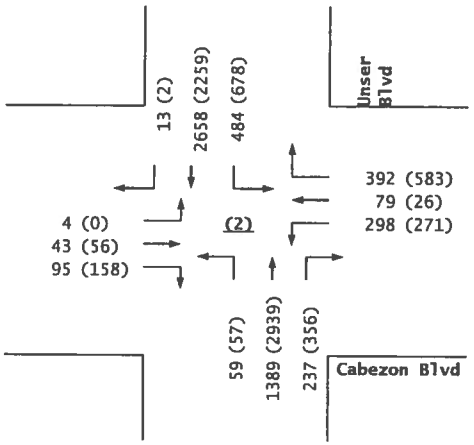
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	2	23	51	45	33	88	38	729	69	177	1,184	8
2009 PM Peak Hr. Volumes	0	6	17	61	26	273	44	1,257	59	167	857	1

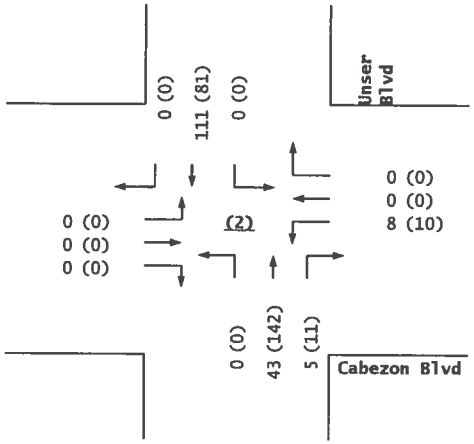
MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count				
2009 AM Link Volume	**76**	**166**	**836**	**1,369**
2009 PM Link Volume	**23**	**360**	**1,360**	**1,025**
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	**0**	**0**	**0**	**0**
2004 PM Link Volume	**0**	**0**	**0**	**0**
2030 AM Link Volume	**141**	**399**	**1295**	**2275**
2030 PM Link Volume	**214**	**323**	**1752**	**1889**
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2009-2030 AM Growth Rates	**4.07%**	**6.68%**	**2.61%**	**3.15%**
2009-2030 PM Growth Rates	**39.54%**	**-0.49%**	**1.37%**	**4.01%**
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2004-2030 PM Growth Rates	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

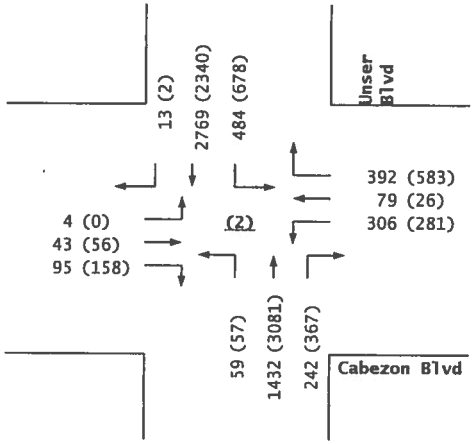
2030
NO BUILD



Trips



2030
BUILD



Cabezon Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av SE / Unser Blvd

INTERSECTION: E-W Street: **19th Av SE** (3)
N-S Street: **Unser Blvd**

Year of Existing Counts 2009
Horizon Year **2030**

Growth Rates	22.26%			0.00%			3.73%			2.74%		
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
Background Traffic Growth	42	0	159	0	0	0	7	613	0	0	747	2
Subtotal	51	0	193	0	0	0	16	1,396	0	0	2,047	6
Cabezon Community	0	0	0	200	0	130	0	230	100	340	540	0
Subtotal (NO BUILD - A.M.)	***51***	***0***	***193***	***200***	***0***	***130***	***16***	***1,626***	***100***	***340***	***2,587***	***6***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.00%*	*12.01%*	*0.00%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*8.01%*	*24.03%*
Percent Commercial Trips Generated(Exiting)	*22.42%*	*11.21%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.62%*	*4.80%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*3.68%*	*11.06%*	*0.00%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*16.19%*
Percent Office Trips Generated(Exiting)	*16.19%*	*11.60%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*3.68%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	34	21	10	19	56	0	30	13	7	0	29	88
Total AM Peak Hour BUILD Volumes	**85**	**21**	**203**	**219**	**56**	**130**	**46**	**1,639**	**107**	**340**	**2,616**	**94**

	10.78%			0.00%			1.58%			2.75%		
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12
Background Traffic Growth	32	0	45	0	0	0	15	437	0	0	635	7
Subtotal	46	0	65	0	0	0	59	1,757	0	0	1,733	19
Cabezon Community	0	0	0	360	0	980	0	630	310	500	390	0
Subtotal (NO BUILD - P.M.)	***46***	***0***	***65***	***360***	***0***	***980***	***59***	***2,387***	***310***	***500***	***2,123***	***19***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*4.00%*	*12.01%*	*0.00%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*8.01%*	*24.03%*
Percent Commercial Trips Generated(Exiting)	*22.42%*	*11.21%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*9.62%*	*4.80%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*3.68%*	*11.06%*	*0.00%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*16.19%*
Percent Office Trips Generated(Exiting)	*16.19%*	*11.60%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*5.40%*	*3.68%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	112	71	36	13	38	0	18	41	25	0	23	69
Total PM Peak Hour BUILD Volumes	**158**	**71**	**101**	**373**	**38**	**980**	**77**	**2,428**	**335**	**500**	**2,146**	**88**

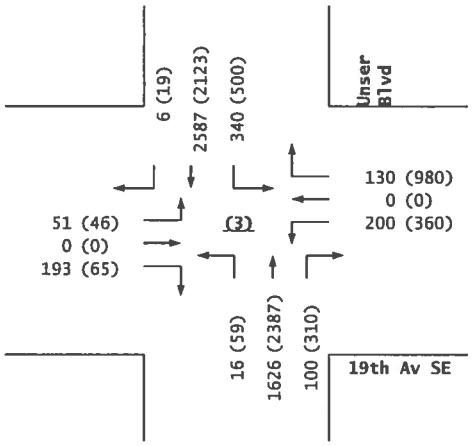
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
2009 PM Peak Hr. Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12

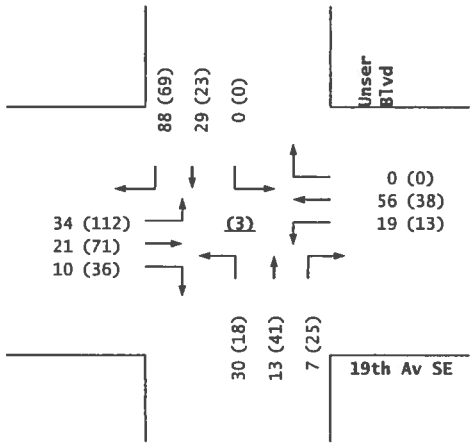
MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count				
2009 AM Link Volume	43	0	792	1,304
2009 PM Link Volume	34	0	1,364	1,110
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	43	0	738	874
2004 PM Link Volume	37	0	1141	1025
2030 AM Link Volume	244	336	1412	2053
2030 PM Link Volume	111	1099	1816	1752
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2009-2030 AM Growth Rates	22.26%	#DIV/0!	3.73%	2.74%
2009-2030 PM Growth Rates	10.78%	#DIV/0!	1.58%	2.75%
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	17.98%	#DIV/0!	3.51%	5.19%
2004-2030 PM Growth Rates	7.69%	#DIV/0!	2.28%	2.73%

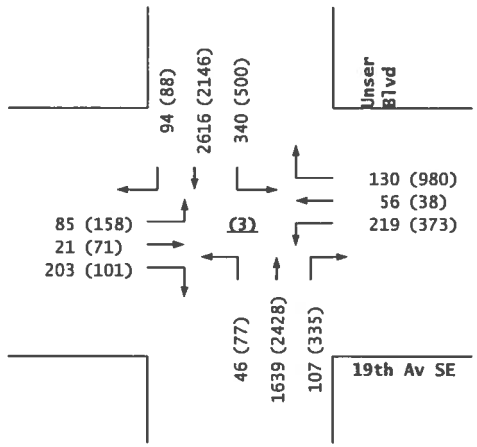
2030
NO BUILD



Trips



2030
BUILD



19th Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av SE / Unser Blvd

INTERSECTION: E-W Street: **Rhonda Av SE** (4)

N-S Street: **Unser Blvd**

Year of Existing Counts 2015

Horizon Year **2030**

Growth Rates	0.00%			0.00%			3.45%			0.00%		
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	170	0	90	0	760	300	280	1,750	0
Background Traffic Growth	0	0	0	0	0	0	0	393	155	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***170***	***0***	***90***	***0***	***1,153***	***455***	***280***	***1,750***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*44.78%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*12.01%*
Percent Commercial Trips Generated(Exiting)	*12.01%*	*0.00%*	*44.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*4.98%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.99%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*9.08%*
Percent Office Trips Generated(Exiting)	*9.08%*	*0.00%*	*56.99%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.33%*	*0.00%*
Total Trips Generated	18	0	91	0	0	0	271	30	0	0	10	48
Total AM Peak Hour BUILD Volumes	**31**	**0**	**115**	**170**	**0**	**90**	**286**	**1,168**	**455**	**280**	**1,731**	**77**

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***2,040***	***290***	***110***	***1,510***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*44.78%*	*4.98%*	*0.00%*	*0.00%*	*0.00%*	*12.01%*
Percent Commercial Trips Generated(Exiting)	*12.01%*	*0.00%*	*44.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*4.98%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.99%*	*6.33%*	*0.00%*	*0.00%*	*0.00%*	*9.08%*
Percent Office Trips Generated(Exiting)	*9.08%*	*0.00%*	*56.99%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.33%*	*0.00%*
Total Trips Generated	62	0	331	0	0	0	165	18	0	0	36	36
Total PM Peak Hour BUILD Volumes	**110**	**0**	**364**	**620**	**0**	**270**	**213**	**2,010**	**290**	**110**	**1,512**	**70**

	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	0	0	0	170	0	90	0	603	238	280	1,750	0
2009 PM Peak Hr. Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0

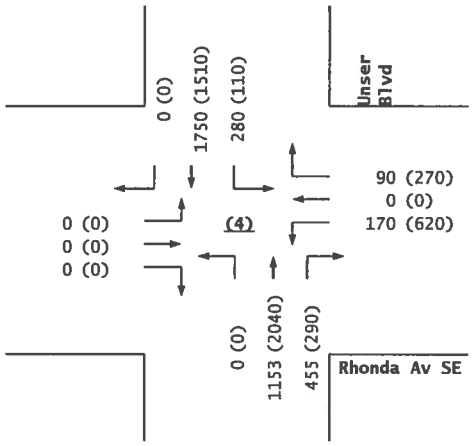
Pass-by Trip Calculations:

AM Pass-by Trips	*Eastbound (Rhonda Av SE)*			*Westbound (Rhonda Av SE)*			*Northbound (Unser Blvd)*			*Southbound (Unser Blvd)*		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*34.30%*	*-34.30%*	*0.00%*	*0.00%*	*-65.70%*	*65.70%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*15*	*-15*	*0*	*0*	*-29*	*29*
Percent Exiting	*34.30%*	*0.00%*	*65.70%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*13*	*0*	*24*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***13***	***0***	***24***	***0***	***0***	***0***	***15***	***-15***	***0***	***0***	***-29***	***29***

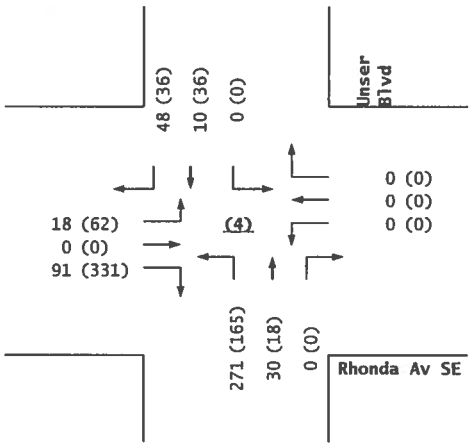
PM Pass-by Trips	*Eastbound (Rhonda Av SE)*			*Westbound (Rhonda Av SE)*			*Northbound (Unser Blvd)*			*Southbound (Unser Blvd)*		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*59.00%*	*-59.00%*	*0.00%*	*0.00%*	*-41.00%*	*41.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*48*	*-48*	*0*	*0*	*-34*	*34*
Percent Exiting	*59.00%*	*0.00%*	*41.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*48*	*0*	*33*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***48***	***0***	***33***	***0***	***0***	***0***	***48***	***-48***	***0***	***0***	***-34***	***34***

	Entering	*Exiting*	
Pass-by Trips	***44***	***37***	*AM*
	82	***81***	*PM*

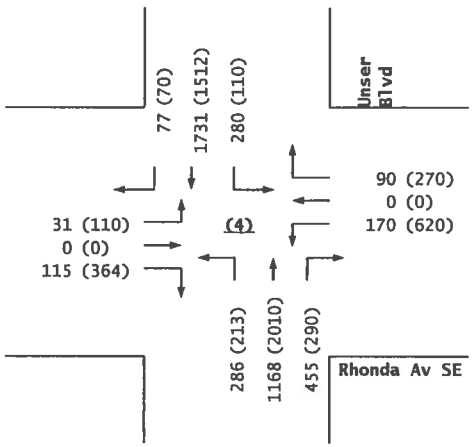
2030
NO BUILD



Trips



2030
BUILD



Rhonda Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

McMahon Blvd / Unser Blvd

INTERSECTION: E-W Street: **McMahon Blvd** (5)
N-S Street: **Unser Blvd**

Year of Existing Counts 2009
Horizon Year **2030**

Growth Rates	7.33%			4.49%			6.69%			1.49%		
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	162	274	67	91	103	127	18	352	134	512	690	87
Background Traffic Growth	249	422	103	86	97	120	25	494	188	160	216	27
Subtotal	411	696	170	177	200	247	43	846	322	672	906	114
Cabezon Community	30	0	0	0	0	100	0	510	0	70	440	60
Subtotal (NO BUILD - A.M.)	***441***	***696***	***170***	***177***	***200***	***347***	***43***	***1,356***	***322***	***742***	***1,346***	***174***
Percent Commercial Trips Generated(Entering)	*11.26%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.46%*	*0.00%*	*24.04%*	*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%*	*14.46%*	*24.04%*	*11.26%*
Percent Office Trips Generated(Entering)	*1.96%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*0.00%*	*59.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*59.56%*	*1.96%*
Total Trips Generated	19	0	0	0	0	22	0	260	0	14	76	12
Total AM Peak Hour BUILD Volumes	**460**	**696**	**170**	**177**	**200**	**369**	**43**	**1,616**	**322**	**756**	**1,422**	**186**

	12.53%			1.23%			4.47%			3.59%		
	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	162	201	31	204	326	486	46	678	101	287	532	185
Background Traffic Growth	426	529	82	53	84	126	43	636	95	216	401	139
Subtotal	588	730	113	257	410	612	89	1,314	196	503	933	324
Cabezon Community	50	0	0	0	0	140	0	730	0	80	1,110	60
Subtotal (NO BUILD - P.M.)	***638***	***730***	***113***	***257***	***410***	***752***	***89***	***2,044***	***196***	***583***	***2,043***	***384***
Percent Commercial Trips Generated(Entering)	*11.26%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.46%*	*0.00%*	*24.04%*	*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%*	*14.46%*	*24.04%*	*11.26%*
Percent Office Trips Generated(Entering)	*1.96%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*0.00%*	*59.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.80%*	*59.56%*	*1.96%*
Total Trips Generated	24	0	0	0	0	30	0	129	0	35	302	29
Total PM Peak Hour BUILD Volumes	**662**	**730**	**113**	**257**	**410**	**782**	**89**	**2,173**	**196**	**618**	**2,345**	**413**

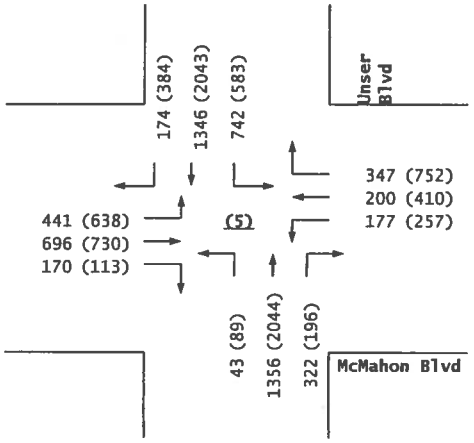
	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	162	274	67	91	103	127	18	352	134	512	690	87
2009 PM Peak Hr. Volumes	162	201	31	204	326	486	46	678	101	287	532	185

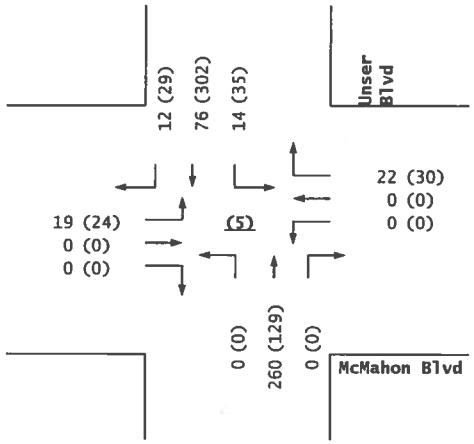
MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count				
2009 AM Link Volume	503	321	504	1,289
2009 PM Link Volume	394	1,016	825	1,004
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	225	0	658	915
2004 PM Link Volume	217	0	1085	1062
2030 AM Link Volume	1277	624	1212	1692
2030 PM Link Volume	1431	1279	1599	1761
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2009-2030 AM Growth Rates	7.33%	4.49%	6.69%	1.49%
2009-2030 PM Growth Rates	12.53%	1.23%	4.47%	3.59%
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	17.98%	#DIV/0!	3.24%	3.27%
2004-2030 PM Growth Rates	21.52%	#DIV/0!	1.82%	2.53%

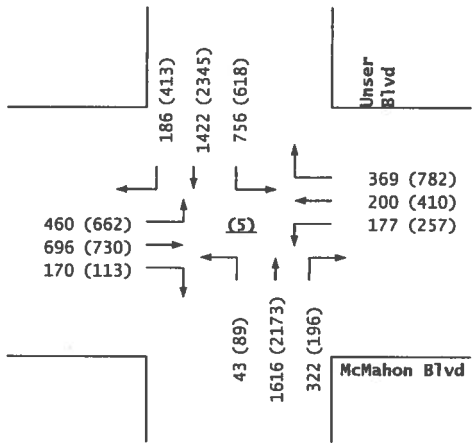
2030
NO BUILD



Trips



2030
BUILD



McMahon Blvd / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av / Driveway 'A'

INTERSECTION: E-W Street: **Rhonda Av** (6)

N-S Street: **Driveway 'A'**

Year of Existing Counts 2015

Horizon Year **2030**

Growth Rates

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.79%*	*0.00%*	*0.00%*	*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%*	*56.79%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	319	0	0	0	110	0	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**319**	**0**	**0**	**0**	**110**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*44*	*0*	*0*	*0*	*37*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**363**	**0**	**0**	**0**	**147**	**0**	**0**

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*56.79%*	*0.00%*	*0.00%*	*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%*	*56.79%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*66.07%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	200	0	0	0	392	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**200**	**0**	**0**	**0**	**392**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*82*	*0*	*0*	*0*	*81*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**0**	**0**	**282**	**0**	**0**	**0**	**473**	**0**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

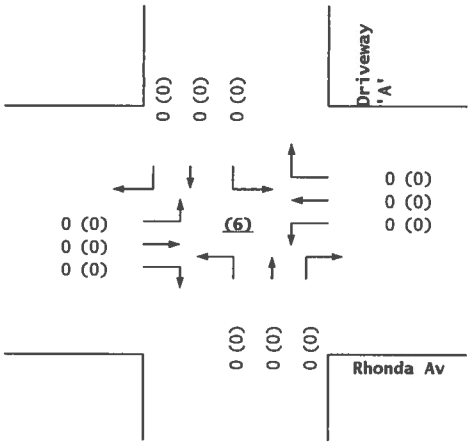
	Eastbound (Rhonda Av)			Westbound (Rhonda Av)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
2009 AM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0
2009 PM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0

Caution ! Year Should be equal to or greater than Year of Existing Counts above.

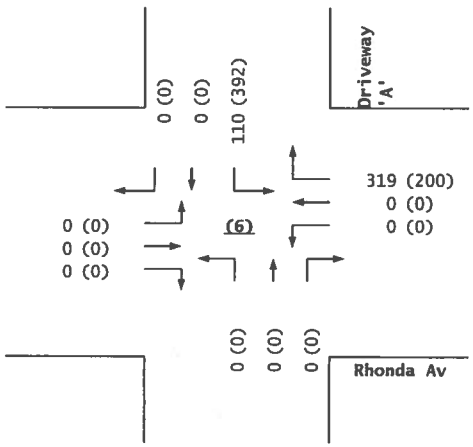
MRCOG Forecast Volumes Worksheet

Based on 2015 Traffic Count				
2015 AM Link Volume	**0**	**0**	**0**	**0**
2015 PM Link Volume	**0**	**0**	**0**	**0**
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	**370**	**327**	**1248**	**1049**
2004 PM Link Volume	**313**	**1024**	**1058**	**1246**
2030 AM Link Volume	**1468**	**848**	**1609**	**777**
2030 PM Link Volume	**923**	**1753**	**1389**	**1534**
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2015-2030 AM Growth Rates	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2015-2030 PM Growth Rates	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	11.41%	6.13%	1.11%	-1.00%
2004-2030 PM Growth Rates	7.50%	2.74%	1.20%	0.89%

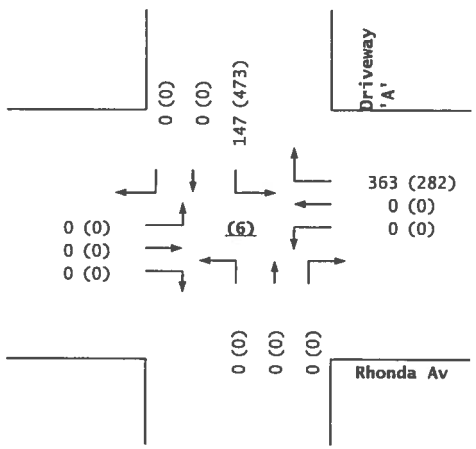
2030
NO BUILD



Trips



2030
BUILD



Rhonda Av / Driveway 'A'

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av / Driveway 'B'

INTERSECTION: E-W Street: **19th Av** (7)

N-S Street: **Driveway 'B'**

Year of Existing Counts **2009**

Horizon Year **2030**

Growth Rates **0.00%** **0.00%** **0.00%** **0.00%**

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	43	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***43***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	3	174	0	0	2	0	66	0	0	0
Total AM Peak Hour BUILD Volumes	**0**	**43**	**3**	**174**	**0**	**0**	**2**	**0**	**66**	**0**	**0**	**0**

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	34	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***34***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*2.19%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*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%*	*2.19%*	*0.00%*	*41.02%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.35%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.35%*	*0.00%*	*33.58%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	4	125	0	0	6	0	223	0	0	0
Total PM Peak Hour BUILD Volumes	**0**	**34**	**4**	**125**	**0**	**0**	**6**	**0**	**223**	**0**	**0**	**0**

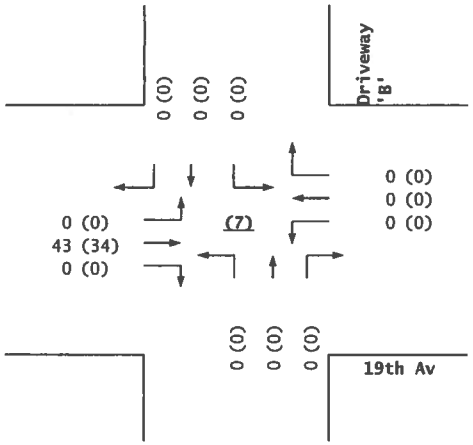
	Entering	Exiting		
Number of Commercial Trips Generated	101	86	A.M.	100% Commercial Development
	190	189	P.M.	
Number of Office Trips Generated	397	92	A.M.	100% Office Development
	140	431	P.M.	

