



SW Corner Sage & Unser

(Albuquerque, New Mexico)

Traffic Impact Study

January 04, 2023

DRAFT

HT#M10D023
Received 1/4/2023



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Sage and Unser Development Unser Blvd and Sage Rd - Albuquerque, NM Traffic Impact Study

Executive Summary

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed Unser and Sage Site Development to determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared in accordance with the requirements of the City of Albuquerque (COA). The City of Albuquerque scoping letter for this TIS is in Appendix pages A-139 thru A-141. Further, it is to show the impacts of a proposed request to request an additional right-in and right-out on Unser Blvd to Middle Regional Council of Governments (MRCOG).

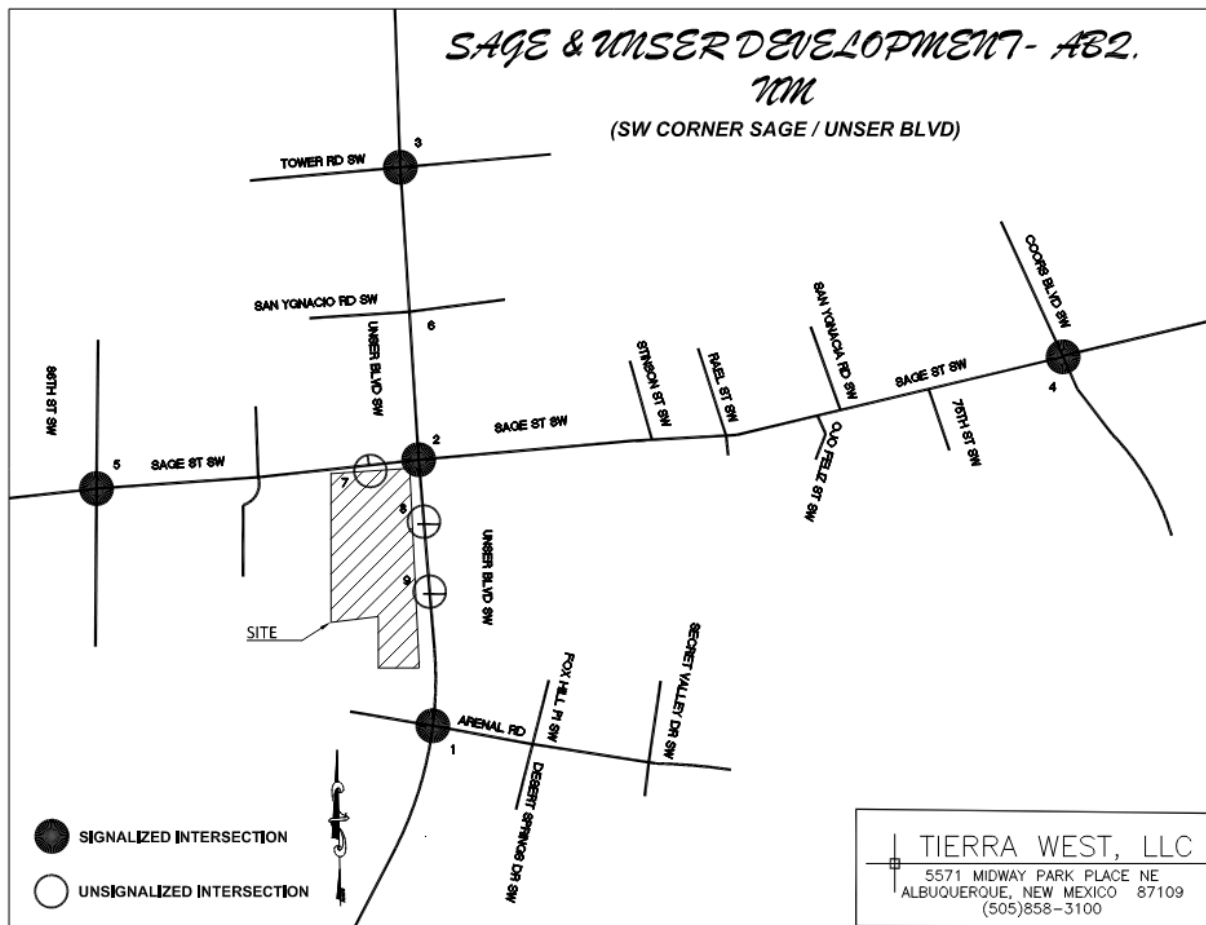
Site Location and Study Area

The proposed Unser and Sage Development is to be located at the southwest corner of Unser Blvd. and Sage Rd. in the City of Albuquerque, New Mexico. See Vicinity Map below.



The study area includes the six intersections listed below and the 3 access points for the Development and shown on the following map:

1. Unser Blvd & Arenal Rd. (Signalized)
2. Unser Blvd & Sage Rd. (Signalized)
3. Unser Blvd & Tower Rd. (Signalized)
4. Coors Blvd & Sage Rd. (Signalized)
5. Sage Rd. & 86th St. (Signalized)
6. Unser Blvd & San Ygnacio Rd (Unsignalized)
7. Sage Rd. & Driveway "A" (Existing)
8. Unser Blvd & Driveway "B" (Proposed – TCC Approval Requested)
9. Unser Blvd & Driveway "C" (Existing right-in, right-out and left in only)