	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
2009 AM Peak Hr. Volumes	0	43	0	0	0	0	0	0	0	0	0	0
2009 PM Peak Hr. Volumes	0	34	0	0	0	0	0	0	0	0	0	0

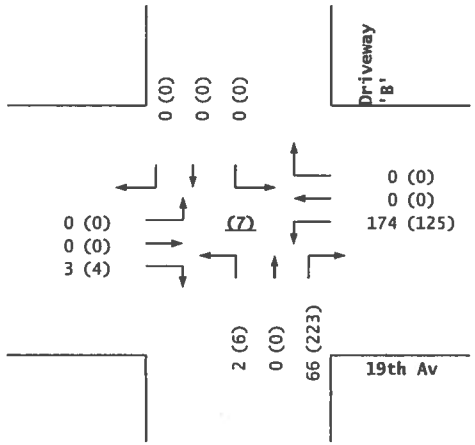
MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count				
2009 AM Link Volume	43	0	0	0
2009 PM Link Volume	34	0	0	0
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	370	327	1248	1049
2004 PM Link Volume	313	1024	1058	1246
2030 AM Link Volume	1468	848	1609	777
2030 PM Link Volume	923	1753	1389	1534
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2009-2030 AM Growth Rates	157.81%	#DIV/0!	#DIV/0!	#DIV/0!
2009-2030 PM Growth Rates	124.51%	#DIV/0!	#DIV/0!	#DIV/0!
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	11.41%	6.13%	1.11%	-1.00%
2004-2030 PM Growth Rates	7.50%	2.74%	1.20%	0.89%

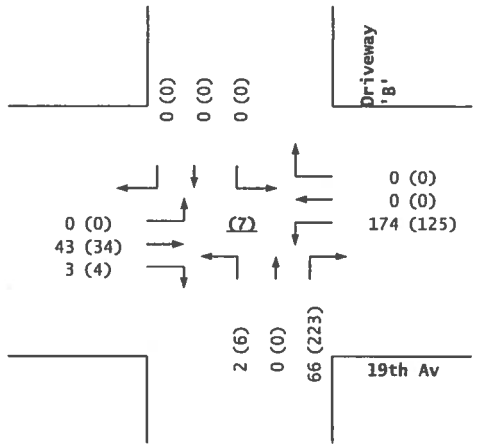
2030
NO BUILD



Trips



2030
BUILD



19th Av / Driveway 'B'

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2030) - 100% Development

Case 'N' - No Rhonda Av extension

INTERSECTION: Summary

19th Av SE / Unser Blvd

(3)

3.0% Truck	0.77			0.85			0.84			0.92			PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	9	0	34	0	0	0	9	783	0	0	1,300	4	
2030 (NO BUILD - A.M.)	*51*	*0*	*193*	*200*	*0*	*130*	*16*	*1,626*	*100*	*340*	*2,587*	*6*	
2030 (BUILD - A.M.)	***112***	***28***	***318***	***200***	***75***	***130***	***332***	***1,611***	***100***	***340***	***2,558***	***153***	

	0.85			0.85			0.93			0.93			PHF
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	14	0	20	0	0	0	44	1,320	0	0	1,098	12	
2030 (NO BUILD - P.M.)	*46*	*0*	*65*	*360*	*0*	*980*	*59*	*2,387*	*310*	*500*	*2,123*	*19*	
2030 (BUILD - P.M.)	***248***	***94***	***465***	***360***	***51***	***980***	***291***	***2,339***	***310***	***500***	***2,089***	***144***	

Rhonda Av SE / Unser Blvd

(4)

3.0% Truck	0.85			0.85			0.84			0.84			PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	170	0	90	0	603	238	280	1,750	0	
2030 (NO BUILD - A.M.)	*0*	*0*	*0*	*170*	*0*	*90*	*0*	*1,153*	*455*	*280*	*1,750*	*0*	
2030 (BUILD - A.M.)	***0***	***0***	***0***	***170***	***0***	***90***	***0***	***1,454***	***455***	***280***	***1,851***	***0***	

	0.85			0.85			0.93			0.93			PHF
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	0	0	620	0	270	0	2,040	290	110	1,510	0	
2030 (NO BUILD - P.M.)	*0*	*0*	*0*	*620*	*0*	*270*	*0*	*2,040*	*290*	*110*	*1,510*	*0*	
2030 (BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***2,224***	***290***	***110***	***1,877***	***0***	

19th Av / Driveway 'B'

(7)

3.0% Truck	0.77			0.77			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	43	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - A.M.)	*0*	*43*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - A.M.)	***0***	***43***	***3***	***539***	***0***	***0***	***2***	***0***	***213***	***0***	***0***	***0***	

	0.85			0.85			0.85			0.85			PHF
	Eastbound (19th Av)			Westbound (19th Av)			Northbound (Driveway 'B')			Southbound (Driveway 'B')			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2009)	0	34	0	0	0	0	0	0	0	0	0	0	
2030 (NO BUILD - P.M.)	*0*	*34*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2030 (BUILD - P.M.)	***0***	***34***	***4***	***408***	***0***	***0***	***6***	***0***	***695***	***0***	***0***	***0***	

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

19th Av SE / Unser Blvd

INTERSECTION: E-W Street: **19th Av SE** (3)

N-S Street: **Unser Blvd**

Year of Existing Counts **2009**

Horizon Year **2030**

Growth Rates	22.26%			0.00%			3.73%			2.74%		
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
Background Traffic Growth	42	0	159	0	0	0	7	613	0	0	747	2
Subtotal	51	0	193	0	0	0	16	1,396	0	0	2,047	6
Cabezon Community	0	0	0	200	0	130	0	230	100	340	540	0
Subtotal (NO BUILD - A.M.)	***51***	***0***	***193***	***200***	***0***	***130***	***16***	***1,626***	***100***	***340***	***2,587***	***6***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.01%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*32.04%*
Percent Commercial Trips Generated(Exiting)	*32.04%*	*16.01%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.74%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*21.59%*
Percent Office Trips Generated(Exiting)	*21.59%*	*14.74%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	48	28	101	0	75	0	301	0	0	0	0	118
Subtotal AM Pk Hr. BUILD Volumes	**99**	**28**	**294**	**200**	**75**	**130**	**317**	**1,626**	**100**	**340**	**2,587**	**124**
Pass-by Trip Adjustments	*13*	*0*	*24*	*0*	*0*	*0*	*15*	*-15*	*0*	*0*	*-29*	*29*
Total AM Peak Hour BUILD Volumes	**112**	**28**	**318**	**200**	**75**	**130**	**332**	**1,611**	**100**	**340**	**2,558**	**153**

	10.78%			0.00%			1.58%			2.75%		
	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12
Background Traffic Growth	32	0	45	0	0	0	15	437	0	0	635	7
Subtotal	46	0	65	0	0	0	59	1,757	0	0	1,733	19
Cabezon Community	0	0	0	360	0	980	0	630	310	500	390	0
Subtotal (NO BUILD - P.M.)	***46***	***0***	***65***	***360***	***0***	***980***	***59***	***2,387***	***310***	***500***	***2,123***	***19***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.01%*	*0.00%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*32.04%*
Percent Commercial Trips Generated(Exiting)	*32.04%*	*16.01%*	*49.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.74%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*21.59%*
Percent Office Trips Generated(Exiting)	*21.59%*	*14.74%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	154	94	367	0	51	0	184	0	0	0	0	91
Subtotal PM Pk Hr. BUILD Volumes	**200**	**94**	**432**	**360**	**51**	**980**	**243**	**2,387**	**310**	**500**	**2,123**	**110**
Pass-by Trip Adjustments	*48*	*0*	*33*	*0*	*0*	*0*	*48*	*-48*	*0*	*0*	*-34*	*34*
Total PM Peak Hour BUILD Volumes	**248**	**94**	**465**	**360**	**51**	**980**	**291**	**2,339**	**310**	**500**	**2,089**	**144**

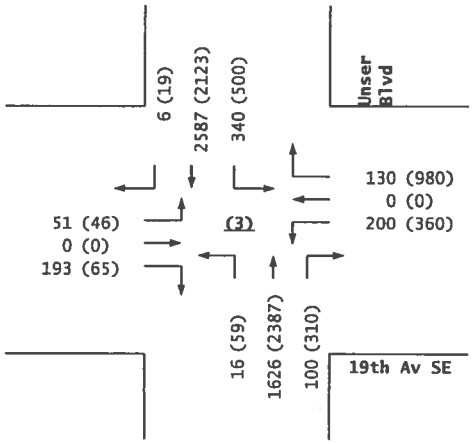
	Entering	Exiting		
Number of Commercial Trips Generated	101	86	A.M.	100% Commercial Development
	190	189	P.M.	
Number of Office Trips Generated	397	92	A.M.	100% Office Development
	140	431	P.M.	

	Eastbound (19th Av SE)			Westbound (19th Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	9	0	34	0	0	0	9	783	0	0	1,300	4
2009 PM Peak Hr. Volumes	14	0	20	0	0	0	44	1,320	0	0	1,098	12

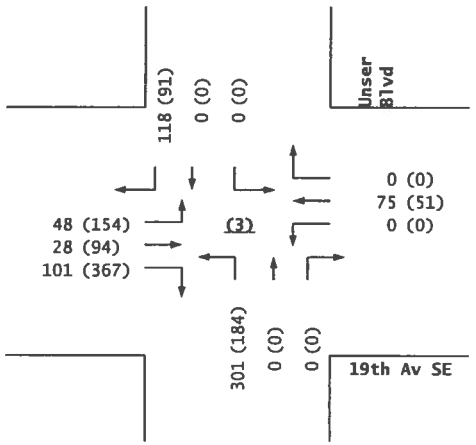
MRCOG Forecast Volumes Worksheet

Based on 2009 Traffic Count				
2009 AM Link Volume	43	0	792	1,304
2009 PM Link Volume	34	0	1,364	1,110
Based on MRCOG Model (2025 Data Set)				
2004 AM Link Volume	43	0	738	874
2004 PM Link Volume	37	0	1141	1025
2030 AM Link Volume	244	336	1412	2053
2030 PM Link Volume	111	1099	1816	1752
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2009-2030 AM Growth Rates	22.26%	#DIV/0!	3.73%	2.74%
2009-2030 PM Growth Rates	10.78%	#DIV/0!	1.58%	2.75%
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	17.98%	#DIV/0!	3.51%	5.19%
2004-2030 PM Growth Rates	7.69%	#DIV/0!	2.28%	2.73%

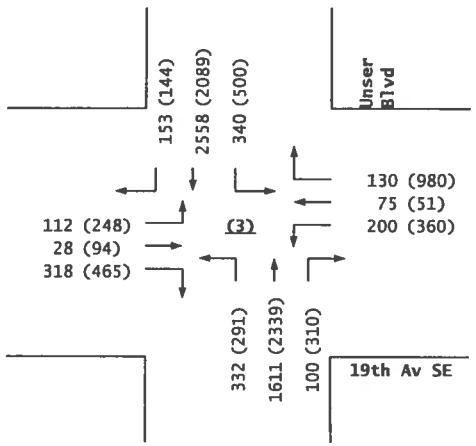
2030
NO BUILD



Trips



2030
BUILD



19th Av SE / Unser Blvd

X-Ray Associates (19th Ave / Unser Blvd)

Projected Turning Movements Worksheet

Rhonda Av SE / Unser Blvd

INTERSECTION: E-W Street: Rhonda Av SE (4)
N-S Street: Unser Blvd

Year of Existing Counts 2015
Horizon Year **2030**

Growth Rates	0.00%			0.00%			3.45%			0.00%		
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	170	0	90	0	760	300	280	1,750	0
Background Traffic Growth	0	0	0	0	0	0	0	393	155	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***170***	***0***	***90***	***0***	***1,153***	***455***	***280***	***1,750***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.78%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	301	0	0	101	0
Total AM Peak Hour BUILD Volumes	**0**	**0**	**0**	**170**	**0**	**90**	**0**	**1,454**	**455**	**280**	**1,851**	**0**

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***620***	***0***	***270***	***0***	***2,040***	***290***	***110***	***1,510***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.78%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*49.78%*	*0.00%*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*63.32%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	184	0	0	367	0
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**620**	**0**	**270**	**0**	**2,224**	**290**	**110**	**1,877**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**101**	**86**	A.M.	100% Commercial Development
	190	**189**	P.M.	
Number of Office Trips Generated	**397**	**92**	A.M.	100% Office Development
	140	**431**	P.M.	

	Eastbound (Rhonda Av SE)			Westbound (Rhonda Av SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2009 AM Peak Hr. Volumes	0	0	0	170	0	90	0	603	238	280	1,750	0
2009 PM Peak Hr. Volumes	0	0	0	620	0	270	0	2,040	290	110	1,510	0

Caution ! Year Should be equal to or greater than Year of Existing Counts above.

MRCOG Forecast Volumes Worksheet

Based on 2015 Traffic Count				
2015 AM Link Volume	**0**	**260**	**1,060**	**2,030**
2015 PM Link Volume	**0**	**890**	**2,330**	**1,620**
Based on MRCOG Model (2025 Data Set)				
2005 AM Link Volume	**370**	**327**	**1248**	**1049**
2005 PM Link Volume	**313**	**1024**	**1058**	**1246**
2025 AM Link Volume	**1468**	**848**	**1609**	**777**
2025 PM Link Volume	**923**	**1753**	**1389**	**1534**
Growth Rate to Apply to Existing Counts to Match 2025 Forecasts				
2006-2025 AM Growth Rates	#DIV/0!	22.62%	5.18%	-6.17%
2006-2025 PM Growth Rates	#DIV/0!	9.70%	-4.04%	-0.53%
Growth Rate to Apply to 2005 Model Volumes to Match 2025 Forecasts				
2006-2025 AM Growth Rates	14.84%	7.97%	1.45%	-1.30%
2006-2025 PM Growth Rates	9.74%	3.56%	1.56%	1.16%

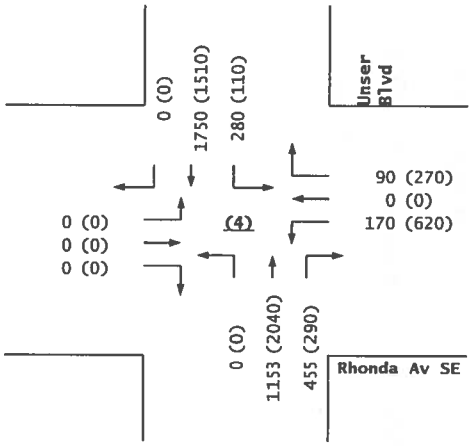
Pass-by Trip Calculations:

AM Pass-by Trips	*Eastbound (Rhonda Av SE)*			*Westbound (Rhonda Av SE)*			*Northbound (Unser Blvd)*			*Southbound (Unser Blvd)*		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

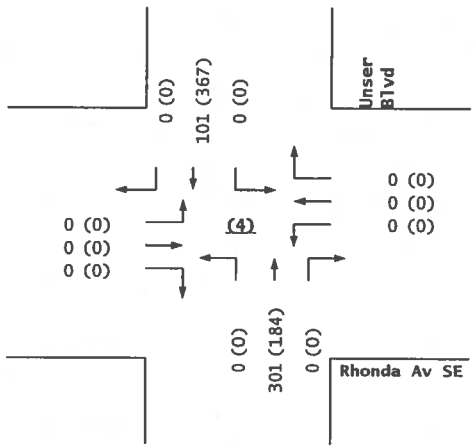
PM Pass-by Trips	*Eastbound (Rhonda Av SE)*			*Westbound (Rhonda Av SE)*			*Northbound (Unser Blvd)*			*Southbound (Unser Blvd)*		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

	Entering	Exiting	
Pass-by Trips	***44***	***37***	*AM*
	82	***81***	*PM*

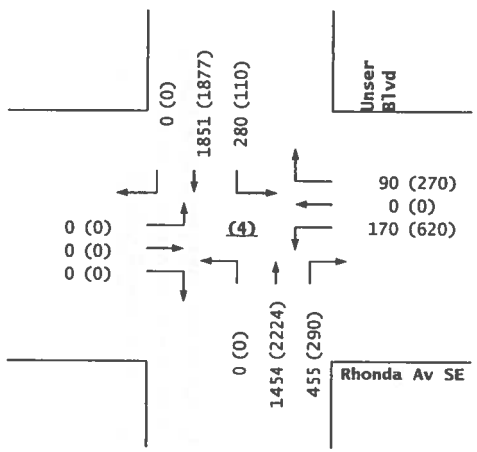
2030
NO BUILD



Trips



2030
BUILD



Rhonda Av SE / Unser Blvd

Timings
1: Southern Blvd & Unser Blvd

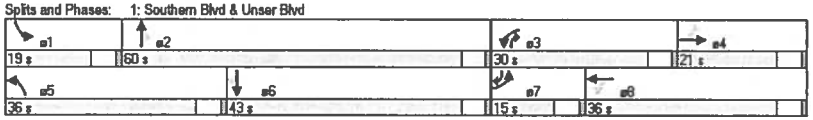
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	375	465	486	670	466	973	1449	597	390	969	99
Turn Type	pm+pt		Free	pm+pt		Free	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4		Free	8		Free			2			6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	15.0	21.0	0.0	30.0	36.0	0.0	36.0	60.0	30.0	19.0	43.0	15.0
Total Split (%)	11.5%	16.2%	0.0%	23.1%	27.7%	0.0%	27.7%	46.2%	23.1%	14.6%	33.1%	11.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	30.0	18.0	130.0	48.0	33.0	130.0	33.0	57.0	87.0	16.0	40.0	55.0
Actuated g/C Ratio	0.23	0.14	1.00	0.37	0.25	1.00	0.25	0.44	0.67	0.12	0.31	0.42
v/c Ratio	0.80	1.00	0.39	1.33	0.87	0.34	1.30	1.08	0.65	1.21	1.17	0.19
Control Delay	59.2	97.4	0.7	196.7	57.7	0.6	176.5	58.1	6.8	162.5	125.8	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	97.4	0.7	196.7	57.7	0.6	176.5	58.1	6.8	162.5	125.8	22.6
LOS	E	F	A	F	E	A	F	E	A	F	F	C
Approach Delay		46.0			83.0			86.1			128.6	
Approach LOS		D			F			F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 22 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.33
Intersection Signal Delay: 88.9 — Intersection LOS: F
Intersection Capacity Utilization 105.2% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Southern Blvd & Unser Blvd



HCM Signalized Intersection Capacity Analysis
1: Southern Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	375	465	486	670	466	973	1449	597	390	969	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.22	1.00	1.00	0.19	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	410	3505	1568	351	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.87	0.87	0.87	0.87	0.87	0.87	0.77	0.77	0.77
Adj. Flow (vph)	175	487	604	559	770	536	1118	1666	686	506	1258	129
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	2	0	0	6
Lane Group Flow (vph)	175	487	604	559	770	536	1118	1666	684	506	1258	123
Turn Type	pm+pt		Free	pm+pt		Free	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4		Free	8		Free			2			6
Actuated Green, G (s)	26.0	16.0	130.0	46.0	31.0	130.0	31.0	55.0	80.0	14.0	38.0	48.0
Effective Green, g (s)	30.0	18.0	130.0	48.0	33.0	130.0	33.0	57.0	84.0	16.0	40.0	52.0
Actuated g/C Ratio	0.23	0.14	1.00	0.37	0.25	1.00	0.25	0.44	0.65	0.12	0.31	0.40
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)	218	485	1568	421	890	1568	863	1537	1049	418	1078	663
v/s Ratio Prot	0.07	0.14		c0.28	0.22		c0.33	0.48	0.14	0.15	c0.36	0.02
v/s Ratio Perm	0.11		0.39	c0.21		0.34			0.30			0.06
v/c Ratio	0.80	1.00	0.39	1.33	0.87	0.34	1.30	1.08	0.85	1.21	1.17	0.19
Uniform Delay, d1	43.2	56.0	0.0	38.4	46.4	0.0	48.5	36.5	14.1	57.0	45.0	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.11	0.46	0.50	1.00	1.00	1.00
Incremental Delay, d2	18.8	41.9	0.7	163.2	8.8	0.6	133.8	39.1	0.1	115.1	85.4	0.1
Delay (s)	62.1	97.9	0.7	201.5	55.2	0.6	187.8	55.8	7.1	172.1	130.4	25.4
Level of Service	E	F	A	F	E	A	F	E	A	F	F	C
Approach Delay (s)		46.6			83.4			88.7			134.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	91.4	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.26				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	105.2%	ICU Level of Service		G	
Analysis Period (min)	15				

c Critical Lane Group

Timings
1: Southern Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	375	465	486	670	466	973	1449	597	390	969	99
Turn Type	pm+pt		Free	Prot		Free	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4		Free			Free			2			6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	12.0	21.0	0.0	22.0	31.0	0.0	41.0	65.0	22.0	22.0	46.0	12.0
Total Split (%)	9.2%	16.2%	0.0%	16.9%	23.8%	0.0%	31.5%	50.0%	16.9%	16.9%	35.4%	9.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	Min	Min	Min	Min	Min
Act Effct Green (s)	27.0	18.0	130.0	19.0	28.0	130.0	38.0	62.0	84.0	19.0	43.0	55.0
Actuated g/C Ratio	0.21	0.14	1.00	0.15	0.22	1.00	0.29	0.48	0.65	0.15	0.33	0.42
v/c Ratio	0.98	1.00	0.39	1.12	1.02	0.34	1.12	1.00	0.68	1.02	1.09	0.19
Control Delay	103.1	97.4	0.7	129.0	87.9	0.6	111.6	55.2	18.4	99.4	94.0	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.1	97.4	0.7	129.0	87.9	0.6	111.6	55.2	18.4	99.4	94.0	23.4
LOS	F	F	A	F	F	A	F	E	B	F	F	C
Approach Delay		52.1			75.1			66.1			90.7	
Approach LOS		D			E			E			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 71.5		Intersection LOS: E	
Intersection Capacity Utilization 93.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Southern Blvd & Unser Blvd

HCM Signalized Intersection Capacity Analysis
1: Southern Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	375	465	486	670	466	973	1449	597	390	969	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.22	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	410	3505	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.87	0.87	0.87	0.87	0.87	0.87	0.77	0.77	0.77
Adj. Flow (vph)	175	487	604	559	770	536	1118	1666	686	506	1258	129
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	3	0	0	4
Lane Group Flow (vph)	175	487	604	559	770	536	1118	1666	683	506	1258	125
Turn Type	pm+pt		Free	Prot		Free	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4		Free			Free			2			6
Actuated Green, G (s)	23.0	16.0	130.0	17.0	26.0	130.0	36.0	60.0	77.0	17.0	41.0	48.0
Effective Green, g (s)	27.0	18.0	130.0	19.0	28.0	130.0	38.0	62.0	81.0	19.0	43.0	52.0
Actuated g/C Ratio	0.21	0.14	1.00	0.15	0.22	1.00	0.29	0.48	0.62	0.15	0.33	0.40
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)	178	485	1568	497	755	1568	994	1672	1013	497	1159	663
v/s Ratio Prot	0.07	0.14		c0.16	c0.22		c0.33	0.48	0.10	0.15	c0.36	0.01
v/s Ratio Perm	0.14		0.39			0.34			0.34			0.07
v/c Ratio	0.98	1.00	0.39	1.12	1.02	0.34	1.12	1.00	0.67	1.02	1.09	0.19
Uniform Delay, d1	48.8	56.0	0.0	55.5	51.0	0.0	46.0	33.9	15.9	55.5	43.5	25.3
Progression 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
Incremental Delay, d2	62.1	41.9	0.7	79.3	37.8	0.6	69.4	21.0	1.8	45.0	52.8	0.1
Delay (s)	110.9	97.9	0.7	134.8	88.8	0.6	115.4	54.9	17.7	100.5	96.3	25.5
Level of Service	F	F	A	F	F	A	F	D	B	F	F	C
Approach Delay (s)		53.3			77.2			67.0			92.6	
Approach LOS		D			E			E			F	

Intersection Summary					
HCM Average Control Delay		72.9	HCM Level of Service		E
HCM Volume to Capacity ratio		1.09			
Actuated Cycle Length (s)		130.0	Sum of lost time (s)		9.0
Intersection Capacity Utilization		93.9%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

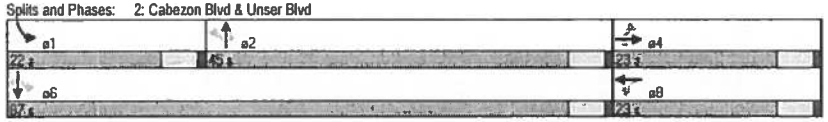
Timings
2: Cabezon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	2	23	51	235	33	44	1114	211	397	2076	9
Turn Type	Perm		Perm	Perm		Perm		Perm	pm+pt		Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	45.0	45.0	45.0	22.0	67.0	67.0
Total Split (%)	25.6%	25.6%	25.6%	25.6%	25.6%	50.0%	50.0%	50.0%	24.4%	74.4%	74.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	19.9	19.9	19.9	19.9	19.9	41.9	41.9	41.9	64.1	64.1	64.1
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.47	0.47	0.47	0.71	0.71	0.71
v/c Ratio	0.04	0.08	0.19	0.91	0.59	0.65	0.82	0.29	0.94	0.89	0.01
Control Delay	29.0	28.4	24.8	68.9	9.9	33.9	7.3	0.6	50.4	13.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	28.4	24.8	68.9	9.9	33.9	7.3	0.6	50.4	13.4	2.2
LOS	C	C	C	E	A	C	A	A	D	B	A
Approach Delay		26.0			35.8		7.1			19.2	
Approach LOS		C			D		A			B	

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 50 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 91.2% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Cabezon Blvd & Unser Blvd



HCM Signalized Intersection Capacity Analysis
2: Cabezon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	23	51	235	33	268	44	1114	211	397	2076	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1598		1752	3505	1568	1752	3505	1568
Flt Permitted	0.20	1.00	1.00	0.74	1.00		0.10	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	371	1845	1568	1359	1598		176	3505	1568	164	3505	1568
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	3	31	68	273	38	312	53	1342	254	427	2232	10
RTOR Reduction (vph)	0	0	12	0	243	0	0	0	136	0	0	3
Lane Group Flow (vph)	3	31	56	273	107	0	53	1342	118	427	2232	7
Turn Type	Perm		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	17.9	17.9	17.9	17.9	17.9		39.9	39.9	39.9	62.1	62.1	62.1
Effective Green, g (s)	19.9	19.9	19.9	19.9	19.9		41.9	41.9	41.9	64.1	64.1	64.1
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.47	0.47	0.47	0.71	0.71	0.71
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)	82	408	347	300	353		82	1632	730	456	2496	1117
v/s Ratio Prot		0.02			0.07			0.38		c0.20	0.64	
v/s Ratio Perm	0.01		0.04	c0.20			0.30		0.08	c0.47		0.00
v/c Ratio	0.04	0.08	0.16	0.91	0.30		0.65	0.82	0.16	0.94	0.89	0.01
Uniform Delay, d1	27.5	27.8	28.3	34.2	29.3		18.4	20.8	13.9	26.7	10.3	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.18	0.19	0.00	1.24	0.90	1.09
Incremental Delay, d2	0.2	0.1	0.2	29.9	0.5		23.5	3.3	0.3	18.0	3.2	0.0
Delay (s)	27.7	27.8	28.5	64.1	29.7		26.8	7.1	0.3	51.0	12.5	4.1
Level of Service	C	C	C	E	C		C	A	A	D	B	A
Approach Delay (s)		28.3			44.8			6.7			18.6	
Approach LOS		C			D			A			B	

Intersection Summary

HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Cabezon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	2	23	51	243	33	44	1157	216	397	2187	9
Turn Type	Perm		Perm	Perm		Perm		Perm	pm+pt		Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	21.0	21.0	21.0	21.0	21.0	41.0	41.0	41.0	18.0	59.0	59.0
Total Split (%)	26.3%	26.3%	26.3%	26.3%	26.3%	51.3%	51.3%	51.3%	22.5%	73.8%	73.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0	38.0	38.0	38.0	56.0	56.0	56.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.48	0.48	0.48	0.70	0.70	0.70
v/c Ratio	0.03	0.07	0.19	0.92	0.59	0.58	0.84	0.30	1.01	0.96	0.01
Control Delay	25.5	25.1	23.4	68.7	9.9	45.4	24.1	2.7	71.4	23.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	25.1	23.4	68.7	9.9	45.4	24.1	2.7	71.4	23.0	2.1
LOS	C	C	C	E	A	D	C	A	E	C	A
Approach Delay		24.0			36.2		21.5			30.3	
Approach LOS		C			D		C			C	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 94.8% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Cabezon Blvd & Unser Blvd

HCM Signalized Intersection Capacity Analysis
2: Cabezon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	23	51	243	33	268	44	1157	216	397	2187	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1598		1752	3505	1568	1752	3505	1568
Flt Permitted	0.22	1.00	1.00	0.74	1.00		0.11	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	410	1845	1568	1359	1598		194	3505	1568	180	3505	1568
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	3	31	68	283	38	312	53	1394	260	427	2352	10
RTOR Reduction (vph)	0	0	9	0	236	0	0	0	137	0	0	3
Lane Group Flow (vph)	3	31	59	283	114	0	53	1394	124	427	2352	7
Turn Type	Perm		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	16.0	16.0	16.0	16.0	16.0		36.0	36.0	36.0	54.0	54.0	54.0
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		38.0	38.0	38.0	56.0	56.0	56.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.48	0.48	0.48	0.70	0.70	0.70
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)	92	415	353	306	360		92	1665	745	421	2454	1098
v/s Ratio Prot		0.02			0.07			0.40		c0.19	0.67	
v/s Ratio Perm	0.01		0.04	c0.21			0.27		0.08	c0.52		0.00
v/c Ratio	0.03	0.07	0.17	0.92	0.32		0.58	0.84	0.17	1.01	0.96	0.01
Uniform Delay, d1	24.2	24.4	25.0	30.3	25.9		15.2	18.3	12.0	24.3	10.9	3.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	0.2	32.3	0.5		8.5	3.8	0.1	47.5	10.1	0.0
Delay (s)	24.3	24.5	25.2	62.6	26.4		23.6	22.2	12.1	71.8	21.0	3.6
Level of Service	C	C	C	E	C		C	C	B	E	C	A
Approach Delay (s)		25.0			42.6			20.7			28.7	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	2	23	51	243	33	44	1157	216	397	2187	9
Turn Type	Perm		Perm	pm+pt		Perm		pm+ov	Prot		Perm
Protected Phases		4		3	8		2	3	1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	3	8	2	2	3	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	21.0	21.0	21.0	10.0	31.0	52.0	52.0	10.0	17.0	69.0	69.0
Total Split (%)	21.0%	21.0%	21.0%	10.0%	31.0%	52.0%	52.0%	10.0%	17.0%	69.0%	69.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	None	Min	Min	Min	None	Min	Min	Min
Act Effct Green (s)	10.6	10.6	10.6	20.6	20.6	49.1	49.1	59.1	14.0	66.1	66.1
Actuated g/C Ratio	0.11	0.11	0.11	0.22	0.22	0.53	0.53	0.64	0.15	0.71	0.71
v/c Ratio	0.04	0.15	0.35	0.98	0.65	0.67	0.75	0.24	0.83	0.94	0.01
Control Delay	37.0	38.0	33.2	85.3	16.5	62.6	20.7	1.6	53.9	21.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	38.0	33.2	85.3	16.5	62.6	20.7	1.6	53.9	21.9	2.8
LOS	D	D	C	F	B	E	C	A	D	C	A
Approach Delay		34.8			47.3		19.1			26.7	
Approach LOS		C			D		B			C	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 92.7			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 94.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: Cabezon Blvd & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	23	51	243	33	268	44	1157	216	397	2187	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1598		1752	3505	1568	3400	3505	1568
Flt Permitted	0.38	1.00	1.00	0.57	1.00		0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	696	1845	1568	1060	1598		160	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	3	31	68	283	38	312	53	1394	260	427	2352	10
RTOR Reduction (vph)	0	0	18	0	187	0	0	0	103	0	0	3
Lane Group Flow (vph)	3	31	50	283	163	0	53	1394	157	427	2352	7
Turn Type	Perm		Perm	pm+pt			Perm		pm+ov	Prot		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4		4	8			2		2			6
Actuated Green, G (s)	8.6	8.6	8.6	18.6	18.6		47.1	47.1	52.1	12.0	64.1	64.1
Effective Green, g (s)	10.6	10.6	10.6	20.6	20.6		49.1	49.1	56.1	14.0	66.1	66.1
Actuated g/C Ratio	0.11	0.11	0.11	0.22	0.22		0.53	0.53	0.61	0.15	0.71	0.71
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)	80	211	179	288	355		79	1856	1000	513	2499	1118
v/s Ratio Prot		0.02		c0.07	0.10			0.40	0.01	0.13	c0.67	
v/s Ratio Perm	0.00		0.03	c0.14			0.35		0.09			0.00
v/c Ratio	0.04	0.15	0.28	0.98	0.46		0.67	0.75	0.16	0.83	0.94	0.01
Uniform Delay, d1	36.5	37.0	37.6	35.4	31.2		15.9	17.0	8.0	38.2	11.6	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.9	48.0	0.9		20.1	1.8	0.1	11.1	8.0	0.0
Delay (s)	36.7	37.3	38.4	83.4	32.2		36.0	18.8	8.1	49.3	19.6	3.8
Level of Service	D	D	D	F	C		D	B	A	D	B	A
Approach Delay (s)		38.0			55.1			17.7			24.1	
Approach LOS		D			E			B			C	

Intersection Summary					
HCM Average Control Delay		26.0	HCM Level of Service		C
HCM Volume to Capacity ratio		0.95			
Actuated Cycle Length (s)		92.7	Sum of lost time (s)		6.0
Intersection Capacity Utilization		94.8%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	1	6	17	271	26	52	2792	349	566	1684	1
Turn Type	Perm		Perm	Perm		Perm		Perm	pm+pt		Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	29.0	29.0	29.0	29.0	29.0	74.0	74.0	74.0	27.0	101.0	101.0
Total Split (%)	22.3%	22.3%	22.3%	22.3%	22.3%	56.9%	56.9%	56.9%	20.8%	77.7%	77.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	26.0	26.0	26.0	26.0	26.0	71.0	71.0	71.0	98.0	98.0	98.0
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.55	0.55	0.55	0.75	0.75	0.75
v/c Ratio	0.02	0.02	0.06	1.12	1.33	0.57	1.55	0.40	1.69	0.72	0.00
Control Delay	43.0	42.2	16.5	136.9	186.3	14.2	267.2	3.3	351.9	3.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	42.2	16.5	136.9	186.3	14.2	267.2	3.3	351.9	3.6	1.0
LOS	D	D	B	F	F	B	F	A	F	A	A
Approach Delay		23.6			171.1		234.3			91.1	
Approach LOS		C			F		F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 91 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.69
Intersection Signal Delay: 171.9 Intersection LOS: F
Intersection Capacity Utilization 156.0% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 2: Cabezon Blvd & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	17	271	26	583	52	2792	349	566	1684	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1580		1752	3505	1568	1752	3505	1568
Flt Permitted	0.15	1.00	1.00	0.75	1.00		0.10	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	284	1845	1568	1389	1580		178	3505	1568	100	3505	1568
Peak-hour factor, PHF	0.82	0.82	0.82	0.87	0.87	0.87	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	1	7	21	311	30	670	55	2970	371	643	1914	1
RTOR Reduction (vph)	0	0	17	0	211	0	0	0	72	0	0	0
Lane Group Flow (vph)	1	7	4	311	489	0	55	2970	299	643	1914	1
Turn Type	Perm		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	24.0	24.0	24.0	24.0	24.0		69.0	69.0	69.0	96.0	96.0	96.0
Effective Green, g (s)	26.0	26.0	26.0	26.0	26.0		71.0	71.0	71.0	98.0	98.0	98.0
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.55	0.55	0.55	0.75	0.75	0.75
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)	57	369	314	278	316		97	1914	856	380	2642	1182
v/s Ratio Prot		0.00			c0.31			0.85		c0.31	0.55	
v/s Ratio Perm	0.00		0.00	0.22			0.31		0.19	c0.97		0.00
v/c Ratio	0.02	0.02	0.01	1.12	1.55		0.57	1.55	0.35	1.69	0.72	0.00
Uniform Delay, d1	41.7	41.8	41.7	52.0	52.0		19.4	29.5	16.5	46.1	8.7	3.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.44	0.40	0.35	1.46	0.31	0.30
Incremental Delay, d2	0.1	0.0	0.0	89.7	261.3		2.2	248.5	0.1	316.6	0.8	0.0
Delay (s)	41.9	41.8	41.7	141.7	313.3		10.8	260.4	5.8	363.9	3.5	1.2
Level of Service	D	D	D	F	F		B	F	A	F	A	A
Approach Delay (s)		41.7			260.5			226.6			99.1	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	185.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	156.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	1	6	17	281	26	52	2934	360	566	1765	1
Turn Type	Perm		Perm	Perm		Perm		Perm	pm+pt		Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	29.0	29.0	29.0	29.0	29.0	74.0	74.0	74.0	27.0	101.0	101.0
Total Split (%)	22.3%	22.3%	22.3%	22.3%	22.3%	56.9%	56.9%	56.9%	20.8%	77.7%	77.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	Min	C-Min	C-Min
Act Effct Green (s)	26.0	26.0	26.0	26.0	26.0	71.0	71.0	71.0	98.0	98.0	98.0
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.55	0.55	0.55	0.75	0.75	0.75
v/c Ratio	0.02	0.02	0.06	1.16	1.33	0.68	1.63	0.41	1.69	0.76	0.00
Control Delay	43.0	42.2	16.5	150.7	186.3	20.1	303.2	3.7	351.7	4.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	42.2	16.5	150.7	186.3	20.1	303.2	3.7	351.7	4.3	1.0
LOS	D	D	B	F	F	C	F	A	F	A	A
Approach Delay		23.6			175.1		266.6			88.6	
Approach LOS		C			F		F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 74 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.69
Intersection Signal Delay: 187.8 — Intersection LOS: F
Intersection Capacity Utilization 159.9% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 2: Cabezon Blvd & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	17	281	26	583	52	2934	360	566	1765	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1580		1752	3505	1568	1752	3506	1568
Flt Permitted	0.15	1.00	1.00	0.75	1.00		0.08	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	284	1845	1568	1389	1580		149	3505	1568	100	3505	1568
Peak-hour factor, PHF	0.82	0.82	0.82	0.87	0.87	0.87	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	1	7	21	323	30	670	55	3121	383	643	2006	1
RTOR Reduction (vph)	0	0	17	0	211	0	0	0	71	0	0	0
Lane Group Flow (vph)	1	7	4	323	489	0	55	3121	312	643	2006	1
Turn Type	Perm		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	24.0	24.0	24.0	24.0	24.0		69.0	69.0	69.0	96.0	96.0	96.0
Effective Green, g (s)	26.0	26.0	26.0	26.0	26.0		71.0	71.0	71.0	98.0	98.0	98.0
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.55	0.55	0.55	0.75	0.75	0.75
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)	57	369	314	278	316		81	1914	856	380	2642	1182
v/s Ratio Prot		0.00			c0.31			0.89		c0.31	0.57	
v/s Ratio Perm	0.00		0.00	0.23			0.37		0.20	c0.97		0.00
v/c Ratio	0.02	0.02	0.01	1.16	1.55		0.68	1.63	0.36	1.69	0.76	0.00
Uniform Delay, d1	41.7	41.8	41.7	52.0	52.0		21.3	29.5	16.7	46.1	9.2	3.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.47	0.45	0.36	1.50	0.36	0.35
Incremental Delay, d2	0.1	0.0	0.0	105.1	261.3		4.1	284.0	0.1	315.7	0.8	0.0
Delay (s)	41.9	41.8	41.7	157.1	313.3		14.2	297.3	6.2	395.0	4.2	1.4
Level of Service	D	D	D	F	F		B	F	A	F	A	A
Approach Delay (s)		41.7			263.9			261.6			96.6	
Approach LOS		D			F			F			F	

Intersection Summary

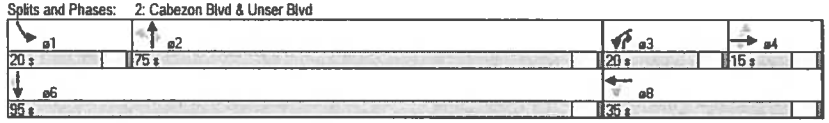
HCM Average Control Delay	200.8	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.65				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)		6.0	
Intersection Capacity Utilization	159.9%	ICU Level of Service		H	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	1	6	17	281	26	52	2934	360	566	1765	1
Turn Type	Perm		Perm	pm+pt		Perm		pm+ov	Prot		Perm
Protected Phases		4		3	8		2	3	1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	3	8	2	2	3	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	20.0	35.0	75.0	75.0	20.0	20.0	95.0	95.0
Total Split (%)	11.5%	11.5%	11.5%	15.4%	26.9%	57.7%	57.7%	15.4%	15.4%	73.1%	73.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	None	Min	Min	Min	None	Min	Min	Min
Act Effct Green (s)	12.0	12.0	12.0	32.0	32.0	72.0	72.0	92.0	17.0	92.0	92.0
Actuated g/C Ratio	0.09	0.09	0.09	0.25	0.25	0.55	0.55	0.71	0.13	0.71	0.71
v/c Ratio	0.02	0.04	0.13	0.90	1.31	0.92	1.61	0.32	1.44	0.81	0.00
Control Delay	55.0	54.5	22.4	75.1	181.9	127.6	301.3	3.1	252.4	16.4	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	54.5	22.4	75.1	181.9	127.6	301.3	3.1	252.4	16.4	4.0
LOS	D	D	C	E	F	F	F	A	F	B	A
Approach Delay		31.3			148.2		266.5			73.7	
Approach LOS		C			F		F			E	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.61			
Intersection Signal Delay: 178.5		Intersection LOS: F	
Intersection Capacity Utilization 144.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 2: Cabezon Blvd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	17	281	26	583	52	2934	360	566	1765	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1752	1580		1752	3505	1568	3400	3505	1568
Flt Permitted	0.33	1.00	1.00	0.60	1.00		0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	615	1845	1568	1111	1580		109	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.82	0.82	0.82	0.87	0.87	0.87	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	1	7	21	323	30	670	55	3121	383	643	2006	1
RTOR Reduction (vph)	0	0	19	0	145	0	0	0	77	0	0	0
Lane Group Flow (vph)	1	7	2	323	555	0	55	3121	306	643	2006	1
Turn Type	Perm		Perm	pm+pt			Perm		pm+ov	Prot		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4		4	8			2		2			6
Actuated Green, G (s)	10.0	10.0	10.0	30.0	30.0		70.0	70.0	85.0	15.0	90.0	90.0
Effective Green, g (s)	12.0	12.0	12.0	32.0	32.0		72.0	72.0	89.0	17.0	92.0	92.0
Actuated g/C Ratio	0.09	0.09	0.09	0.25	0.25		0.55	0.55	0.68	0.13	0.71	0.71
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)	57	170	145	357	389		60	1941	1110	445	2480	1110
v/s Ratio Prot		0.00		0.12	c0.35			c0.89	0.04	c0.19	0.57	
v/s Ratio Perm	0.00		0.00	0.10			0.51		0.16			0.00
v/c Ratio	0.02	0.04	0.01	0.90	1.43		0.92	1.61	0.28	1.44	0.81	0.00
Uniform Delay, d1	53.6	53.8	53.6	46.2	49.0		26.3	29.0	8.0	56.5	13.0	5.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	0.0	25.3	205.9		85.9	276.0	0.1	212.6	2.0	0.0
Delay (s)	53.8	53.9	53.7	71.5	254.9		112.1	305.0	8.1	269.1	15.0	5.6
Level of Service	D	D	D	E	F		F	F	A	F	B	A
Approach Delay (s)		53.7			197.0			270.1			76.7	
Approach LOS		D			F			F			E	

Intersection Summary					
HCM Average Control Delay	188.3	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.54				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	144.7%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Timings
3: 19th Ave & Unser Blvd

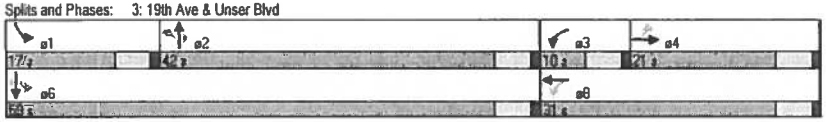
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	9	1	200	1	10	1114	100	340	2008	5
Turn Type	Perm		pm+pt		Perm		Perm	pm+pt		Perm
Protected Phases		4	3	8		2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	21.0	21.0	10.0	31.0	42.0	42.0	42.0	17.0	59.0	59.0
Total Split (%)	23.3%	23.3%	11.1%	34.4%	46.7%	46.7%	46.7%	18.9%	65.6%	65.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min	Min	C-Min	C-Min
Act Effct Green (s)	8.8	8.8	18.8	18.8	39.0	39.0	39.0	65.2	65.2	65.2
Actuated g/C Ratio	0.10	0.10	0.21	0.21	0.43	0.43	0.43	0.72	0.72	0.72
v/c Ratio	0.10	0.25	0.88	0.34	0.15	0.87	0.16	0.69	0.86	0.00
Control Delay	37.9	21.1	65.8	7.4	16.6	26.0	2.6	24.4	6.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	21.1	65.8	7.4	16.6	26.0	2.6	24.4	6.9	1.0
LOS	D	C	E	A	B	C	A	C	A	A
Approach Delay		24.6		42.7		24.0			9.4	
Approach LOS		C		D		C			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 17.3 Intersection LOS: B
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
3: 19th Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1	34	200	1	130	10	1114	100	340	2008	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1574		1752	1570		1752	3505	1568	1752	3505	1568
Flt Permitted	0.66	1.00		0.54	1.00		0.10	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	1216	1574		1001	1570		189	3505	1568	176	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.85	0.85	0.85	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	12	1	44	235	1	153	12	1326	119	370	2183	5
RTOR Reduction (vph)	0	29	0	0	121	0	0	0	67	0	0	1
Lane Group Flow (vph)	12	16	0	235	33	0	12	1326	52	370	2183	4
Turn Type	Perm			pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.8	6.8		16.8	16.8		37.0	37.0	37.0	63.2	63.2	63.2
Effective Green, g (s)	8.8	8.8		18.8	18.8		39.0	39.0	39.0	65.2	65.2	65.2
Actuated g/C Ratio	0.10	0.10		0.21	0.21		0.43	0.43	0.43	0.72	0.72	0.72
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)	119	154		268	328		82	1519	679	534	2539	1136
v/s Ratio Prot		0.01		c0.07	0.02			0.38		0.18	c0.62	
v/s Ratio Perm	0.01			c0.12			0.06		0.03	0.32		0.00
v/c Ratio	0.10	0.10		0.88	0.10		0.15	0.87	0.08	0.69	0.86	0.00
Uniform Delay, d1	37.0	37.0		33.9	28.8		15.4	23.2	14.9	21.5	9.1	3.4
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.78	0.69	1.08	0.45	0.37
Incremental Delay, d2	0.4	0.3		25.8	0.1		3.7	7.1	0.2	1.8	1.9	0.0
Delay (s)	37.4	37.3		59.7	28.9		15.2	25.2	10.5	25.0	6.0	1.3
Level of Service	D	D		E	C		B	C	B	C	A	A
Approach Delay (s)		37.3			47.5			24.0			8.7	
Approach LOS		D			D			C			A	

Intersection Summary

HCM Average Control Delay	17.5	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.86				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0		
Intersection Capacity Utilization	87.4%	ICU Level of Service	E		
Analysis Period (min)	15				

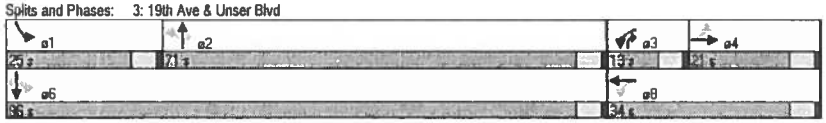
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	43	21	219	56	40	1127	107	340	2037	93
Turn Type	Perm		pm+pt		Perm		pm+ov	pm+pt		Perm
Protected Phases		4	3	8		2	3	1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	3	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	21.0	21.0	13.0	34.0	71.0	71.0	13.0	25.0	96.0	96.0
Total Split (%)	16.2%	16.2%	10.0%	26.2%	54.6%	54.6%	10.0%	19.2%	73.8%	73.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	13.4	13.4	28.5	28.5	67.5	67.5	82.5	95.5	95.5	95.5
Actuated g/C Ratio	0.10	0.10	0.22	0.22	0.52	0.52	0.63	0.73	0.73	0.73
v/c Ratio	0.47	0.43	0.96	0.51	0.84	0.74	0.12	0.87	0.86	0.09
Control Delay	67.0	44.5	93.9	31.6	109.3	20.8	0.5	53.5	17.2	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	44.5	93.9	31.6	109.3	20.8	0.5	53.5	17.2	1.4
LOS	E	D	F	C	F	C	A	D	B	A
Approach Delay		53.5		65.3		21.9			21.6	
Approach LOS		D		E		C			C	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 99 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 27.0 — Intersection LOS: C
Intersection Capacity Utilization 90.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	21	44	219	56	130	40	1127	107	340	2037	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1657		1752	1651		1752	3505	1568	1752	3505	1568
Flt Permitted	0.62	1.00		0.46	1.00		0.06	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	1146	1657		845	1651		109	3505	1568	160	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.85	0.85	0.85	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	56	27	57	258	66	153	48	1342	127	370	2214	101
RTOR Reduction (vph)	0	22	0	0	66	0	0	0	49	0	0	25
Lane Group Flow (vph)	56	62	0	258	153	0	48	1342	78	370	2214	76
Turn Type	Perm			pm+pt			Perm		pm+ov	pm+pt		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	11.4	11.4		26.5	26.5		65.5	65.5	75.6	93.5	93.5	93.5
Effective Green, g (s)	13.4	13.4		28.5	28.5		67.5	67.5	79.6	95.5	95.5	95.5
Actuated g/C Ratio	0.10	0.10		0.22	0.22		0.52	0.52	0.61	0.73	0.73	0.73
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)	118	171		270	362		57	1820	996	424	2575	1152
v/s Ratio Prot		0.04		c0.09	0.09			0.38	0.01	0.17	c0.63	
v/s Ratio Perm	0.05			c0.12			0.44		0.04	c0.47		0.05
v/c Ratio	0.47	0.36		0.96	0.42		0.84	0.74	0.08	0.87	0.86	0.07
Uniform Delay, d1	55.0	54.3		48.6	43.7		26.7	24.3	10.3	36.5	12.4	4.8
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.73	0.15	1.00	1.00	1.00
Incremental Delay, d2	3.0	1.3		42.3	0.8		78.7	2.7	0.0	17.6	4.0	0.1
Delay (s)	58.0	55.6		91.0	44.5		98.8	20.5	1.6	54.1	16.5	4.9
Level of Service	E	E		F	D		F	C	A	D	B	A
Approach Delay (s)		56.6			69.6			21.4			21.2	
Approach LOS		E			E			C			C	

Intersection Summary

HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

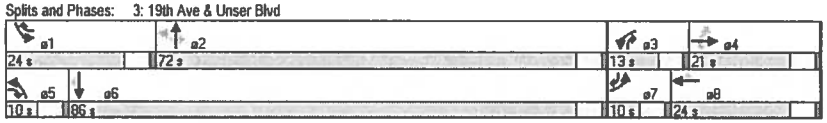
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	21	44	219	56	130	40	1127	107	340	2037	93
Turn Type	pm+pt		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4			8	2		2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	10.0	21.0	10.0	13.0	24.0	24.0	10.0	72.0	13.0	24.0	86.0	10.0
Total Split (%)	7.7%	16.2%	7.7%	10.0%	18.5%	18.5%	7.7%	55.4%	10.0%	18.5%	66.2%	7.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	Min	None	Min	Min	Min	None	C-Min	Min	Min	C-Min	None
Act Effct Green (s)	15.6	8.5	18.9	11.4	12.7	36.3	85.0	76.6	90.9	21.6	91.8	102.0
Actuated g/C Ratio	0.12	0.07	0.15	0.09	0.10	0.28	0.65	0.59	0.70	0.17	0.71	0.78
v/c Ratio	0.31	0.12	0.24	0.87	0.19	0.18	0.28	0.45	0.11	0.66	0.89	0.08
Control Delay	51.3	58.0	44.0	85.8	56.0	6.5	15.9	11.2	0.4	56.1	21.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	58.0	44.0	85.8	56.0	6.5	15.9	11.2	0.4	56.1	21.9	1.0
LOS	D	E	D	F	E	A	B	B	A	E	C	A
Approach Delay		49.6			56.2			10.4			25.8	
Approach LOS		D			E			B			C	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 24.7 — Intersection LOS: C
Intersection Capacity Utilization 83.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	21	44	219	56	130	40	1127	107	340	2037	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	2760	1752	5036	1568	3400	3505	1568
Flt Permitted	0.71	1.00	1.00	0.95	1.00	1.00	0.05	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1313	3505	1568	3400	3505	2760	96	5036	1568	3400	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.85	0.85	0.85	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	56	27	57	258	66	153	48	1342	127	370	2214	101
RTOR Reduction (vph)	0	0	8	0	0	108	0	0	41	0	0	23
Lane Group Flow (vph)	56	27	49	258	66	45	48	1342	86	370	2214	78
Turn Type	pm+pt		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4			8	2		2			6
Actuated Green, G (s)	11.7	6.5	11.8	9.4	10.7	30.3	79.8	74.5	83.9	19.6	88.8	94.0
Effective Green, g (s)	15.7	8.5	13.8	11.4	12.7	32.3	83.8	76.5	87.9	21.6	90.8	98.0
Actuated g/C Ratio	0.12	0.07	0.11	0.09	0.10	0.25	0.64	0.59	0.68	0.17	0.70	0.75
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)	183	229	215	298	342	771	155	2963	1096	565	2448	1218
v/s Ratio Prot	0.02	0.01	0.01	c0.08	0.02	0.01	0.02	0.27	0.01	c0.11	c0.63	0.00
v/s Ratio Perm	c0.02		0.02			0.01	0.18		0.05			0.05
v/c Ratio	0.31	0.12	0.23	0.87	0.19	0.06	0.31	0.45	0.08	0.65	0.90	0.06
Uniform Delay, d1	51.9	57.2	53.2	58.5	53.9	37.3	21.8	15.0	7.2	50.7	16.0	4.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.03	0.70	0.18	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.2	0.5	22.1	0.3	0.0	1.1	0.5	0.0	2.7	6.1	0.0
Delay (s)	52.9	57.4	53.8	80.7	54.2	37.3	23.7	11.0	1.3	53.4	22.1	4.2
Level of Service	D	E	D	F	D	D	C	B	A	D	C	A
Approach Delay (s)		54.1			63.1			10.5			25.8	
Approach LOS		D			E			B			C	

Intersection Summary

HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	70	28	200	75	326	1099	100	340	1979	152
Turn Type	Perm		pm+pt		Perm		pm+ov	pm+pt		Perm
Protected Phases		4	3	8		2	3	1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	3	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	21.0	21.0	13.0	34.0	71.0	71.0	13.0	25.0	96.0	96.0
Total Split (%)	16.2%	16.2%	10.0%	26.2%	54.6%	54.6%	10.0%	19.2%	73.8%	73.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	15.8	15.8	28.8	28.8	69.8	69.8	82.8	95.2	95.2	95.2
Actuated g/C Ratio	0.12	0.12	0.22	0.22	0.54	0.54	0.64	0.73	0.73	0.73
v/c Ratio	0.67	1.13	1.22	0.58	6.93	0.69	0.11	0.91	0.84	0.14
Control Delay	77.5	145.4	178.5	38.4	2690.7	25.1	1.9	56.1	16.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	145.4	178.5	38.4	2690.7	25.1	1.9	56.1	16.5	1.2
LOS	E	F	F	D	F	C	A	E	B	A
Approach Delay		126.8		107.6		593.4			21.1	
Approach LOS		F		F		F			C	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 99 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 6.93
Intersection Signal Delay: 231.1 — Intersection LOS: F
Intersection Capacity Utilization 108.5% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	28	159	200	75	130	326	1099	100	340	1979	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1609		1752	1669		1752	3505	1568	1752	3505	1568
Flt Permitted	0.61	1.00		0.21	1.00		0.06	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	1123	1609		392	1669		106	3505	1568	189	3505	1568
Peak-hour factor, PHF	0.77	0.77	0.77	0.85	0.85	0.85	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	91	36	206	235	88	153	388	1308	119	370	2151	165
RTOR Reduction (vph)	0	19	0	0	49	0	0	0	46	0	0	42
Lane Group Flow (vph)	91	223	0	235	192	0	388	1308	73	370	2151	123
Turn Type	Perm			pm+pt			Perm		pm+ov	pm+pt		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	13.8	13.8		26.8	26.8		67.8	67.8	75.8	93.2	93.2	93.2
Effective Green, g (s)	15.8	15.8		28.8	28.8		69.8	69.8	79.8	95.2	95.2	95.2
Actuated g/C Ratio	0.12	0.12		0.22	0.22		0.54	0.54	0.61	0.73	0.73	0.73
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)	136	196		191	370		57	1882	999	408	2567	1148
v/s Ratio Prot		0.14		c0.09	0.12			0.37	0.01	c0.16	0.61	
v/s Ratio Perm	0.08			c0.18			c3.67		0.04	0.51		0.08
v/c Ratio	0.67	1.14		1.23	0.52		6.81	0.70	0.07	0.91	0.84	0.11
Uniform Delay, d1	54.6	57.1		47.6	44.5		30.1	22.2	10.1	34.5	12.1	5.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.8	105.7		140.7	1.2		2649.7	2.1	0.0	23.2	3.5	0.2
Delay (s)	66.4	162.8		188.3	45.7		2679.8	24.4	10.2	57.8	15.5	5.2
Level of Service	E	F		F	D		F	C	B	E	B	A
Approach Delay (s)		136.4			116.1			691.1			20.7	
Approach LOS		F			F			F			C	

Intersection Summary

HCM Average Control Delay	231.5	HCM Level of Service	F
HCM Volume to Capacity ratio	4.39		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	14	1	360	1	50	2120	310	500	1630	14
Turn Type	Perm		pm+pt		Perm		Perm	pm+pt		Perm
Protected Phases		4	3	8		2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	24.0	24.0	26.0	50.0	56.0	56.0	56.0	24.0	80.0	80.0
Total Split (%)	18.5%	18.5%	20.0%	38.5%	43.1%	43.1%	43.1%	18.5%	61.5%	61.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	C-Min	Min	C-Min	C-Min
Act Effct Green (s)	21.0	21.0	47.0	47.0	53.0	53.0	53.0	77.0	77.0	77.0
Actuated g/C Ratio	0.16	0.16	0.36	0.36	0.41	0.41	0.41	0.59	0.59	0.59
v/c Ratio	0.28	0.09	0.80	1.53	0.96	1.60	0.46	1.59	0.84	0.02
Control Delay	62.1	18.4	48.1	268.0	127.3	296.3	11.5	299.0	30.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.1	18.4	48.1	268.0	127.3	296.3	11.5	299.0	30.0	6.6
LOS	E	B	D	F	F	F	B	F	C	A
Approach Delay		35.5		208.9		257.4			92.6	
Approach LOS		D		F		F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.60
Intersection Signal Delay: 186.7 — Intersection LOS: F
Intersection Capacity Utilization 157.0% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	1	20	360	1	980	50	2120	310	500	1630	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1579		1752	1568		1752	3505	1568	1752	3505	1568
Flt Permitted	0.19	1.00		0.65	1.00		0.08	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	351	1579		1196	1568		139	3505	1568	132	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	16	1	24	424	1	1153	54	2280	333	538	1753	15
RTOR Reduction (vph)	0	20	0	0	189	0	0	0	85	0	0	5
Lane Group Flow (vph)	16	5	0	424	965	0	54	2280	248	538	1753	10
Turn Type	Perm			pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	19.0	19.0		45.0	45.0		51.0	51.0	51.0	75.0	75.0	75.0
Effective Green, g (s)	21.0	21.0		47.0	47.0		53.0	53.0	53.0	77.0	77.0	77.0
Actuated g/C Ratio	0.16	0.16		0.36	0.36		0.41	0.41	0.41	0.59	0.59	0.59
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)	57	255		531	567		57	1429	639	340	2076	929
v/s Ratio Prot		0.00		0.14	c0.62			0.65		c0.26	0.50	
v/s Ratio Perm	0.05			0.15			0.39		0.16	c0.68		0.01
v/c Ratio	0.28	0.02		0.80	1.70		0.95	1.60	0.39	1.58	0.84	0.01
Uniform Delay, d1	47.9	45.8		35.4	41.5		37.2	38.5	27.1	43.6	21.6	10.9
Progression Factor	1.00	1.00		1.00	1.00		0.78	0.79	0.65	0.77	1.22	1.13
Incremental Delay, d2	2.7	0.0		8.2	323.4		86.0	270.3	1.2	270.9	2.9	0.0
Delay (s)	50.6	45.9		43.6	364.9		116.0	300.8	18.8	304.5	29.3	12.3
Level of Service	D	D		D	F		F	F	B	F	C	B
Approach Delay (s)		47.7			278.6			261.9			93.4	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	205.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	157.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Timings
3: 19th Ave & Unser Blvd

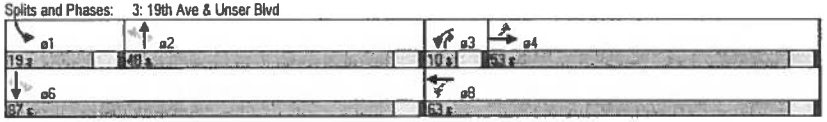
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	126	71	373	38	68	2161	335	500	1653	83
Turn Type	Perm		pm+pt		Perm		pm+ov	pm+pt		Perm
Protected Phases		4	3	8		2	3	1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	3	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	53.0	53.0	10.0	63.0	48.0	48.0	10.0	19.0	67.0	67.0
Total Split (%)	40.8%	40.8%	7.7%	48.5%	36.9%	36.9%	7.7%	14.6%	51.5%	51.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	50.0	50.0	60.0	60.0	45.0	45.0	55.0	64.0	64.0	64.0
Actuated g/C Ratio	0.38	0.38	0.46	0.46	0.35	0.35	0.42	0.49	0.49	0.49
v/c Ratio	2.60	0.22	0.84	1.37	1.28	1.92	0.48	1.98	1.03	0.11
Control Delay	786.7	24.2	44.8	199.5	222.6	439.8	13.5	470.0	62.4	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	786.7	24.2	44.8	199.5	222.6	439.8	13.5	470.0	62.4	9.4
LOS	F	C	D	F	F	F	B	F	E	A
Approach Delay		402.9		158.1		378.4			151.7	
Approach LOS		F		F		F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 52 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.60
Intersection Signal Delay: 251.8 Intersection LOS: F
Intersection Capacity Utilization 170.4% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
3: 19th Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	71	56	373	38	960	68	2161	335	500	1653	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1723		1752	1578		1752	3505	1568	1752	3505	1568
Flt Permitted	0.08	1.00		0.57	1.00		0.09	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	148	1723		1053	1578		164	3505	1568	154	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	148	84	66	439	45	1153	73	2324	360	538	1777	89
RTOR Reduction (vph)	0	12	0	0	144	0	0	0	93	0	0	29
Lane Group Flow (vph)	148	138	0	439	1054	0	73	2324	267	538	1777	60
Turn Type	Perm			pm+pt			Perm		pm+ov	pm+pt		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	48.0	48.0		58.0	58.0		43.0	43.0	48.0	62.0	62.0	62.0
Effective Green, g (s)	50.0	50.0		60.0	60.0		45.0	45.0	52.0	64.0	64.0	64.0
Actuated g/C Ratio	0.38	0.38		0.46	0.46		0.35	0.35	0.40	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
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)	57	663		524	728		57	1213	663	272	1726	772
v/s Ratio Prot		0.08		0.05	c0.67			0.66	0.02	c0.24	0.51	
v/s Ratio Perm	c1.00			0.34			0.45		0.15	c0.73		0.04
v/c Ratio	2.60	0.21		0.84	1.45		1.28	1.92	0.40	1.98	1.03	0.08
Uniform Delay, d1	40.0	26.8		31.9	35.0		42.5	42.5	27.9	41.1	33.0	17.4
Progression Factor	1.00	1.00		1.00	1.00		0.96	0.93	0.81	0.77	1.16	1.22
Incremental Delay, d2	766.6	0.2		11.2	209.0		186.0	414.0	0.2	447.8	24.8	0.1
Delay (s)	806.6	26.9		43.1	244.0		226.8	453.7	22.9	479.3	63.2	21.4
Level of Service	F	C		D	F		F	F	C	F	E	C
Approach Delay (s)		414.1			190.1			391.4			154.8	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	265.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.20		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	170.4%	ICU Level of Service	H
Analysis Period (min)	15		

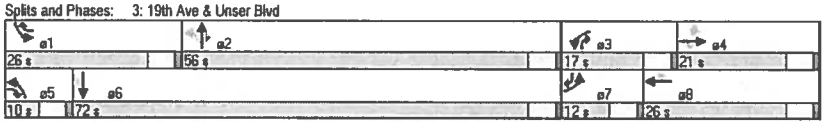
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	71	56	373	38	980	68	2161	335	500	1653	83
Turn Type	pm+pt		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4			8	2		2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	12.0	21.0	10.0	17.0	26.0	26.0	10.0	56.0	17.0	26.0	72.0	12.0
Total Split (%)	10.0%	17.5%	8.3%	14.2%	21.7%	21.7%	8.3%	46.7%	14.2%	21.7%	60.0%	10.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	Min	None	Min	Min	Min	None	C-Min	Min	Min	C-Min	None
Act Effct Green (s)	19.3	10.3	21.6	14.0	15.3	48.0	62.4	53.0	70.0	30.7	74.4	86.4
Actuated g/C Ratio	0.16	0.09	0.18	0.12	0.13	0.40	0.52	0.44	0.58	0.26	0.62	0.72
v/c Ratio	0.60	0.28	0.22	1.11	0.10	1.00	0.37	1.04	0.35	0.62	0.82	0.08
Control Delay	51.2	53.3	33.9	125.6	46.1	59.8	18.5	54.0	0.9	43.4	22.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	53.3	33.9	125.6	46.1	59.8	18.5	54.0	0.9	43.4	22.3	1.4
LOS	D	D	C	F	D	E	B	D	A	D	C	A
Approach Delay		48.0			77.0			46.2			26.2	
Approach LOS		D			E			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 111 (93%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 46.6 — Intersection LOS: D
Intersection Capacity Utilization 93.0% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	71	56	373	38	980	68	2161	335	500	1653	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	2760	1752	5036	1568	3400	3505	1568
Flt Permitted	0.73	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1339	3505	1568	3400	3505	2760	139	5036	1568	3400	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	148	84	66	439	45	1153	73	2324	360	538	1777	89
RTOR Reduction (vph)	0	0	13	0	0	54	0	0	123	0	0	27
Lane Group Flow (vph)	148	84	53	439	45	1099	73	2324	237	538	1777	62
Turn Type	pm+pt		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4			8	2		2			6
Actuated Green, G (s)	15.3	8.3	15.7	12.0	13.3	42.0	58.4	51.0	63.0	28.7	72.3	79.3
Effective Green, g (s)	19.3	10.3	17.7	14.0	15.3	44.0	62.4	53.0	67.0	30.7	74.3	83.3
Actuated g/C Ratio	0.16	0.09	0.15	0.12	0.13	0.37	0.52	0.44	0.56	0.26	0.62	0.69
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)	246	301	284	397	447	1104	199	2224	915	870	2170	1128
v/s Ratio Prot	0.05	0.02	0.01	c0.13	0.01	c0.25	0.03	c0.46	0.03	0.16	0.51	0.00
v/s Ratio Perm	0.05		0.02			0.15	0.16		0.12			0.04
v/c Ratio	0.60	0.28	0.19	1.11	0.10	1.00	0.37	1.04	0.26	0.62	0.82	0.05
Uniform Delay, d1	46.2	51.4	44.8	53.0	46.3	37.9	18.1	33.5	13.7	39.5	17.7	5.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.67	0.06	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.5	0.3	76.9	0.1	25.8	0.9	30.5	0.1	1.3	3.6	0.0
Delay (s)	50.3	51.9	45.2	129.9	46.4	63.7	18.4	53.0	0.9	40.8	21.2	5.9
Level of Service	D	D	D	F	D	E	B	D	A	D	C	A
Approach Delay (s)		49.6			81.0			45.2			25.0	
Approach LOS		D			F			D			C	

Intersection Summary

HCM Average Control Delay	46.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

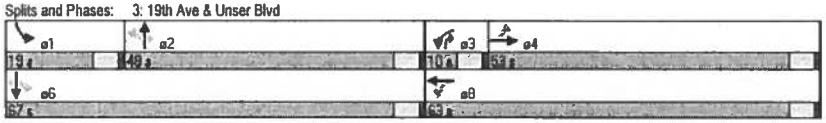
Timings
3: 19th Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	216	94	360	51	282	2072	310	500	1696	139
Turn Type	Perm		pm+pt		Perm		pm+ov	pm+pt		Perm
Protected Phases		4	3	8		2	3	1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	2	2	3	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0	21.0	10.0	10.0	21.0	21.0
Total Split (s)	53.0	53.0	10.0	63.0	48.0	48.0	10.0	19.0	67.0	67.0
Total Split (%)	40.8%	40.8%	7.7%	48.5%	36.9%	36.9%	7.7%	14.6%	51.5%	51.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead	Lead		
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	C-Min	C-Min	Min	Min	C-Min	C-Min
Act Effct Green (s)	50.0	50.0	60.0	60.0	45.0	45.0	55.0	64.0	64.0	64.0
Actuated g/C Ratio	0.38	0.38	0.46	0.46	0.35	0.35	0.42	0.49	0.49	0.49
v/c Ratio	4.46	0.96	2.47	1.39	5.32	1.84	0.44	1.98	0.99	0.18
Control Delay	1607.4	67.0	694.6	206.3	1990.9	407.2	16.0	477.4	53.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1607.4	67.0	694.6	206.3	1990.9	407.2	16.0	477.4	53.3	7.3
LOS	F	E	F	F	F	F	B	F	D	A
Approach Delay		522.5		332.8		529.3			145.4	
Approach LOS		F		F		F			F	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 52 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 5.32
Intersection Signal Delay: 368.3 Intersection LOS: F
Intersection Capacity Utilization 173.6% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 3: 19th Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
3: 19th Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	216	94	420	360	51	980	282	2072	310	500	1696	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1619		1752	1582		1752	3505	1568	1752	3505	1568
Flt Permitted	0.08	1.00		0.10	1.00		0.09	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	148	1619		190	1582		164	3505	1568	154	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	254	111	494	424	60	1153	303	2228	333	538	1716	149
RTOR Reduction (vph)	0	5	0	0	144	0	0	0	90	0	0	50
Lane Group Flow (vph)	254	600	0	424	1069	0	303	2228	243	538	1716	99
Turn Type	Perm			pm+pt			Perm		pm+ov	pm+pt		Perm
Protected Phases		4		3	8			2	3	1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	48.0	48.0		58.0	58.0		43.0	43.0	48.0	62.0	62.0	62.0
Effective Green, g (s)	50.0	50.0		60.0	60.0		45.0	45.0	52.0	64.0	64.0	64.0
Actuated g/C Ratio	0.38	0.38		0.46	0.46		0.35	0.35	0.40	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
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)	57	623		172	730		57	1213	663	272	1726	772
v/s Ratio Prot		0.37		c0.13	0.68			0.64	0.02	c0.24	0.49	
v/s Ratio Perm	c1.72			1.01			c1.85		0.14	0.73		0.06
v/c Ratio	4.46	0.96		2.47	1.46		5.32	1.84	0.37	1.98	0.99	0.13
Uniform Delay, d1	40.0	39.1		31.2	35.0		42.5	42.5	27.4	41.1	32.8	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1595.0	26.9		676.5	216.3		1980.3	379.8	0.3	453.1	20.3	0.3
Delay (s)	1635.0	66.0		707.7	251.3		2022.8	422.3	27.8	494.2	53.2	18.2
Level of Service	F	E		F	F		F	F	C	F	D	B
Approach Delay (s)		530.0			369.5			545.7			149.7	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	384.2	HCM Level of Service	F
HCM Volume to Capacity ratio	4.34		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	173.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Wellspring Ave & Unser Blvd

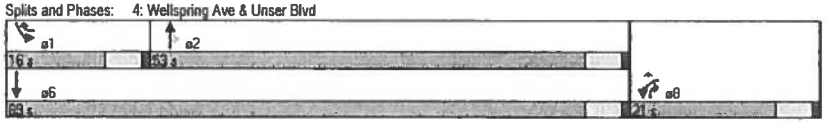
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	170	90	662	261	244	1524
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	21.0	16.0	53.0	21.0	16.0	69.0
Total Split (%)	23.3%	17.8%	58.9%	23.3%	17.8%	76.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	12.9	30.8	53.2	69.2	14.8	71.1
Actuated g/C Ratio	0.14	0.34	0.59	0.77	0.16	0.79
v/c Ratio	0.41	0.17	0.38	0.25	0.52	0.66
Control Delay	37.0	4.3	11.2	3.0	35.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	4.3	11.2	3.0	35.3	4.6
LOS	D	A	B	A	D	A
Approach Delay	25.7		8.9			8.9
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 7 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 10.3 — Intersection LOS: B
Intersection Capacity Utilization 53.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Wellspring Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
4: Wellspring Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	170	90	662	261	244	1524
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	3505	1568	3400	3505
Peak-hour factor, PHF	0.85	0.85	0.84	0.84	0.84	0.84
Adj. Flow (vph)	200	106	788	311	290	1814
RTOR Reduction (vph)	0	73	0	20	0	0
Lane Group Flow (vph)	200	33	788	291	290	1814
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	10.9	23.7	51.3	62.2	12.8	69.1
Effective Green, g (s)	12.9	27.7	53.3	66.2	14.8	71.1
Actuated g/C Ratio	0.14	0.31	0.59	0.74	0.16	0.79
Clearance Time (s)	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
Lane Grp Cap (vph)	487	535	2076	1206	559	2769
v/s Ratio Prot	c0.06	0.01	0.22	0.03	0.09	c0.52
v/s Ratio Perm		0.01		0.15		
v/c Ratio	0.41	0.06	0.38	0.24	0.52	0.66
Uniform Delay, d1	35.1	22.0	9.7	3.8	34.3	4.1
Progression Factor	1.00	1.00	1.00	1.00	0.99	0.87
Incremental Delay, d2	0.6	0.0	0.5	0.1	0.4	0.6
Delay (s)	35.7	22.0	10.2	3.9	34.4	4.2
Level of Service	D	C	B	A	C	A
Approach Delay (s)	30.9		8.4			8.4
Approach LOS	C		A			A

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rhonda Ave & Unser Blvd

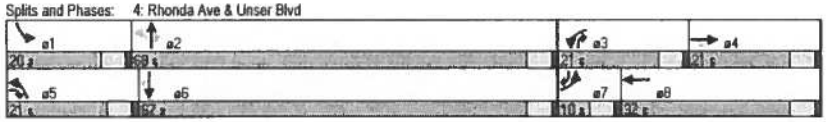
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	33	10	115	170	10	286	677	261	244	1505	77
Turn Type	Prot		pm+ov	Prot		pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	5	2	3	1	6	7
Permitted Phases			4			2		2			6
Detector Phase	7	4	5	3	8	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0
Total Split (s)	10.0	21.0	21.0	21.0	32.0	21.0	68.0	21.0	20.0	67.0	10.0
Total Split (%)	7.7%	16.2%	16.2%	16.2%	24.6%	16.2%	52.3%	16.2%	15.4%	51.5%	7.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	7.0	8.5	42.2	14.8	16.3	97.7	76.4	94.3	18.3	64.0	74.0
Actuated g/C Ratio	0.05	0.07	0.32	0.11	0.13	0.75	0.59	0.73	0.14	0.49	0.57
v/c Ratio	0.21	0.10	0.26	0.52	0.40	0.72	0.39	0.25	0.61	1.04	0.10
Control Delay	61.8	58.5	26.9	58.6	15.6	40.9	7.6	1.0	56.1	54.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	58.5	26.9	58.6	15.6	40.9	7.6	1.0	56.1	54.4	4.1
LOS	E	E	C	E	B	D	A	A	E	D	A
Approach Delay		36.3			42.7		14.0			52.5	
Approach LOS		D			D		B			D	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 83 (64%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 37.4 — Intersection LOS: D
Intersection Capacity Utilization 79.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Rhonda Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
4: Rhonda Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	10	115	170	10	90	286	677	261	244	1505	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1568	3400	1596		1752	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1845	1568	3400	1596		110	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	12	135	200	12	106	340	806	311	290	1792	92
RTOR Reduction (vph)	0	0	22	0	93	0	0	0	93	0	0	31
Lane Group Flow (vph)	39	12	113	200	25	0	340	806	218	290	1792	61
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2			6
Actuated Green, G (s)	5.0	6.5	35.2	12.8	14.3		95.7	74.4	87.2	16.3	62.0	67.0
Effective Green, g (s)	7.0	8.5	39.2	14.8	16.3		97.7	76.4	91.2	18.3	64.0	71.0
Actuated g/C Ratio	0.05	0.07	0.30	0.11	0.13		0.75	0.59	0.70	0.14	0.49	0.55
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)	183	121	509	387	200		470	2060	1136	479	1726	893
v/s Ratio Prot	0.01	0.01	c0.05	c0.06	0.02		c0.17	0.23	0.02	0.09	c0.51	0.00
v/s Ratio Perm			0.02				0.37		0.12			0.04
v/c Ratio	0.21	0.10	0.22	0.52	0.13		0.72	0.39	0.19	0.61	1.04	0.07
Uniform Delay, d1	58.9	57.1	34.0	54.2	50.5		37.8	14.3	6.7	52.5	33.0	13.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.19	0.49	1.35	1.02	0.84	0.90
Incremental Delay, d2	0.6	0.4	0.2	1.2	0.3		0.5	0.1	0.0	1.1	26.2	0.0
Delay (s)	59.4	57.5	34.2	55.4	50.8		45.6	7.1	9.1	54.7	54.0	12.6
Level of Service	E	E	C	E	D		D	A	A	D	D	B
Approach Delay (s)		41.0			53.7			16.5			52.4	
Approach LOS		D			D			B			D	

Intersection Summary

HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rhonda Ave & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	10	115	170	10	90	286	677	261	244	1505	77
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	10.0	10.0	21.0	21.0	10.0	21.0	10.0
Total Split (s)	10.0	21.0	21.0	21.0	32.0	20.0	21.0	68.0	21.0	20.0	67.0	10.0
Total Split (%)	7.7%	16.2%	16.2%	16.2%	24.6%	15.4%	16.2%	52.3%	16.2%	15.4%	51.5%	7.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	7.0	8.5	42.2	14.8	16.3	36.6	97.7	76.4	94.3	18.3	64.0	74.0
Actuated g/C Ratio	0.05	0.07	0.32	0.11	0.13	0.28	0.75	0.59	0.73	0.14	0.49	0.57
v/c Ratio	0.21	0.10	0.26	0.52	0.05	0.21	0.72	0.27	0.25	0.61	1.04	0.10
Control Delay	61.8	58.5	26.9	58.6	48.4	6.3	54.4	3.9	0.3	58.1	53.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	58.5	26.9	58.6	48.4	6.3	54.4	3.9	0.3	58.1	53.0	3.1
LOS	E	E	C	E	D	A	D	A	A	E	D	A
Approach Delay		36.3			40.8			14.9			51.6	
Approach LOS		D			D			B			D	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 69 (53%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 37.1		Intersection LOS: D	
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Rhonda Ave & Unser Blvd

HCM Signalized Intersection Capacity Analysis
4: Rhonda Ave & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	10	115	170	10	90	286	677	261	244	1505	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1568	3400	1845	1568	1752	5036	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1845	1568	3400	1845	1568	110	5036	1568	3400	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	12	135	200	12	106	340	806	311	290	1792	92
RTOR Reduction (vph)	0	0	22	0	0	79	0	0	93	0	0	31
Lane Group Flow (vph)	39	12	113	200	12	27	340	806	218	290	1792	61
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2			6
Actuated Green, G (s)	5.0	6.5	35.2	12.8	14.3	30.6	95.7	74.4	87.2	16.3	62.0	67.0
Effective Green, g (s)	7.0	8.5	39.2	14.8	16.3	32.6	97.7	76.4	91.2	18.3	64.0	71.0
Actuated g/C Ratio	0.05	0.07	0.30	0.11	0.13	0.25	0.75	0.59	0.70	0.14	0.49	0.55
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)	183	121	509	387	231	441	470	2960	1136	479	1726	893
v/s Ratio Prot	0.01	0.01	c0.05	c0.06	0.01	0.01	c0.17	0.16	0.02	0.09	c0.51	0.00
v/s Ratio Perm			0.02			0.01	0.37		0.12			0.04
v/c Ratio	0.21	0.10	0.22	0.52	0.05	0.06	0.72	0.27	0.19	0.61	1.04	0.07
Uniform Delay, d1	58.9	57.1	34.0	54.2	50.0	37.0	37.8	13.2	6.7	52.5	33.0	13.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.56	0.27	0.25	1.06	0.81	0.69
Incremental Delay, d2	0.6	0.4	0.2	1.2	0.1	0.1	1.5	0.1	0.0	1.0	25.8	0.0
Delay (s)	59.4	57.5	34.2	55.4	50.1	37.1	60.4	3.6	1.7	56.8	52.4	9.7
Level of Service	E	E	C	E	D	D	E	A	A	E	D	A
Approach Delay (s)		41.0			49.1			16.5			51.2	
Approach LOS		D			D			B			D	

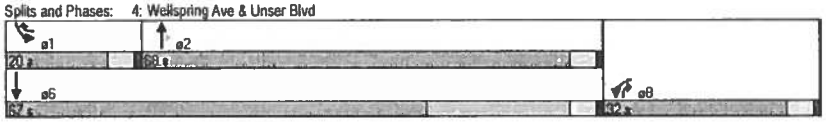
Intersection Summary					
HCM Average Control Delay	38.3	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	79.0%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	170	90	963	261	244	1625
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	32.0	20.0	68.0	32.0	20.0	67.0
Total Split (%)	26.7%	16.7%	56.7%	26.7%	16.7%	55.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	14.6	35.0	79.0	96.6	17.4	99.4
Actuated g/C Ratio	0.12	0.29	0.66	0.80	0.14	0.83
v/c Ratio	0.48	0.21	0.50	0.24	0.59	0.67
Control Delay	52.8	13.6	12.1	2.9	52.6	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	13.6	12.1	2.9	52.6	5.6
LOS	D	B	B	A	D	A
Approach Delay	39.2		10.1			11.7
Approach LOS	D		B			B

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 13.3 — Intersection LOS: B
Intersection Capacity Utilization 56.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Wellspring Ave & Unser Blvd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	170	90	963	261	244	1625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	3505	1568	3400	3505
Peak-hour factor, PHF	0.85	0.85	0.84	0.84	0.84	0.84
Adj. Flow (vph)	200	106	1146	311	290	1935
RTOR Reduction (vph)	0	48	0	16	0	0
Lane Group Flow (vph)	200	58	1146	295	290	1935
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	12.6	28.0	77.0	89.6	15.4	97.4
Effective Green, g (s)	14.6	32.0	79.0	93.6	17.4	99.4
Actuated g/C Ratio	0.12	0.27	0.66	0.78	0.14	0.83
Clearance Time (s)	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
Lane Grp Cap (vph)	414	457	2307	1262	493	2903
v/s Ratio Prot	c0.06	0.02	0.33	0.03	0.09	c0.55
v/s Ratio Perm		0.02		0.16		
v/c Ratio	0.48	0.13	0.50	0.23	0.59	0.67
Uniform Delay, d1	49.2	33.4	10.4	3.6	48.0	3.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.8	0.1	1.8	1.2
Delay (s)	50.1	33.5	11.2	3.6	49.7	5.2
Level of Service	D	C	B	A	D	A
Approach Delay (s)	44.3		9.6			11.0
Approach LOS	D		A			B

Intersection Summary

HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

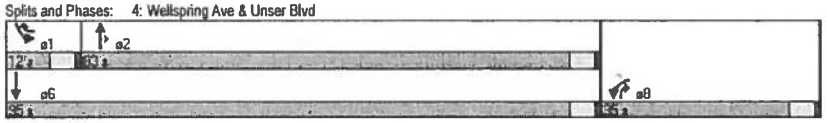
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	620	270	1777	253	96	1315
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	35.0	12.0	83.0	35.0	12.0	95.0
Total Split (%)	26.9%	9.2%	63.8%	26.9%	9.2%	73.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	31.9	44.0	80.0	114.9	9.1	92.1
Actuated g/C Ratio	0.25	0.34	0.62	0.88	0.07	0.71
v/c Ratio	0.87	0.59	0.89	0.19	0.43	0.57
Control Delay	59.5	38.8	19.2	0.6	59.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	38.8	19.2	0.6	59.6	8.0
LOS	E	D	B	A	E	A
Approach Delay	53.3		16.9			11.5
Approach LOS	D		B			B

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 36 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 73.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Wellspring Ave & Unser Blvd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	620	270	1777	253	96	1315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	3505	1568	3400	3505
Peak-hour factor, PHF	0.85	0.85	0.93	0.93	0.93	0.93
Adj. Flow (vph)	729	318	1911	272	103	1414
RTOR Reduction (vph)	0	11	0	21	0	0
Lane Group Flow (vph)	729	307	1911	251	103	1414
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	29.9	37.0	78.0	107.9	7.1	90.1
Effective Green, g (s)	31.9	41.0	80.0	111.9	9.1	92.1
Actuated g/C Ratio	0.25	0.32	0.62	0.86	0.07	0.71
Clearance Time (s)	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
Lane Grp Cap (vph)	834	531	2157	1386	238	2483
v/s Ratio Prot	c0.21	c0.04	c0.55	0.04	0.03	0.40
v/s Ratio Perm		0.16		0.12		
v/c Ratio	0.87	0.58	0.89	0.18	0.43	0.57
Uniform Delay, d1	47.1	37.3	21.1	1.5	58.0	9.3
Progression Factor	1.00	1.00	0.85	1.38	0.97	0.79
Incremental Delay, d2	10.1	1.5	0.6	0.0	0.7	0.5
Delay (s)	57.2	38.8	18.6	2.1	56.8	7.8
Level of Service	E	D	B	A	E	A
Approach Delay (s)	51.6		16.5			11.2
Approach LOS	D		B			B

Intersection Summary

HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

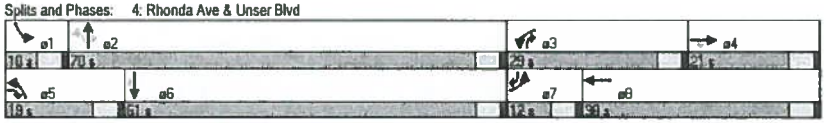
Timings
4: Rhonda Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	114	1	364	620	1	213	1747	253	96	1317	70
Turn Type	Prot		pm+ov	Prot		pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	5	2	3	1	6	7
Permitted Phases			4			2		2			6
Detector Phase	7	4	5	3	8	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0
Total Split (s)	12.0	21.0	19.0	29.0	38.0	19.0	70.0	29.0	10.0	61.0	12.0
Total Split (%)	9.2%	16.2%	14.6%	22.3%	29.2%	14.6%	53.8%	22.3%	7.7%	46.9%	9.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	9.0	11.6	37.0	26.0	28.6	83.4	70.8	99.8	9.6	58.0	70.0
Actuated g/C Ratio	0.07	0.09	0.28	0.20	0.22	0.64	0.54	0.77	0.07	0.45	0.54
v/c Ratio	0.57	0.01	0.94	1.07	0.77	0.64	0.98	0.21	0.41	0.91	0.09
Control Delay	68.7	50.0	74.2	104.4	46.3	36.0	26.5	0.6	64.1	25.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	50.0	74.2	104.4	46.3	36.0	26.5	0.6	64.1	25.7	0.2
LOS	E	D	E	F	D	D	C	A	E	C	A
Approach Delay		72.9			86.7		24.4			27.0	
Approach LOS		E			F		C			C	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 48 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 41.7		Intersection LOS: D	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 4: Rhonda Ave & Unser Blvd



HCM Signalized Intersection Capacity Analysis
4: Rhonda Ave & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	1	364	620	1	270	213	1747	253	96	1317	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1568	3400	1569		1752	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.07	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1845	1568	3400	1569		121	3505	1568	3400	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	134	1	428	729	1	318	229	1878	272	103	1416	75
RTOR Reduction (vph)	0	0	9	0	70	0	0	0	69	0	0	32
Lane Group Flow (vph)	134	1	419	729	249	0	229	1878	203	103	1416	43
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2			6
Actuated Green, G (s)	7.0	9.6	30.0	24.0	26.6		81.4	68.8	92.8	7.6	56.0	63.0
Effective Green, g (s)	9.0	11.6	34.0	26.0	28.6		83.4	70.8	96.8	9.6	58.0	67.0
Actuated g/C Ratio	0.07	0.09	0.26	0.20	0.22		0.64	0.54	0.74	0.07	0.45	0.52
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)	235	165	446	680	345		359	1909	1204	251	1564	844
v/s Ratio Prot	0.04	0.00	c0.16	c0.21	0.16		0.11	c0.54	0.03	0.03	0.40	0.00
v/s Ratio Perm			0.11				0.30		0.10			0.02
v/c Ratio	0.57	0.01	0.94	1.07	0.72		0.64	0.98	0.17	0.41	0.91	0.05
Uniform Delay, d1	58.6	53.9	47.0	52.0	47.0		35.0	29.0	4.8	57.5	33.5	15.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.18	0.75	0.94	1.08	0.86	0.03
Incremental Delay, d2	3.3	0.0	27.7	55.5	7.2		0.3	3.5	0.0	0.3	2.9	0.0
Delay (s)	61.9	54.0	74.7	107.5	54.2		41.7	25.2	4.6	62.3	25.1	0.4
Level of Service	E	D	E	F	D		D	C	A	E	C	A
Approach Delay (s)		71.6			91.3			24.5			26.4	
Approach LOS		E			F			C			C	

Intersection Summary					
HCM Average Control Delay		42.3	HCM Level of Service		D
HCM Volume to Capacity ratio		0.99			
Actuated Cycle Length (s)		130.0	Sum of lost time (s)		6.0
Intersection Capacity Utilization		87.6%	ICU Level of Service		E
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	1	364	620	1	270	213	1747	253	98	1317	70
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	21.0	10.0	10.0	21.0	21.0	10.0	21.0	10.0
Total Split (s)	12.0	21.0	17.0	28.0	37.0	13.0	17.0	58.0	28.0	13.0	54.0	12.0
Total Split (%)	10.0%	17.5%	14.2%	23.3%	30.8%	10.8%	14.2%	48.3%	23.3%	10.8%	45.0%	10.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	9.1	7.6	35.0	25.3	23.9	37.9	78.1	63.1	91.4	12.0	50.8	62.8
Actuated g/C Ratio	0.08	0.06	0.29	0.21	0.20	0.32	0.65	0.53	0.76	0.10	0.42	0.52
v/c Ratio	0.52	0.01	0.92	1.02	0.00	0.63	0.55	0.71	0.22	0.30	0.95	0.09
Control Delay	61.2	53.0	67.0	85.2	39.0	39.0	27.9	17.9	0.4	45.7	37.9	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	53.0	67.0	85.2	39.0	39.0	27.9	17.9	0.4	45.7	37.9	4.1
LOS	E	D	E	F	D	D	C	B	A	D	D	A
Approach Delay		65.6			71.2			16.9			36.8	
Approach LOS		E			E			B			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 106 (88%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 37.7 — Intersection LOS: D
Intersection Capacity Utilization 86.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Rhonda Ave & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	1	364	620	1	270	213	1747	253	98	1317	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1568	3400	1845	1568	1752	5036	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1845	1568	3400	1845	1568	137	5036	1568	3400	3505	1568
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	134	1	428	729	1	318	229	1878	272	103	1416	75
RTOR Reduction (vph)	0	0	8	0	0	11	0	0	72	0	0	35
Lane Group Flow (vph)	134	1	420	729	1	307	229	1878	200	103	1416	40
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2			6
Actuated Green, G (s)	7.1	5.7	28.0	23.3	21.9	31.9	76.0	61.0	84.3	10.0	48.7	55.8
Effective Green, g (s)	9.1	7.7	32.0	25.3	23.9	33.9	78.0	63.0	88.3	12.0	50.7	59.8
Actuated g/C Ratio	0.08	0.06	0.27	0.21	0.20	0.28	0.65	0.52	0.74	0.10	0.42	0.50
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)	258	118	457	717	367	495	416	2644	1193	340	1481	821
v/s Ratio Prot	0.04	0.00	c0.19	c0.21	0.00	0.06	0.11	0.37	0.04	0.03	c0.40	0.00
v/s Ratio Perm			0.08			0.14	0.25		0.09			0.02
v/c Ratio	0.52	0.01	0.92	1.02	0.00	0.62	0.55	0.71	0.17	0.30	0.96	0.05
Uniform Delay, d1	53.3	52.6	42.7	47.4	38.5	37.4	28.8	21.6	4.8	50.1	33.6	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	0.80	0.57	0.91	0.85	1.05
Incremental Delay, d2	1.8	0.0	23.3	37.9	0.0	2.3	0.1	0.2	0.0	0.2	8.9	0.0
Delay (s)	55.1	52.6	66.0	85.2	38.5	39.7	33.9	17.4	2.7	45.8	37.5	16.3
Level of Service	E	D	E	F	D	D	C	B	A	D	D	B
Approach Delay (s)		63.4			71.4			17.3			37.0	
Approach LOS		E			E			B			D	

Intersection Summary

HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

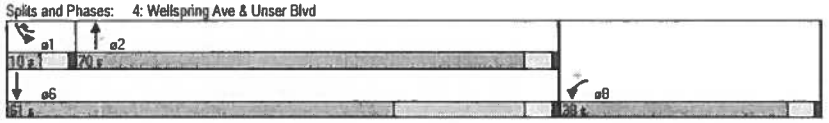
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	620	270	1961	253	96	1682
Turn Type		pm+ov		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	38.0	10.0	70.0	70.0	10.0	61.0
Total Split (%)	32.2%	8.5%	59.3%	59.3%	8.5%	51.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Min	C-Min	Min	C-Min
Act Effct Green (s)	31.9	43.2	68.8	68.8	8.3	80.1
Actuated g/C Ratio	0.27	0.37	0.58	0.58	0.07	0.68
v/c Ratio	0.79	0.55	1.03	0.27	0.43	0.76
Control Delay	46.8	32.9	54.1	4.7	59.0	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	32.9	54.1	4.7	59.0	15.9
LOS	D	C	D	A	E	B
Approach Delay	42.5		48.5			18.2
Approach LOS	D		D			B

Intersection Summary

Cycle Length: 118
Actuated Cycle Length: 118
Offset: 48 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 36.5 — Intersection LOS: D
Intersection Capacity Utilization 78.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Wellspring Ave & Unser Blvd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	620	270	1961	253	96	1682
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	3505	1568	3400	3505
Peak-hour factor, PHF	0.85	0.85	0.93	0.93	0.93	0.93
Adj. Flow (vph)	729	318	2109	272	103	1809
RTOR Reduction (vph)	0	4	0	79	0	0
Lane Group Flow (vph)	729	314	2109	193	103	1809
Turn Type		pm+ov		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	29.9	36.2	66.8	66.8	8.3	78.1
Effective Green, g (s)	31.9	40.2	68.8	68.8	8.3	80.1
Actuated g/C Ratio	0.27	0.34	0.58	0.58	0.07	0.68
Clearance Time (s)	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
Lane Grp Cap (vph)	919	574	2044	914	239	2379
v/s Ratio Prot	c0.21	0.04	c0.60		0.03	c0.52
v/s Ratio Perm		0.16		0.12		
v/c Ratio	0.79	0.55	1.03	0.21	0.43	0.76
Uniform Delay, d1	40.0	31.5	24.6	11.7	52.6	12.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	1.1	28.6	0.5	1.2	2.4
Delay (s)	44.7	32.6	53.2	12.2	53.8	14.9
Level of Service	D	C	D	B	D	B
Approach Delay (s)	41.1		48.5			17.0
Approach LOS	D		D			B

Intersection Summary

HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	118.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	274	67	113	128	258	22	936	162	648	1219	158
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	21.0	31.0	10.0	21.0	55.0	10.0	65.0	75.0	34.0	89.0	99.0
Total Split (%)	7.7%	16.2%	23.8%	7.7%	16.2%	42.3%	7.7%	50.0%	57.7%	26.2%	68.5%	76.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	Min		Min	Min	
Act Effct Green (s)	24.2	17.2	27.2	24.2	17.2	51.2	69.0	62.0	72.0	96.0	86.0	96.0
Actuated g/C Ratio	0.19	0.13	0.21	0.19	0.13	0.40	0.53	0.48	0.56	0.74	0.67	0.74
v/c Ratio	0.90	0.66	0.19	0.73	0.30	0.44	0.18	1.31	0.22	1.47	1.08	0.14
Control Delay	85.6	60.6	10.2	70.3	52.4	25.5	11.8	176.2	12.1	255.4	72.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.6	60.6	10.2	70.3	52.4	25.6	11.8	176.2	12.1	255.4	72.6	1.3
LOS	F	E	B	E	D	C	B	F	B	F	E	A
Approach Delay		63.3			42.5			149.2			125.5	
Approach LOS		E			D			F			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 129.2			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay: 114.9		Intersection LOS: F	
Intersection Capacity Utilization 113.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: McMahon Blvd & Unser Blvd

HCM Signalized Intersection Capacity Analysis
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	274	67	113	128	258	22	936	162	648	1219	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.59	1.00	1.00	0.30	1.00	1.00	0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1093	3505	1568	552	3505	1568	119	1845	1568	114	1845	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.81	0.81	0.81	0.92	0.92	0.92
Adj. Flow (vph)	216	308	75	124	141	284	27	1156	200	704	1325	172
RTOR Reduction (vph)	0	0	59	0	0	30	0	0	19	0	0	39
Lane Group Flow (vph)	216	308	16	124	141	254	27	1156	181	704	1325	133
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.2	15.2	25.2	20.2	15.2	49.2	65.0	60.0	70.0	94.0	84.0	94.0
Effective Green, g (s)	24.2	17.2	27.2	24.2	17.2	51.2	69.0	62.0	72.0	96.0	86.0	96.0
Actuated g/C Ratio	0.19	0.13	0.21	0.19	0.13	0.40	0.53	0.48	0.56	0.74	0.67	0.74
Clearance Time (s)	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	
Lane Grp Cap (vph)	240	467	330	168	467	621	152	885	874	478	1228	1165
v/s Ratio Prot	c0.05	0.09	0.01	0.04	0.04	0.16	0.01	0.63	0.12	c0.35	0.72	0.08
v/s Ratio Perm	c0.12			0.10			0.09			c0.74		
v/c Ratio	0.90	0.66	0.05	0.74	0.30	0.41	0.18	1.31	0.21	1.47	1.08	0.11
Uniform Delay, d1	50.5	53.2	40.7	47.2	50.6	28.1	27.5	33.6	14.3	43.1	21.6	4.7
Progression 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
Incremental Delay, d2	32.8	3.4	0.1	15.5	0.4	0.4	0.6	146.0	0.1	223.9	49.8	0.0
Delay (s)	83.3	56.6	40.7	62.7	50.9	28.5	28.0	179.6	14.4	267.0	71.4	4.7
Level of Service	F	E	D	E	D	C	C	F	B	F	E	A
Approach Delay (s)		64.2			42.0			152.7			128.6	
Approach LOS		E			D			F			F	

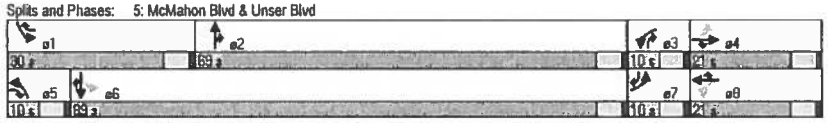
Intersection Summary					
HCM Average Control Delay	117.5	HCM Level of Service	F		
HCM Volume to Capacity ratio	1.35				
Actuated Cycle Length (s)	129.2	Sum of lost time (s)	9.0		
Intersection Capacity Utilization	113.3%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	274	67	113	128	280	22	1196	162	662	1295	170
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	21.0	31.0	10.0	21.0	51.0	10.0	69.0	79.0	30.0	89.0	99.0
Total Split (%)	7.7%	16.2%	23.8%	7.7%	16.2%	39.2%	7.7%	53.1%	60.8%	23.1%	68.5%	76.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min		Min	C-Min	
Act Effct Green (s)	24.9	17.9	28.0	24.9	17.9	48.0	73.1	66.0	76.0	96.1	86.0	96.0
Actuated g/C Ratio	0.19	0.14	0.22	0.19	0.14	0.37	0.56	0.51	0.58	0.74	0.66	0.74
v/c Ratio	0.97	0.64	0.19	0.72	0.29	0.52	0.18	1.58	0.21	1.70	1.15	0.15
Control Delay	99.6	59.7	11.1	68.2	52.2	32.5	10.6	291.3	11.1	356.2	85.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	59.7	11.1	68.2	52.2	32.5	10.6	291.3	11.1	356.2	85.7	0.1
LOS	F	E	B	E	D	C	B	F	B	F	F	A
Approach Delay		69.1			45.1			254.0			163.0	
Approach LOS		E			D			F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.70
Intersection Signal Delay: 168.6 — Intersection LOS: F
Intersection Capacity Utilization 128.8% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 5: McMahon Blvd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	274	67	113	128	280	22	1196	162	662	1295	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.60	1.00	1.00	0.31	1.00	1.00	0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1098	3505	1568	570	3505	1568	112	1845	1568	107	1845	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.81	0.81	0.81	0.92	0.92	0.92
Adj. Flow (vph)	237	308	75	124	141	308	27	1477	200	720	1408	185
RTOR Reduction (vph)	0	0	56	0	0	18	0	0	15	0	0	40
Lane Group Flow (vph)	237	308	19	124	141	290	27	1477	185	720	1408	145
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.9	15.9	26.0	20.9	15.9	46.0	69.1	64.0	74.0	94.1	84.0	94.0
Effective Green, g (s)	24.9	17.9	28.0	24.9	17.9	48.0	73.1	66.0	76.0	96.1	86.0	96.0
Actuated g/C Ratio	0.19	0.14	0.22	0.19	0.14	0.37	0.56	0.51	0.58	0.74	0.66	0.74
Clearance Time (s)	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	
Lane Grp Cap (vph)	246	483	338	173	483	579	153	937	917	422	1221	1158
v/s Ratio Prot	c0.05	0.09	0.01	0.04	0.04	0.19	0.01	0.80	0.12	c0.36	0.76	0.09
v/s Ratio Perm	c0.13			0.10			0.09			c0.91		
v/c Ratio	0.96	0.64	0.05	0.72	0.29	0.50	0.18	1.58	0.20	1.71	1.15	0.13
Uniform Delay, d1	51.4	53.0	40.5	47.0	50.4	31.7	27.7	32.0	12.7	44.8	22.0	4.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.27	0.00
Incremental Delay, d2	46.9	2.8	0.1	13.2	0.3	0.7	0.6	264.5	0.1	322.7	74.0	0.0
Delay (s)	98.2	55.7	40.6	60.2	50.7	32.4	28.2	296.5	12.8	387.1	80.0	0.0
Level of Service	F	E	D	E	D	C	C	F	B	F	E	A
Approach Delay (s)		70.2			42.9			258.9			169.2	
Approach LOS		E			D			F			F	

Intersection Summary

HCM Average Control Delay 172.9 — HCM Level of Service F
HCM Volume to Capacity ratio 1.55
Actuated Cycle Length (s) 130.0 — Sum of lost time (s) 9.0
Intersection Capacity Utilization 128.8% — ICU Level of Service H
Analysis Period (min) 15
c Critical Lane Group

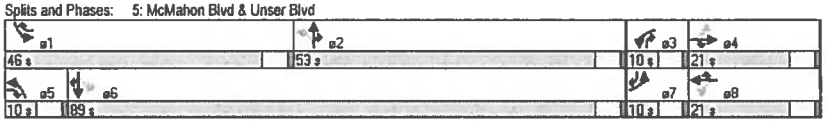
Timings
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	274	67	113	128	280	22	1196	162	662	1295	170
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	21.0	31.0	10.0	21.0	67.0	10.0	53.0	63.0	46.0	89.0	99.0
Total Split (%)	7.7%	16.2%	23.8%	7.7%	16.2%	51.5%	7.7%	40.8%	48.5%	35.4%	68.5%	76.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min		Min	C-Min	
Act Effct Green (s)	24.6	17.6	27.7	24.6	17.6	64.0	57.1	50.0	60.0	96.4	86.3	96.3
Actuated g/C Ratio	0.19	0.14	0.21	0.19	0.14	0.49	0.44	0.38	0.46	0.74	0.66	0.74
v/c Ratio	0.98	0.65	0.19	0.73	0.30	0.39	0.18	1.10	0.26	1.12	1.15	0.15
Control Delay	102.4	60.3	11.1	69.5	52.4	21.5	15.7	93.1	14.5	104.8	83.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.4	60.3	11.1	69.5	52.4	21.5	15.7	93.1	14.5	104.8	83.8	0.1
LOS	F	E	B	E	D	C	B	F	B	F	F	A
Approach Delay		70.4			39.5			82.6			83.7	
Approach LOS		E			D			F			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 76.9		Intersection LOS: E	
Intersection Capacity Utilization 101.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 5: McMahon Blvd & Unser Blvd



HCM Signalized Intersection Capacity Analysis
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	274	67	113	128	280	22	1196	162	662	1295	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	3505	1568	1752	1845	1568
Flt Permitted	0.59	1.00	1.00	0.30	1.00	1.00	0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1095	3505	1568	561	3505	1568	148	3505	1568	139	1845	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.81	0.81	0.81	0.92	0.92	0.92
Adj. Flow (vph)	237	308	75	124	141	308	27	1477	200	720	1408	185
RTOR Reduction (vph)	0	0	57	0	0	8	0	0	38	0	0	40
Lane Group Flow (vph)	237	308	18	124	141	300	27	1477	162	720	1408	145
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.6	15.6	25.7	20.6	15.6	62.0	53.1	48.0	58.0	94.4	84.3	94.3
Effective Green, g (s)	24.6	17.6	27.7	24.6	17.6	64.0	57.1	50.0	60.0	96.4	86.3	96.3
Actuated g/C Ratio	0.19	0.14	0.21	0.19	0.14	0.49	0.44	0.38	0.46	0.74	0.66	0.74
Clearance Time (s)	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	
Lane Grp Cap (vph)	243	475	334	170	475	772	153	1348	724	642	1225	1162
v/s Ratio Prot	c0.05	0.09	0.01	0.04	0.04	0.19	0.01	0.42	0.10	c0.37	c0.76	0.09
v/s Ratio Perm	c0.13			0.10			0.07			0.46		
v/c Ratio	0.98	0.65	0.05	0.73	0.30	0.39	0.18	1.10	0.22	1.12	1.15	0.13
Uniform Delay, d1	51.7	53.3	40.7	47.3	50.6	20.7	55.2	40.0	21.0	38.2	21.9	4.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.28	0.00
Incremental Delay, d2	50.4	3.0	0.1	14.5	0.4	0.3	0.6	55.0	0.2	65.3	72.3	0.0
Delay (s)	102.0	56.3	40.8	61.8	51.0	21.0	55.7	95.0	21.2	110.4	78.4	0.0
Level of Service	F	E	D	E	D	C	E	F	C	F	E	A
Approach Delay (s)		71.9			37.2			85.7			82.1	
Approach LOS		E			D			F			F	

Intersection Summary					
HCM Average Control Delay		77.1	HCM Level of Service		E
HCM Volume to Capacity ratio		1.10			
Actuated Cycle Length (s)		130.0	Sum of lost time (s)		9.0
Intersection Capacity Utilization		101.5%	ICU Level of Service		G
Analysis Period (min)		15			
c Critical Lane Group					

Timings
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	201	31	254	405	744	56	1550	122	404	1711	269
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	22.0	32.0	19.0	31.0	48.0	10.0	72.0	91.0	17.0	79.0	89.0
Total Split (%)	7.7%	16.9%	24.6%	14.6%	23.8%	36.9%	7.7%	55.4%	70.0%	13.1%	60.8%	68.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min		Min	C-Min	
Act Effct Green (s)	26.0	19.0	29.0	38.0	28.0	45.0	76.0	69.0	88.0	86.0	76.0	86.0
Actuated g/C Ratio	0.20	0.15	0.22	0.29	0.22	0.35	0.58	0.53	0.68	0.66	0.58	0.66
v/c Ratio	1.11	0.43	0.09	0.80	0.58	1.44	0.40	1.72	0.12	1.73	1.67	0.26
Control Delay	137.7	53.5	13.1	57.8	49.2	241.2	20.9	353.7	3.7	370.0	325.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.7	53.5	13.1	57.8	49.2	241.2	20.9	353.7	3.7	370.0	325.9	2.8
LOS	F	D	B	E	D	F	C	F	A	F	F	A
Approach Delay		90.9			152.6			318.2			296.9	
Approach LOS		F			F			F			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.73			
Intersection Signal Delay: 253.3		Intersection LOS: F	
Intersection Capacity Utilization 149.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: McMahon Blvd & Unser Blvd

HCM Signalized Intersection Capacity Analysis
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	201	31	254	405	744	56	1550	122	404	1711	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.42	1.00	1.00	0.40	1.00	1.00	0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	782	3505	1568	737	3505	1568	107	1845	1568	102	1845	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	233	221	34	273	435	800	61	1685	133	425	1801	283
RTOR Reduction (vph)	0	0	26	0	0	12	0	0	24	0	0	48
Lane Group Flow (vph)	233	221	8	273	435	788	61	1685	109	425	1801	235
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	17.0	27.0	36.0	26.0	43.0	72.0	67.0	86.0	84.0	74.0	84.0
Effective Green, g (s)	26.0	19.0	29.0	38.0	28.0	45.0	76.0	69.0	88.0	86.0	76.0	86.0
Actuated g/C Ratio	0.20	0.15	0.22	0.29	0.22	0.35	0.58	0.53	0.68	0.66	0.58	0.66
Clearance Time (s)	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	
Lane Grp Cap (vph)	209	512	350	340	755	543	151	979	1061	245	1079	1037
v/s Ratio Prot	c0.06	0.06	0.00	0.10	0.12	c0.50	0.02	0.91	0.07	c0.19	0.98	0.15
v/s Ratio Perm	0.16			0.14			0.21			c0.96		
v/c Ratio	1.11	0.43	0.02	0.80	0.58	1.45	0.40	1.72	0.10	1.73	1.67	0.23
Uniform Delay, d1	50.4	50.6	39.4	39.3	45.7	42.5	28.4	30.5	7.3	45.7	27.0	8.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.12	0.72	0.54
Incremental Delay, d2	96.5	0.6	0.0	12.8	1.1	212.9	1.8	328.8	0.0	344.4	304.5	0.1
Delay (s)	146.9	51.2	39.5	52.1	46.8	255.4	30.2	359.3	7.3	395.5	323.9	4.9
Level of Service	F	D	D	D	D	F	C	F	A	F	F	A
Approach Delay (s)		96.1			158.4			323.7			300.0	
Approach LOS		F			F			F			F	

Intersection Summary					
HCM Average Control Delay	257.9	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.60				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)		6.0	
Intersection Capacity Utilization	149.4%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Timings
5: McMahon Blvd & Unser Blvd

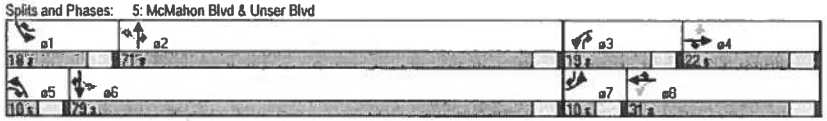
Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	201	31	254	405	774	56	1679	122	439	2013	298
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	22.0	32.0	19.0	31.0	49.0	10.0	71.0	90.0	18.0	79.0	89.0
Total Split (%)	7.7%	16.9%	24.6%	14.6%	23.8%	37.7%	7.7%	54.6%	69.2%	13.8%	60.8%	68.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min		Min	C-Min	
Act Effct Green (s)	26.0	19.0	29.0	38.0	28.0	46.0	75.0	68.0	87.0	86.0	76.0	86.0
Actuated g/C Ratio	0.20	0.15	0.22	0.29	0.22	0.35	0.58	0.52	0.67	0.66	0.58	0.66
v/c Ratio	1.24	0.43	0.09	0.80	0.58	1.48	0.40	1.89	0.12	1.79	1.96	0.29
Control Delay	179.8	53.5	18.6	57.8	49.2	256.4	21.0	428.6	4.2	390.7	456.5	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	179.8	53.5	18.6	57.8	49.2	256.4	21.0	428.6	4.2	390.7	456.5	3.7
LOS	F	D	B	E	D	F	C	F	A	F	F	A
Approach Delay		114.8			162.7			388.3			396.9	
Approach LOS		F			F			F			F	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 124 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.96
Intersection Signal Delay: 321.8 Intersection LOS: F
Intersection Capacity Utilization 159.4% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 5: McMahon Blvd & Unser Blvd



HCM Signalized Intersection Capacity Analysis
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/5/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	201	31	254	405	774	56	1679	122	439	2013	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.42	1.00	1.00	0.40	1.00	1.00	0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	782	3505	1568	737	3505	1568	109	1845	1568	104	1845	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	259	221	34	273	435	832	61	1825	133	462	2119	314
RTOR Reduction (vph)	0	0	20	0	0	8	0	0	22	0	0	45
Lane Group Flow (vph)	259	221	14	273	435	824	61	1825	111	462	2119	269
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	17.0	27.0	36.0	26.0	44.0	71.0	66.0	85.0	84.0	74.0	84.0
Effective Green, g (s)	26.0	19.0	29.0	38.0	28.0	46.0	75.0	68.0	87.0	86.0	76.0	86.0
Actuated g/C Ratio	0.20	0.15	0.22	0.29	0.22	0.35	0.58	0.52	0.67	0.66	0.58	0.66
Clearance Time (s)	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	
Lane Grp Cap (vph)	209	512	350	340	755	555	151	965	1049	259	1079	1037
v/s Ratio Prot	c0.07	0.06	0.01	0.10	0.12	c0.53	0.02	0.99	0.07	c0.21	c1.15	0.17
v/s Ratio Perm	0.18			0.14			0.21			0.98		
v/c Ratio	1.24	0.43	0.04	0.80	0.58	1.48	0.40	1.89	0.11	1.78	1.96	0.26
Uniform Delay, d1	50.4	50.6	39.6	39.3	45.7	42.0	28.3	31.0	7.7	45.8	27.0	9.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	0.87	0.66
Incremental Delay, d2	141.6	0.6	0.0	12.8	1.1	227.3	1.8	405.0	0.0	360.4	435.4	0.1
Delay (s)	192.0	51.2	39.6	52.1	46.8	269.3	30.1	436.0	7.7	407.6	458.9	6.0
Level of Service	F	D	D	D	D	F	C	F	A	F	F	A
Approach Delay (s)		121.4			167.9			395.5			401.6	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	327.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	159.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

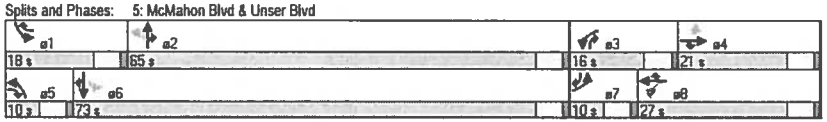
Timings
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	201	31	254	405	774	56	1679	122	439	2013	298
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Detector Phase	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	21.0		10.0	21.0		10.0	21.0		10.0	21.0	
Total Split (s)	10.0	21.0	31.0	16.0	27.0	45.0	10.0	65.0	61.0	18.0	73.0	83.0
Total Split (%)	8.3%	17.5%	25.8%	13.3%	22.5%	37.5%	8.3%	54.2%	67.5%	15.0%	60.8%	69.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		Min	C-Min		Min	C-Min	
Act Effct Green (s)	25.0	18.0	28.0	34.0	24.0	42.0	69.0	62.0	78.0	80.0	70.0	80.0
Actuated g/C Ratio	0.21	0.15	0.23	0.28	0.20	0.35	0.58	0.52	0.65	0.67	0.58	0.67
v/c Ratio	1.28	0.42	0.09	0.85	0.62	1.49	0.37	1.01	0.13	1.64	1.97	0.29
Control Delay	194.2	49.1	20.9	61.9	48.3	261.9	17.5	52.4	2.3	326.9	457.3	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	194.2	49.1	20.9	61.9	48.3	261.9	17.5	52.4	2.3	326.9	457.3	1.8
LOS	F	D	C	E	D	F	B	D	A	F	F	A
Approach Delay		120.3			166.1			48.0			387.1	
Approach LOS		F			F			D			F	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 48 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.97			
Intersection Signal Delay: 220.3		Intersection LOS: F	
Intersection Capacity Utilization 147.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: McMahon Blvd & Unser Blvd



HCM Signalized Intersection Capacity Analysis
5: McMahon Blvd & Unser Blvd

Terry O. Brown, P.E.
9/6/2009 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	201	31	254	405	774	56	1679	122	439	2013	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (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 Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	3505	1568	1752	1845	1568
Flt Permitted	0.36	1.00	1.00	0.41	1.00	1.00	0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	666	3505	1568	752	3505	1568	119	3505	1568	114	1845	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	259	221	34	273	435	832	61	1825	133	462	2119	314
RTOR Reduction (vph)	0	0	15	0	0	8	0	0	39	0	0	49
Lane Group Flow (vph)	259	221	19	273	435	824	61	1825	94	462	2119	265
Turn Type	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov	pm+pt		pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	21.0	16.0	28.0	32.0	22.0	40.0	65.0	60.0	76.0	78.0	68.0	78.0
Effective Green, g (s)	25.0	18.0	28.0	34.0	24.0	42.0	69.0	62.0	78.0	80.0	70.0	80.0
Actuated g/C Ratio	0.21	0.15	0.23	0.28	0.20	0.35	0.58	0.52	0.65	0.67	0.58	0.67
Clearance Time (s)	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	
Lane Grp Cap (vph)	202	526	366	321	701	549	164	1811	1019	281	1076	1045
v/s Ratio Prot	c0.07	0.06	0.01	0.09	0.12	c0.53	0.02	0.52	0.06	c0.21	c1.15	0.17
v/s Ratio Perm	0.19			0.15			0.19			0.90		
v/c Ratio	1.28	0.42	0.05	0.85	0.62	1.50	0.37	1.01	0.09	1.64	1.97	0.25
Uniform Delay, d1	45.9	46.3	35.7	38.1	43.8	39.0	25.7	29.0	7.8	41.7	25.0	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.16	0.70	0.36
Incremental Delay, d2	159.3	0.5	0.1	18.9	1.7	235.0	1.4	23.0	0.0	297.6	437.8	0.1
Delay (s)	205.2	46.8	35.7	57.0	45.6	274.0	27.1	52.0	7.9	345.9	455.2	2.9
Level of Service	F	D	D	E	D	F	C	D	A	F	F	A
Approach Delay (s)		125.9			171.0			48.4			388.7	
Approach LOS		F			F			D			F	

Intersection Summary					
HCM Average Control Delay	222.6	HCM Level of Service	F		
HCM Volume to Capacity ratio	1.76				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0		
Intersection Capacity Utilization	147.7%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	1	1	1	363	147	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	1	1	427	173	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			551			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	428				218	215
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324				94	90
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				79	100
cM capacity (veh/h)	1121				823	880

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	2	428	174
Volume Left	1	0	173
Volume Right	0	427	1
cSH	1121	1700	823
Volume to Capacity	0.00	0.25	0.21
Queue Length 95th (ft)	0	0	20
Control Delay (s)	4.1	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	4.1	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	1	1	1	282	473	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	1	1	332	556	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			551			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	333				171	167
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	264				93	89
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				35	100
cM capacity (veh/h)	1222				854	913

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	2	333	558
Volume Left	1	0	556
Volume Right	0	332	1
cSH	1222	1700	854
Volume to Capacity	0.00	0.20	0.65
Queue Length 95th (ft)	0	0	124
Control Delay (s)	4.0	0.0	16.8
Lane LOS	A		C
Approach Delay (s)	4.0	0.0	16.8
Approach LOS			C

Intersection Summary			
Average Delay	10.5		
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	43	3	174	1	2	66
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.85	0.85
Hourly flow rate (vph)	56	4	226	1	2	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				437		
pX, platoon unblocked					0.98	
vC, conflicting volume			60		511	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			60		490	58
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		99	92
cM capacity (veh/h)			1538		447	1005

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	60	227	80
Volume Left	0	226	2
Volume Right	4	0	78
cSH	1700	1538	970
Volume to Capacity	0.04	0.15	0.08
Queue Length 95th (ft)	0	13	7
Control Delay (s)	0.0	7.7	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	7.7	9.0
Approach LOS			A

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	34	4	125	1	6	223
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	40	5	147	1	7	262
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				437		
pX, platoon unblocked						
vC, conflicting volume			45		338	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			45		338	42
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		99	74
cM capacity (veh/h)			1557		594	1025

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	45	148	269
Volume Left	0	147	7
Volume Right	5	0	262
cSH	1700	1557	1006
Volume to Capacity	0.03	0.09	0.27
Queue Length 95th (ft)	0	8	27
Control Delay (s)	0.0	7.5	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	7.5	9.9
Approach LOS			A

Intersection Summary			
Average Delay		8.2	
Intersection Capacity Utilization		34.4%	ICU Level of Service A
Analysis Period (min)		15	

Traffic Count Data Sheet

Year Counts Taken: **2009**

E-W Street **Southern Blvd**
N-S Street: **Unser Blvd**

Speed Limit (Southern Blvd)= **25** MPH
Speed Limit (Unser Blvd)= **45** MPH
Date of Count: 5/20/09

Begin Time	End Time	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	~~26~~	~~81~~	~~46~~	~~28~~	~~72~~	~~32~~	~~47~~	~~80~~	~~41~~	~~85~~	~~126~~	~~15~~
7:15 AM	7:30 AM	**20**	**104**	**49**	**34**	**94**	**43**	**28**	**58**	**26**	**98**	**104**	**14**
7:30 AM	7:45 AM	**29**	**113**	**118**	**27**	**68**	**23**	**48**	**111**	**47**	**112**	**205**	**15**
7:45 AM	8:00 AM	**36**	**131**	**78**	**30**	**48**	**35**	**42**	**85**	**48**	**111**	**177**	**25**
8:00 AM	8:15 AM	**28**	**92**	**64**	**22**	**52**	**45**	**40**	**103**	**42**	**95**	**192**	**32**
8:15 AM	8:30 AM	~~21~~	~~90~~	~~54~~	~~28~~	~~58~~	~~34~~	~~30~~	~~68~~	~~35~~	~~92~~	~~104~~	~~27~~
8:30 AM	8:45 AM	~~28~~	~~110~~	~~69~~	~~29~~	~~69~~	~~44~~	~~23~~	~~86~~	~~37~~	~~101~~	~~162~~	~~44~~
8:45 AM	9:00 AM	~~36~~	~~138~~	~~44~~	~~34~~	~~72~~	~~36~~	~~29~~	~~83~~	~~46~~	~~87~~	~~94~~	~~33~~
AM Peak Hour Volumes		**113**	**440**	**309**	**113**	**262**	**146**	**158**	**357**	**163**	**416**	**678**	**86**
% of Total Traffic		3.5%	13.6%	9.5%	3.5%	8.1%	4.5%	4.9%	11.0%	5.0%	12.8%	20.9%	2.7%
% Directional			26.6%			16.1%			20.9%			36.4%	
AM Peak Hour Factor			*0.83*			*0.76*			*0.82*			*0.89*	

Begin Time	End Time	Eastbound (Southern Blvd)			Westbound (Southern Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~26~~	~~93~~	~~29~~	~~49~~	~~170~~	~~95~~	~~118~~	~~191~~	~~41~~	~~93~~	~~115~~	~~24~~
4:15 PM	4:30 PM	~~27~~	~~70~~	~~37~~	~~53~~	~~181~~	~~131~~	~~97~~	~~145~~	~~47~~	~~112~~	~~141~~	~~17~~
4:30 PM	4:45 PM	~~34~~	~~86~~	~~30~~	~~54~~	~~163~~	~~111~~	~~113~~	~~195~~	~~32~~	~~97~~	~~143~~	~~25~~
4:45 PM	5:00 PM	~~35~~	~~65~~	~~30~~	~~45~~	~~124~~	~~61~~	~~101~~	~~125~~	~~29~~	~~75~~	~~142~~	~~19~~
5:00 PM	5:15 PM	**24**	**43**	**34**	**44**	**124**	**73**	**86**	**146**	**16**	**43**	**74**	**15**
5:15 PM	5:30 PM	**25**	**80**	**55**	**63**	**171**	**133**	**113**	**187**	**44**	**103**	**184**	**34**
5:30 PM	5:45 PM	**29**	**107**	**64**	**49**	**204**	**119**	**110**	**219**	**45**	**94**	**135**	**24**
5:45 PM	6:00 PM	**33**	**78**	**42**	**39**	**161**	**121**	**97**	**190**	**44**	**115**	**146**	**25**
PM Peak Hour Volumes		**111**	**308**	**195**	**195**	**660**	**446**	**406**	**742**	**149**	**355**	**539**	**98**
% of Total Traffic		2.6%	7.3%	4.6%	4.6%	15.7%	10.6%	9.7%	17.6%	3.5%	8.4%	12.8%	2.3%
% Directional			14.6%			30.9%			30.9%			23.6%	
PM Peak Hour Factor			*0.77*			*0.87*			*0.87*			*0.77*	

Traffic Count Data Sheet

Year Counts Taken: **2009**

E-W Street **Cabezon Blvd**
N-S Street: **Unser Blvd**

Speed Limit (Cabezon Blvd)= **25** MPH
Speed Limit (Unser Blvd)= **45** MPH
Date of Count: 5/13/09

Begin Time	End Time	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	**0**	**4**	**11**	**10**	**3**	**17**	**6**	**148**	**11**	**35**	**306**	**1**
7:15 AM	7:30 AM	**1**	**3**	**13**	**13**	**7**	**23**	**6**	**189**	**14**	**55**	**296**	**1**
7:30 AM	7:45 AM	**1**	**7**	**9**	**11**	**10**	**27**	**15**	**215**	**22**	**47**	**318**	**2**
7:45 AM	8:00 AM	**0**	**9**	**18**	**11**	**13**	**21**	**11**	**177**	**22**	**40**	**264**	**4**
8:00 AM	8:15 AM	~~0~~	~~5~~	~~9~~	~~14~~	~~7~~	~~20~~	~~4~~	~~139~~	~~15~~	~~40~~	~~278~~	~~2~~
8:15 AM	8:30 AM	~~0~~	~~6~~	~~7~~	~~5~~	~~15~~	~~22~~	~~11~~	~~137~~	~~15~~	~~31~~	~~194~~	~~8~~
8:30 AM	8:45 AM	~~8~~	~~22~~	~~22~~	~~13~~	~~52~~	~~15~~	~~23~~	~~134~~	~~25~~	~~44~~	~~185~~	~~8~~
8:45 AM	9:00 AM	~~6~~	~~34~~	~~31~~	~~6~~	~~13~~	~~22~~	~~14~~	~~140~~	~~12~~	~~18~~	~~175~~	~~2~~
AM Peak Hour Volumes		**2**	**23**	**51**	**45**	**33**	**88**	**38**	**729**	**69**	**177**	**1184**	**8**
% of Total Traffic		0.1%	0.9%	2.1%	1.8%	1.3%	3.6%	1.6%	29.8%	2.8%	7.2%	48.4%	0.3%
% Directional			3.1%			6.8%			34.2%			55.9%	
AM Peak Hour Factor			***0.70***			***0.86***			***0.83***			***0.93***	

Begin Time	End Time	Eastbound (Cabezon Blvd)			Westbound (Cabezon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~0~~	~~4~~	~~7~~	~~17~~	~~6~~	~~62~~	~~8~~	~~297~~	~~17~~	~~32~~	~~213~~	~~1~~
4:15 PM	4:30 PM	~~0~~	~~4~~	~~13~~	~~14~~	~~8~~	~~66~~	~~6~~	~~280~~	~~17~~	~~34~~	~~163~~	~~0~~
4:30 PM	4:45 PM	~~0~~	~~5~~	~~3~~	~~9~~	~~8~~	~~45~~	~~12~~	~~258~~	~~16~~	~~26~~	~~146~~	~~5~~
4:45 PM	5:00 PM	~~0~~	~~1~~	~~1~~	~~0~~	~~2~~	~~37~~	~~15~~	~~186~~	~~7~~	~~10~~	~~90~~	~~2~~
5:00 PM	5:15 PM	**0**	**3**	**4**	**13**	**2**	**69**	**4**	**284**	**13**	**43**	**181**	**0**
5:15 PM	5:30 PM	**0**	**0**	**4**	**22**	**6**	**68**	**14**	**311**	**18**	**48**	**242**	**0**
5:30 PM	5:45 PM	**0**	**1**	**6**	**8**	**4**	**65**	**7**	**337**	**12**	**41**	**229**	**0**
5:45 PM	6:00 PM	**0**	**2**	**3**	**18**	**14**	**71**	**19**	**325**	**16**	**35**	**205**	**1**
PM Peak Hour Volumes		**0**	**6**	**17**	**61**	**26**	**273**	**44**	**1257**	**59**	**167**	**857**	**1**
% of Total Traffic		0.0%	0.2%	0.6%	2.2%	0.9%	9.9%	1.6%	45.4%	2.1%	6.0%	31.0%	0.0%
% Directional			0.8%			13.0%			49.1%			37.0%	
PM Peak Hour Factor			***0.82***			***0.87***			***0.94***			***0.88***	

Traffic Count Data Sheet

Year Counts Taken: **2009**

E-W Street **19th Ave SE**
N-S Street: **Unser Blvd**

Speed Limit (19th Ave SE)= **25** MPH
Speed Limit (Unser Blvd)= **45** MPH
Date of Count: 5/19/09

Begin Time	End Time	Eastbound (19th Ave SE)			Westbound (19th Ave SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	2	0	8	0	0	0	1	150	0	0	352	1
7:15 AM	7:30 AM	4	0	6	0	0	0	3	195	0	0	295	1
7:30 AM	7:45 AM	1	0	13	0	0	0	1	236	0	0	312	2
7:45 AM	8:00 AM	2	0	7	0	0	0	4	202	0	0	341	0
8:00 AM	8:15 AM	~~1~~	~~0~~	~~8~~	~~0~~	~~0~~	~~0~~	~~3~~	~~166~~	~~0~~	~~0~~	~~287~~	~~1~~
8:15 AM	8:30 AM	~~3~~	~~0~~	~~6~~	~~0~~	~~0~~	~~0~~	~~0~~	~~176~~	~~0~~	~~1~~	~~281~~	~~2~~
8:30 AM	8:45 AM	~~1~~	~~0~~	~~9~~	~~0~~	~~0~~	~~0~~	~~2~~	~~177~~	~~0~~	~~1~~	~~219~~	~~2~~
8:45 AM	9:00 AM	~~6~~	~~0~~	~~5~~	~~0~~	~~0~~	~~0~~	~~1~~	~~146~~	~~0~~	~~0~~	~~218~~	~~0~~
AM Peak Hour Volumes		**9**	**0**	**34**	**0**	**0**	**0**	**9**	**783**	**0**	**0**	**1300**	**4**
% of Total Traffic		0.4%	0.0%	1.6%	0.0%	0.0%	0.0%	0.4%	36.6%	0.0%	0.0%	60.8%	0.2%
% Directional			2.0%			0.0%			37.0%			61.0%	
AM Peak Hour Factor			*0.77*						*0.84*			*0.92*	

Begin Time	End Time	Eastbound (19th Ave SE)			Westbound (19th Ave SE)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~1~~	~~0~~	~~5~~	~~0~~	~~0~~	~~0~~	~~8~~	~~282~~	~~0~~	~~0~~	~~200~~	~~3~~
4:15 PM	4:30 PM	~~1~~	~~0~~	~~5~~	~~0~~	~~0~~	~~0~~	~~13~~	~~294~~	~~0~~	~~1~~	~~276~~	~~5~~
4:30 PM	4:45 PM	~~2~~	~~0~~	~~7~~	~~0~~	~~0~~	~~0~~	~~13~~	~~301~~	~~0~~	~~0~~	~~257~~	~~1~~
4:45 PM	5:00 PM	6	0	4	0	0	0	6	310	0	0	286	3
5:00 PM	5:15 PM	1	0	7	0	0	0	10	342	0	0	287	3
5:15 PM	5:30 PM	2	0	6	0	0	0	15	314	0	0	296	3
5:30 PM	5:45 PM	5	0	3	0	0	0	13	354	0	0	229	3
5:45 PM	6:00 PM	~~2~~	~~0~~	~~4~~	~~0~~	~~0~~	~~0~~	~~10~~	~~299~~	~~0~~	~~0~~	~~211~~	~~1~~
PM Peak Hour Volumes		**14**	**0**	**20**	**0**	**0**	**0**	**44**	**1320**	**0**	**0**	**1098**	**12**
% of Total Traffic		0.6%	0.0%	0.8%	0.0%	0.0%	0.0%	1.8%	52.6%	0.0%	0.0%	43.8%	0.5%
% Directional			1.4%			0.0%			54.4%			44.3%	
PM Peak Hour Factor			*0.85*						*0.93*			*0.93*	

Traffic Count Data Sheet

Year Counts Taken: **2009**

E-W Street **McMahon Blvd**
N-S Street: **Unser Blvd**

Speed Limit (McMahon Blvd)= **25** MPH
Speed Limit (Unser Blvd)= **45** MPH
Date of Count: **5/14/09**

Begin Time	End Time	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	**31**	**87**	**24**	**22**	**29**	**24**	**3**	**79**	**34**	**134**	**194**	**22**
7:15 AM	7:30 AM	**41**	**63**	**13**	**26**	**30**	**32**	**5**	**87**	**20**	**128**	**175**	**21**
7:30 AM	7:45 AM	**48**	**57**	**14**	**15**	**22**	**45**	**2**	**81**	**38**	**154**	**161**	**25**
7:45 AM	8:00 AM	**42**	**67**	**16**	**28**	**22**	**26**	**8**	**105**	**42**	**96**	**160**	**19**
8:00 AM	8:15 AM	~~45~~	~~61~~	~~11~~	~~22~~	~~8~~	~~19~~	~~8~~	~~100~~	~~45~~	~~105~~	~~139~~	~~17~~
8:15 AM	8:30 AM	~~34~~	~~58~~	~~9~~	~~18~~	~~18~~	~~35~~	~~5~~	~~69~~	~~32~~	~~103~~	~~137~~	~~14~~
8:30 AM	8:45 AM	~~31~~	~~57~~	~~16~~	~~35~~	~~29~~	~~53~~	~~10~~	~~95~~	~~40~~	~~117~~	~~113~~	~~13~~
8:45 AM	9:00 AM	~~30~~	~~50~~	~~15~~	~~14~~	~~26~~	~~42~~	~~11~~	~~116~~	~~42~~	~~114~~	~~158~~	~~25~~
AM Peak Hour Volumes		**162**	**274**	**67**	**91**	**103**	**127**	**18**	**352**	**134**	**512**	**690**	**87**
% of Total Traffic		6.2%	10.5%	2.6%	3.5%	3.9%	4.9%	0.7%	13.5%	5.1%	19.6%	26.4%	3.3%
% Directional			19.2%			12.3%			19.3%			49.3%	
AM Peak Hour Factor			*0.89*			*0.91*			*0.81*			*0.92*	

Begin Time	End Time	Eastbound (McMahon Blvd)			Westbound (McMahon Blvd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~37~~	~~59~~	~~7~~	~~38~~	~~92~~	~~106~~	~~22~~	~~170~~	~~34~~	~~66~~	~~111~~	~~50~~
4:15 PM	4:30 PM	~~30~~	~~36~~	~~7~~	~~45~~	~~87~~	~~96~~	~~10~~	~~181~~	~~22~~	~~97~~	~~161~~	~~36~~
4:30 PM	4:45 PM	~~33~~	~~42~~	~~6~~	~~40~~	~~92~~	~~120~~	~~5~~	~~154~~	~~32~~	~~93~~	~~127~~	~~44~~
4:45 PM	5:00 PM	~~37~~	~~58~~	~~3~~	~~42~~	~~82~~	~~100~~	~~10~~	~~133~~	~~22~~	~~86~~	~~120~~	~~36~~
5:00 PM	5:15 PM	**43**	**40**	**7**	**46**	**91**	**132**	**10**	**151**	**30**	**81**	**121**	**42**
5:15 PM	5:30 PM	**35**	**54**	**6**	**63**	**74**	**83**	**13**	**164**	**21**	**71**	**147**	**46**
5:30 PM	5:45 PM	**45**	**47**	**9**	**57**	**80**	**135**	**14**	**174**	**24**	**62**	**137**	**55**
5:45 PM	6:00 PM	**39**	**60**	**9**	**38**	**81**	**136**	**9**	**189**	**26**	**73**	**127**	**42**
PM Peak Hour Volumes		**162**	**201**	**31**	**204**	**326**	**486**	**46**	**678**	**101**	**287**	**532**	**185**
% of Total Traffic		5.0%	6.2%	1.0%	6.3%	10.1%	15.0%	1.4%	20.9%	3.1%	8.9%	16.4%	5.7%
% Directional			12.2%			31.4%			25.5%			31.0%	
PM Peak Hour Factor			*0.91*			*0.93*			*0.92*			*0.95*	

Signalized Intersection Information Sheet

Intersection: **Southern / Unser**

Speed Limit - E-W Street: UNKNOWN
Speed Limit - N-S Street: 45 M.P.H.
Type of Intersection Control: Signalized
Date: **5/20/2009**

East Bound Approach: Southern

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	2	-	1
Length -	350					250

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	NO

Is there a right turn slip laned that by-passes the traffic signal? YES-Yield

West Bound Approach: Southern

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	2	-	1
Length -	300					450

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	NO	NO

Is there a right turn slip laned that by-passes the traffic signal? YES-Yield
add lane

North Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	2	-	-	2	-	1
Length -	220					350

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Protected ->	YES	YES	NO

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

South Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	2	-	-	2	-	1
Length -	600					500

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Protected ->	YES	YES	NO

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

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: **Cabezon / Unser**

Speed Limit - E-W Street: UNKNOWN
Speed Limit - N-S Street: UNKNOWN
Type of Intersection Control: Signalized
Date: **5/13/2009**

East Bound Approach: Cabezon

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	1	-	1
Length -	180					180

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted ->	NO	YES	NO

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

West Bound Approach: Cabezon

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	-	1	-
Length -	200					0

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted ->	NO	YES	NO

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

North Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	150					150

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	NO

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

South Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	200					120

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted ->	NO	NO	NO

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

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: **McMahon / Unser**

Speed Limit - E-W Street: UNKNOWN
Speed Limit - N-S Street: UNKNOWN
Type of Intersection Control: Signalized
Date: **5/14/2009**

East Bound Approach: McMahon

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	2	-	1
Length -	200					200

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	YES

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

West Bound Approach: McMahon

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	2	-	1
Length -	200					200

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	YES

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

North Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		1	-	1
Length -	180					180

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	YES

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

South Bound Approach: Unser

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		1	-	1
Length -	180					120

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	YES

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

NOTE: Existing Geometry

Terry O. Brown P.E.
Civil / Transportation Engineering

Thursday, October 01, 2009

John Castillo, P.E., Director of Development Services
City of Rio Rancho
3200 Civic Center Circle NE
Rio Rancho, NM 87144

Re: X-Ray Associates of NM Development (Westside Blvd. / Unser Blvd.)

Dear John:

I would like to stress an important item of consideration with regard to the request for access on Unser Blvd. at Ronda Ave. in Rio Rancho. Although it is apparent in the Access Justification Study, I am concerned that it may be overlooked in the approval process.

The reason that I believe that the requested access of Ronda Ave. (aligned with Wellspring Ave.) on Unser Blvd. is critical is due to the fact that without the approval of the requested access, all entering and exiting traffic generated by the 250,000 S.F. medical office / commercial development will be forced to access only via 19th Avenue (Westside Blvd.). Roughly half of the traffic approaching the project will be travelling on Unser Blvd. from the south. If there is no access for them from Unser Blvd., they will be required to travel north to 19th Ave. (Westside Blvd.) and make the left at that intersection. That fact alone will result in one of two consequences: 1) A northbound dual left turn operation (protected only) will be required much earlier than if the access at Ronda Ave. was approved, and 2) failure of the intersection of 19th Ave. (Westside Blvd.) will occur prior to 2030 and failure of the northbound left turn movement is projected to fail for the year 2012. In fact, the Access Justification Study indicates that, if the Ronda Ave. access is not granted, then the 2030 AM Peak Hour LOS for the intersection of 19th Ave. / Unser will be "F" and the 2030 PM Peak Hour LOS for the intersection will be "E" (with the northbound left turn movement operating at LOS "F").

For the reasons stated above, I am concerned that there will be operational problems (and perhaps associated safety problems) at the intersection of 19th Ave. (Westside Blvd.) / Unser Blvd. if the Ronda Ave. access is not approved as requested.

Please call me if you have questions or if you need additional information.

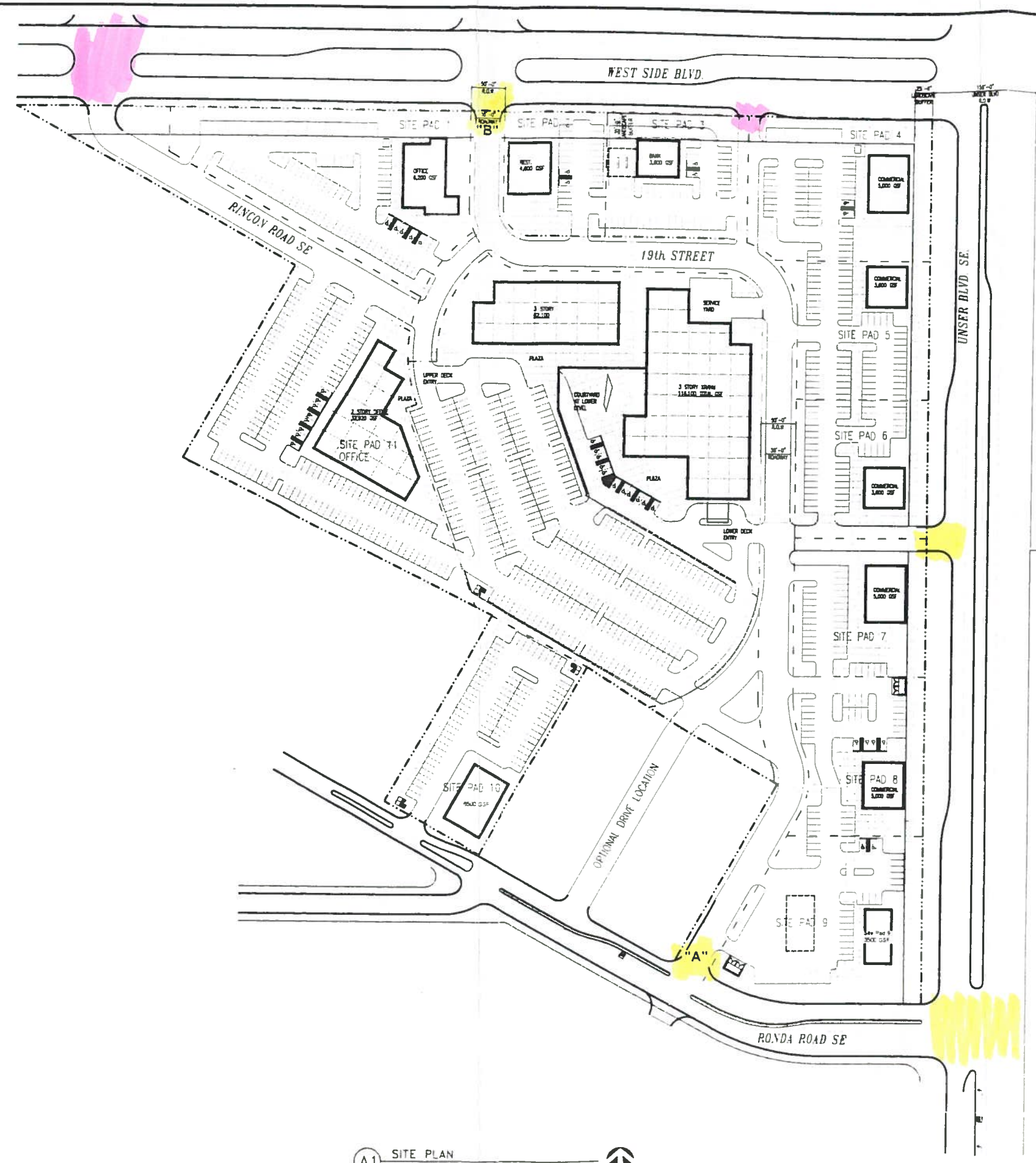
Best Regards,

Terry O Brown

Terry O. Brown, P.E.

cc: Josh Skarsgard, The Skarsgard Firm

Terry O. Brown • tobe@swcp.com • P.O. Box 92051 • Albuquerque, NM 87199 • 505 · 883 · 8807



1,100 PROVIDED PARKING SPACES
PHASE TWO EMPLOYEE PARKING AN
ADDITIONAL 100 PARKING SPACES

A1 SITE PLAN
SCALE: 1"=80'-0"

TRUE NORTH

8/20/2009 4:14 PM

P:\0908 XRANM\10-Drawings\1-PREDES\08xx-AS-101-a.dwg

LJACKSON

STUDIO SW ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS INC
2101 Mountain Rd NW Albuquerque NM 87104
505.843.9639 fax 505.843.9681
Web Site www.studiosw.com
E-Mail mail@studiosw.com

CONSULTANTS

Architect Engineer

XRANM
RIO RANCHO

Key Plan

MARK	DATE	DESCRIPTION
ISSUE		SCHEMATIC DESIGN
PROJECT NO		0908
CAD DWG FILE		08xx-AS-101.DWG
DRAWN BY		LAJ
CHECKED BY		DD
DATE		08/24/2009

SHEET TITLE

SITE PLAN

AS-101

Terry O. Brown P.E.
Civil / Transportation Engineering

Saturday, September 19, 2009

John Castillo, P.E.
City of Rio Rancho Development Services
3200 Civic Center Circle NE
Rio Rancho, NM 87144

Re: X-Ray Associates Development (Westside Blvd. / Unser Blvd.) - SUPPLEMENT

Dear John:

Please consider this letter as a supplement to the Access Justification Study for the X-Ray Associates of New Mexico project dated September 7, 2009. The Access Justification Study for the proposed X-Ray Associates of New Mexico Development at the southwest corner of 19th Ave. (Westside Blvd.) / Unser Blvd. did not provide an analysis for the proposed right-turn-in only driveway on Unser Blvd. approximately 650 feet south of Westside Blvd. The 2000 Highway Capacity Manual provides methodology for determination of average controlled delay at unsignalized intersections (two-way stop control) for the left, thru, and right turn movements from the minor street onto the major street and for the left turn movements from the major street onto the minor street. There is no method to calculate the delay at the unsignalized intersection for the main street thru traffic nor the right turn movements off of the main street onto the side (or minor) street. Therefore, the delay to the thru movements on the major street and the right turn movements off of the major street are considered to be zero. An analysis of the proposed right-turn-in only driveway on the west side of Unser Blvd. approximately 650 feet south of Westside Blvd. would show no impact to the Unser Blvd. corridor nor to the adjacent transportation system.

Implementation of the new right-turn-in only driveway on Unser Blvd. at that located will serve to intercept a significant percentage of the southbound right turn volume on Unser Blvd. at Ronda Ave. It would also serve as emergency access for the medical facilities in the local of the proposed driveway.

Consideration of the proposed right-turn-in only driveway concludes that the new access will have no impact on the operations within neither the Unser Blvd. corridor nor the adjacent transportation system. It will reduce the southbound right turn movement on Unser Blvd. at Ronda Ave. This analysis forecasts that the southbound right turn movement reduction at Ronda Ave. will be approximately 51 vehicles per hour during the AM Peak Hour period and approximately 47 vehicles per hour during the PM Peak Hour period. Hence, the projected southbound right turn volume turning right into the new driveway will be 51 vph during the AM Peak Hour and 47 vph during the PM Peak Hour.

Terry O. Brown • tobe@swcp.com • P.O. Box 92051 • Albuquerque, NM 87199 • 505 · 883 · 8807

John Castillo, Director of Development Services
Saturday, September 19, 2009

Re: X-Ray Associates Development (Westside Blvd. / Unser Blvd.) - SUPPLEMENT

Recommendation is made to approve the southbound to westbound right-in only driveway on the west side of Unser Blvd. approximately 650 feet south of 19th Ave. with the following recommended conditions:

- Design and construction of the new driveway shall be prohibitive to eastbound right turn traffic (or any other movement other than the southbound to westbound right turn movement).
- A 12' wide southbound right turn deceleration lane shall be constructed on Unser Blvd. at the proposed right-in only driveway. The length of the southbound right turn deceleration lane should be 370' plus a 150'-150' reverse curve transition.
- The curb return radius of the driveway should be a minimum of 50 feet.
- Eastbound traffic at the driveway shall be prohibited within a distance of approximately 150 feet west of Unser Blvd. The paved entrance aisle should not be wider than 20 feet for the 150 foot distance from Unser Blvd. Also, this section of driveway aisle shall be separated from adjacent parking areas by raised medians or curbs. "DO NOT ENTER" (R5-1) signs should be appropriately places at the point at which the one-way driveway begins on the west end.

Attached is a copy of the proposed site plan modified to show the proposed right-turn-in only driveway.

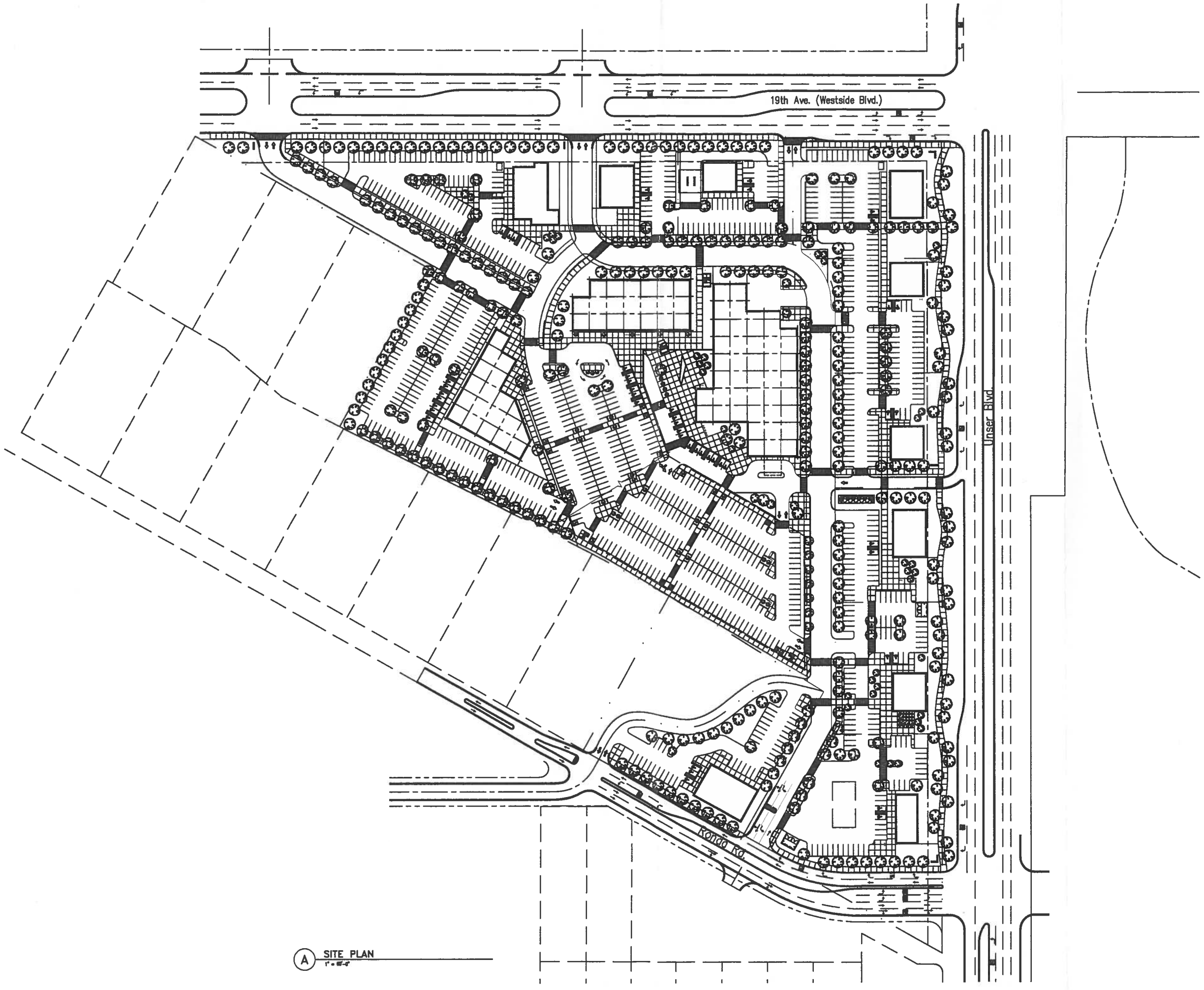
Please call me if you have questions or if you need additional information.

Best Regards,

Terry O. Brown, P.E.

cc: Josh Skarsgard, The Skarsgard Firm w/attachment
John MacKenzie, Mark Goodwin & Associates w/attachment
Dave Dekker, Studio Southwest Architects w/attachment

attachment as noted



A SITE PLAN
1" = 60'-0"

08xx-AS-101.DWG
AA
DD

SITE PLAN
OPTION 1

AS-101

MR COG
Communities Working Together

Mid-Region Council of Governments

September 16, 2009

Re: Request for Access Modification by City of Rio Rancho

Dear Roadway Access Committee:

The City of Rio Rancho is requesting consideration of ***additional access on Unser Boulevard at Wellspring (Rhonda Rd.), an additional right in only access on southbound Unser Boulevard between Rhonda Rd. and Westside Boulevard and additional access on 19th Avenue (Westside Blvd.)***. We are enclosing copies of a request letter from the City of Rio Rancho along with completed Roadway Access Modification Request Forms, the Traffic Impact Analysis for the proposed development and an Access Justification Study. Please review these documents according to the Roadway Access Policies and Modification Procedures and submit your comments back to me by ***Friday, October 2, 2009***. We would like to schedule a meeting of the RAC ***during the week of October 3rd*** to discuss your comments and tentatively make a recommendation to the TCC for their regular meeting on October 9, 2009. Please send me an email with your availability during that week along with any questions you might have (please copy Jack Lord on all correspondence).

Sincerely,

Terrence Doyle

Enclosures

Cc: David Albright, Chair – TCC (letter only)
Lisa Vornholt, City of Rio Rancho (letter only)

Terry O. Brown P.E.
Civil / Transportation Engineering

Tuesday, September 14, 2009

Jack Lord
Mid-Region Council of Governments
809 Copper Ave. NW
Albuquerque, NM 87102

Re: X-Ray Associates Development (Westside Blvd. / Unser Blvd.)

Dear Jack:

Attached are five copies of the DRAFT Traffic Impact Study and Access Justification Study for review by the Roadway Access Committee and consideration by the Transportation Coordinating Committee for approval. The access will be sponsored by the City of Rio Rancho. John Castillo has submitted a letter of request to Terry Doyle. Also, I believe the intent is to be heard at the Transportation Coordinating Committed on October 9, 2009.

Please call me if you have questions or if you need additional information.

Best Regards,

Terry O. Brown, P.E.

cc: John Castillo, Director of Development Services, City of Rio Rancho
Josh Skarsgard, The Skarsgard Firm

attachments as noted

Terry O. Brown • tobe@swcp.com • P.O. Box 92051 • Albuquerque, NM 87199 • 505 · 883 · 8807

September 14, 2009

Mr. Terry Doyle, Assistant Transportation Director
Mid-Region Council of Governments
809 Copper Ave. NW
Albuquerque, NM 87102

Re: Notice of intent for access modification to Unser Blvd.

Dear Mr. Doyle,

Enclosed are 5 copies of the Traffic Impact Study and Access Justification Study presented by X-Ray Associates of New Mexico in consideration for development in Rio Rancho. The request is to add full access to the west side of Unser Blvd. at Ronda Rd., SE and for a right in only (south bound) between Westside Blvd. and Ronda Rd.

I respectfully request that this document be considered for review by the Roadway Access Committee so that a recommendation can be submitted to the Transportation Coordinating Committee at its meeting scheduled for October 9, 2009.

If you have any questions or concerns, I can be contacted by e-mail to jcastillo@ci.rio-rancho.nm.us or by phone to 505-891-8784. Thank you for your time and consideration.

Sincerely,

John R. Castillo, PE
Development Services Director

JRC/mj

ROADWAY ACCESS MODIFICATION REQUEST FORM

GENERAL INFORMATION	
Date: 09/15/2009	
Sponsoring Agency: Rio Rancho	
Contact Name: John Castillo	Phone: 891-5005
	E-Mail: jcastillo@ci.rio-rancho.nm.us
Applicant: X-Ray Associates of NM	
Contact Name: Josh Skarsgard/Terry O. Brown	Phone: 883-8807
	E-Mail: tobe@swcp.com
MODIFICATION INFORMATION	
Facility	Unser Blvd, Westside Blvd.
Location of Change	Unser Blvd s/o Westside (2 locations), Westside Blvd w/o Unser
Current Policy for Facility and Location	½ mile full access, ¼ mile right in-out
Nature of the Change	Additional Access
Reason for the Change	Support Development
IDENTIFICATION OF ANALYSIS INPUTS	
Implementation Year	See TIA and AJS
Forecast Year	
Trip Generation for Proposed Development	
Days/Peak Hours Analyzed	
Trip Generation Numbers	
Level of Analysis Required	
Additional assumptions/inputs used in the analysis	
ANALYSIS RESULTS	
The analysis results submitted by the applicant must be consistent with the scope	

established by the Roadway Access Committee. At a minimum, the applicant must:

- Analyze both the Build and the No-Build scenarios in the Implementation Year (effects with and without the requested access change(s))
- Analyze both the Build and the No-Build scenarios in the Forecast Year (effects with and without the requested access change(s))

The MRCOG MPO will provide peak-hour link volumes for the Base Year and Horizon Year from the current Metropolitan Transportation Plan to the applicant.

The applicant will be required to conduct analyses as defined by the RAC using the MRCOG data. The applicant must use the most recent data available to complete the analysis. It will be the applicant's responsibility to conduct traffic counts as needed and to derive any peak-hour turning movements that may be required to complete the analysis. Traffic counts conducted by the applicant must conform with New Mexico Traffic Counting Standards. ***Results of the analysis must accompany this form.***

ATTACHMENTS	
Map(s):	
General location with current access	
Analysis area	
Site plan with requested access	
Other	
Other:	
Any additional documentation that will assist the Technical Review Committee or Transportation Coordinating Committee to decide the case.	

RioRancho
City of Vision
Department of Public Works – Engineering Division

June 20, 2008

Mr. Jack Lord
Mid-Region Council of Governments
809 Copper Avenue NW
Albuquerque, NM 87102

RE: Unser Access Agreement – McMahon Blvd. to Westside Blvd.

Mr. Lord:

The City of Rio Rancho is currently reviewing the development of a large commercial tract and Presbyterian Hospital site located at the NE corner of Unser Blvd. and Black Arroyo Rd. This 2 million plus square foot development is bordered by Westside Blvd. to the north and east, Unser Blvd. to the west and Black Arroyo Rd. to the south. Requests for access onto Unser Blvd. have been made by both developments.

Unser Blvd. is classified as a limited access principal arterial by the Mid-Region Council of Governments. This designation runs through multiple jurisdictions; the City of Rio Rancho, the City of Albuquerque and Bernalillo County. Permitted access locations within the City of Rio Rancho and adjacent to the proposed project are at Westside Blvd. (full access). Permitted access locations within the City of Albuquerque (County Line to McMahon Blvd.) are at McMahon Blvd. (full access) and at Black Arroyo Rd. (right-in and right-out only).

The developers **Traffic Impact Study** recommends the following access points onto Unser Blvd. in the City of Rio Rancho:

1. Signalization of the Westside Blvd. / Unser Blvd. intersection. The traffic signal is being constructed by the Cabezon Communities subdivision developer.
2. Full access signalized intersection at Arroyo Road (new road) and Unser Blvd. This proposed roadway bisects the commercial and hospital development. The roadway runs from West to East connecting Unser Blvd. to Westside Blvd. This access point has a quarter mile spacing between Westside Blvd. and Black Arroyo Rd. on Unser Blvd.
3. A northbound right-in only access half way between Arroyo Blvd. and Black Arroyo Rd. This access is proposed to accommodate northbound emergency vehicles.

The City of Rio Rancho supports the above study recommendations.

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While it is duly noted that existing plans for this corridor negate any additional full access locations between McMahon Blvd. and Westside Blvd. the reality of development as it is occurring within the Cities of Rio Rancho and Albuquerque in this area do not support the access policy as written. Every possible alternative to accommodate future traffic access points on limited access facilities should be investigated prior to requesting new access on any access controlled facility in our region.

The following access recommendations were agreed upon by the City of Rio Rancho, the City of Albuquerque and the New Mexico Department of Transportation as the best access options to accommodate current and future planned growth along this segment of Unser Blvd.

1. Restrict the new access from Arroyo Rd. to Unser Blvd. to a signalized T-intersection. No access will be granted to properties on the west side of Unser Blvd. Satisfactory operation of the intersection of Westside Blvd. / Unser Blvd. is dependent on this intersections construction. Future access to the west side of this intersection would be detrimental to traffic flows on Unser Blvd. and may negate any of the level of service improvements achieved at Westside Blvd. / Unser Blvd. The City of Rio Rancho will commit to analyzing and constructing this intersection as a high "T" intersection when Unser Blvd. is widened to a six lane roadway in the future from McMahon Blvd. to Southern Blvd.
2. The median on Unser Blvd. at Black Arroyo Rd. will be constructed such that only right-in and right-out movements are permitted. Left in access from Unser Blvd to Black Arroyo Rd. may be constructed provided the intersection remains un-signalized. Temporary construction of the median on Unser Blvd. in this area will be included with the project with the final alignment and cross section being constructed by the City of Albuquerque or its representative in the future. Any changes to these access restriction would require a complete analysis demonstrating the need and impact to Unser Blvd. and be approved by the COG and the NSHTD.
3. A full access signalized intersection at Night Whisper Road and Unser Blvd. will be constructed by the City of Albuquerque once warranted.
4. The City of Rio Rancho and the City of Albuquerque will work to prevent Black Arroyo Blvd. traffic from using local residential streets in order to access Unser Blvd. Should cut through traffic become a concern on residential streets adjacent to Black Arroyo Blvd., traffic calming measures will be employed where feasible, including but not limited to speed humps, traffic circles, traffic diverters and possibly implementing full diverters on Black Arroyo Blvd. west of Unser. Reducing the amount of cut-through traffic from adjacent neighborhoods to gain access onto 19th Ave. (Westside Blvd.) and Night Whisper Rd. is the key component. The City of Albuquerque's goal will be to get their local traffic onto Sweet Dreams Dr. for access to Night Whisper Rd. or McMahon Blvd. The City of Rio Rancho's goal is to provide a south to north route to 19th Ave. (Westside Blvd.). Traffic calming will be employed where feasible.

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These recommendations are a compromise by the three affected public entities to maintain traffic flows on Unser Blvd. while accommodating development in these areas in a responsible manner. The City of Rio Rancho and the City of Albuquerque recognize that limiting access to Unser Blvd. is needed in order for the roadway to operate efficiently and any additional modifications to access in the area would be considered only if an traffic analysis documents a revision is warranted to address an operational or safety concern and address any impact the change may have on the operation of Unser Blvd. Purposed modification would require the approval of the controlling agencies.

Please advise if any additional information is needed or requested concerning this submittal.

Respectfully,

Leonard C. Rivera
City of Rio Rancho
Traffic Operations Manager

Concur:

Tony Abbo, P.E., P.T.O.E.
NMDOT District 3
Traffic Engineer

Kevin Broderick, P.E.
City of Albuquerque
Traffic Engineering Division Manager

Attachments: Vicinity Map (1).

Cc: Lisa Vornholt, P.E., CoRR Director of Public Works
Scott Sensanbaugher, P.E., CoRR Acting City Engineer
Project File

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PROPOSED COMMERCIAL DEVELOPMENT
(SITE PLAN SUBJECT TO CHANGE)
PRESBYTERIAN HOSPITAL SITE
(SITE PLAN SUBJECT TO CHANGE)
WESTSIDE BLVD
SANDOVAL COUNTY
Bohannan Huston

RESOLUTION

of the

TRANSPORTATION COORDINATING COMMITTEE

of the

METROPOLITAN TRANSPORTATION BOARD

of the

MID-REGION COUNCIL OF GOVERNMENTS OF NEW MEXICO

(R-09-01 TCC)

MODIFYING ACCESS POINTS ON UNSER BOULEVARD BETWEEN BLACK ARROYO BOULEVARD AND CABEZON BOULEVARD

WHEREAS, Resolution UTPPB R-84-15 designated Unser Boulevard from Gun Club Road to US 550 as a high-capacity limited access principal arterial with access limited to approximately one-quarter mile at-grade intersections; and

WHEREAS, the Roadway Access Limitations for the Albuquerque Metropolitan Planning Area (AMPA) allow a right-in/right-out access at approximately the midpoint on Unser Boulevard between Westside Boulevard and Cabezon Boulevard; and

WHEREAS, this action would relocate that access on the east side of Unser Boulevard to approximately seven hundred fifty (750) feet north of the intersection with Westside Boulevard; and

WHEREAS, Resolution R-05-09 MTB adopted policies for determining roadway access modifications in the Albuquerque Metropolitan Planning Area; and

WHEREAS it is the responsibility of the Transportation Coordinating Committee of the Metropolitan Transportation Board to affect any changes to the Limited Access Roadways in the Albuquerque Metropolitan Planning Area.

NOW, THEREFORE BE IT RESOLVED by the Transportation Coordinating Committee of the Metropolitan Transportation Board of the Mid-Region Council of Governments of New Mexico that the Roadway Access Policies for the Albuquerque Metropolitan Planning Area are amended, as shown on Attachment "A" and as described:

1. Relocating the RIGHT-IN/RIGHT-OUT unsignalized access on the east side of Unser Boulevard from the midpoint between Westside Boulevard and Cabezon Boulevard to approximately 750 feet north of the intersection with Westside Boulevard, and
2. Adding a new RIGHT-IN access on Unser at approximately the midpoint between Westside Boulevard and Arroyo Road.

PASSED, APPROVED, AND ADOPTED this 10th day of April 2009 by the Transportation Coordinating Committee of the Metropolitan Transportation Board of the Mid-Region Council of Governments of New Mexico.

Debbie Stover, Chair
Transportation Coordinating Committee

ATTEST:

Lawrence Reel
Executive Director

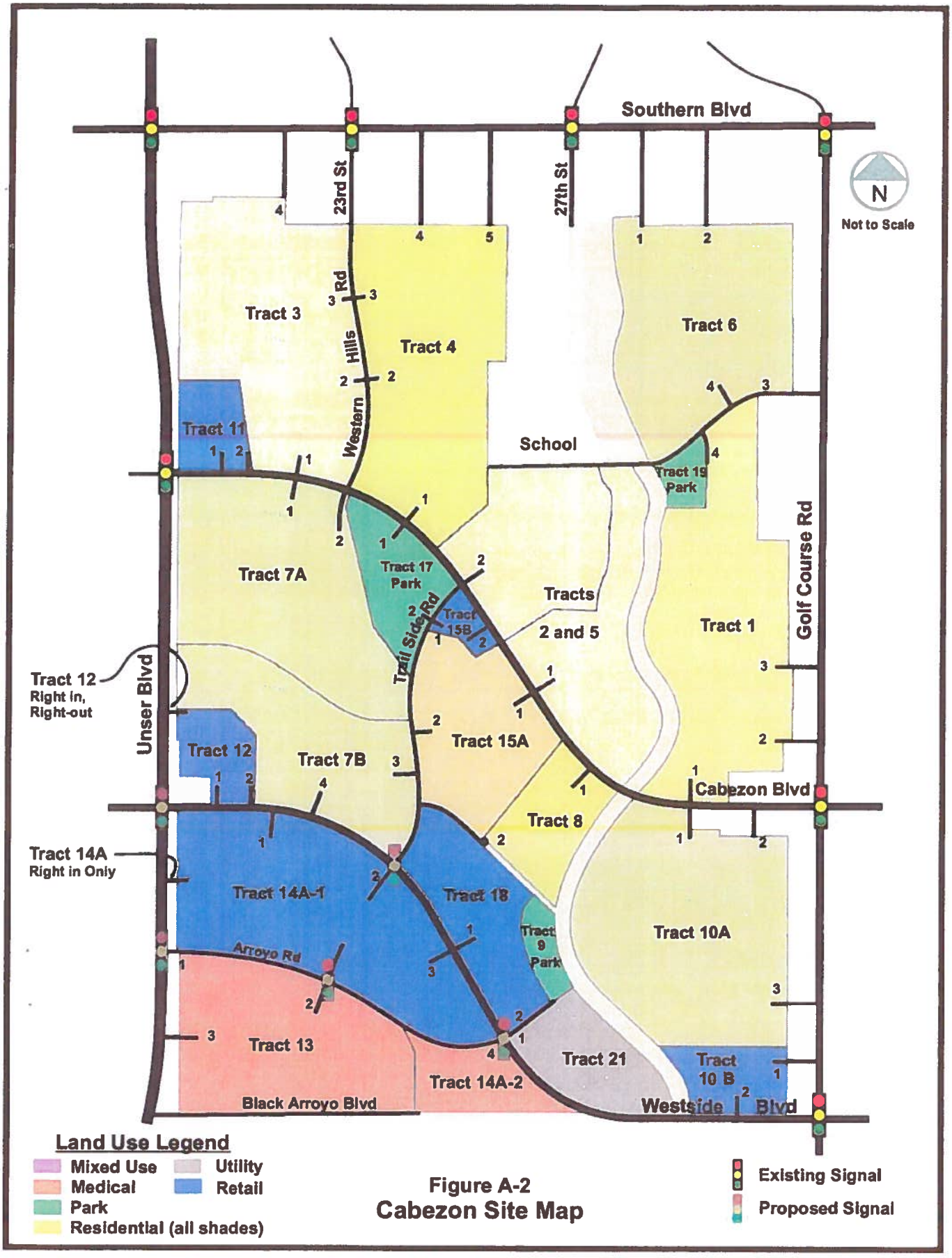

Figure A-2
Cabezon Site Map

Terry,

The City of Albuquerque supports the request for access modification per the letter dated September 16, 2009. However, the draft Traffic Impact Study should be revised as follows:

1. The conceptual site development plan (sheet A-3) should be revised to match the request for access modification;
2. The supplemental analysis (dated September 19, 2009) for the Unser Boulevard right turn-in only should be incorporated in the study;
3. The letter dated October 1, 2009 that addresses the need for additional access modification, per the requirement of the Unser Access Agreement - McMahon Boulevard to Westside Boulevard dated June 20, 2008, should be incorporated in the study.

Also, if full access at the intersection of Westside Boulevard/Rincon Road and right turn-in/right turn-out access on Westside Boulevard located approximately 250' west of Unser are desired, as shown on the conceptual site development plan (sheet A-3), then the applicant should revise the request for access modification and provide the appropriate analysis for review. However, if those access points are supported in the applicable Access Policy for Westside Boulevard then further analysis and modification to the current request for access would not be needed. Should this be the case, it should be referenced at those locations on the conceptual site development plan (sheet A-3) - see #1 above.

If you have any questions, let me know.

Tony

Loyd, Tony J.

From: Terry Doyle [tdoyle@mrcog-nm.gov]
Sent: Wednesday, September 30, 2009 3:49 PM
To: Loyd, Tony J.
Cc: jcastillo@ci.rio-rancho.nm.us; rbaker@bernco.gov; Abbo, Tony S., NMDOT; Jack Lord
Subject: RE: RAC Review of CORR Unser and Westside Access Request

Tony,

Attached is a PDF of the three party letter pertaining to your request. I believe Arroyo Road referenced in the letter is Wellspring/Rhonda (see map)

Terry

Phone: (505)247-1750
Email: tdoyle@mrcog-nm.gov

From: Loyd, Tony J. [mailto:TLoyd@cabq.gov]
Sent: Wednesday, September 30, 2009 2:50 PM
To: Terry Doyle
Subject: RE: RAC Review of CORR Unser and Westside Access Request

Terry,

I understand there is some type of written agreement concerning the previous request for access (east side of Unser) at Wellspring/Rhonda Avenue with Unser Boulevard. Do you have a copy of this agreement or know what it says and who it is between?

Tony

From: Terry Doyle [mailto:tdoyle@mrcog-nm.gov]
Sent: Wednesday, September 30, 2009 2:22 PM
To: Terry Doyle; Loyd, Tony J.; rbaker@bernco.gov; Abbo, Tony S., NMDOT; jcastillo@ci.rio-rancho.nm.us
Cc: Jack Lord
Subject: RE: RAC Review of CORR Unser and Westside Access Request

Good afternoon RAC members. Just checking in regarding your review of the subject access request delivered to you for review on 9/15/2009 (copy of request attached). I am hoping to have your comments and vote by this Friday, please let me know if you think we need to meet next week prior to Friday's TCC meeting on 10/9. I have no problem handling comments and the recommendation by email, but recognize that you may want to get together, just let me know.

Thanks,

Terry Doyle

Assistant Director of Transportation
Mid-Region Council of Governments
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Albuquerque, NM 87102
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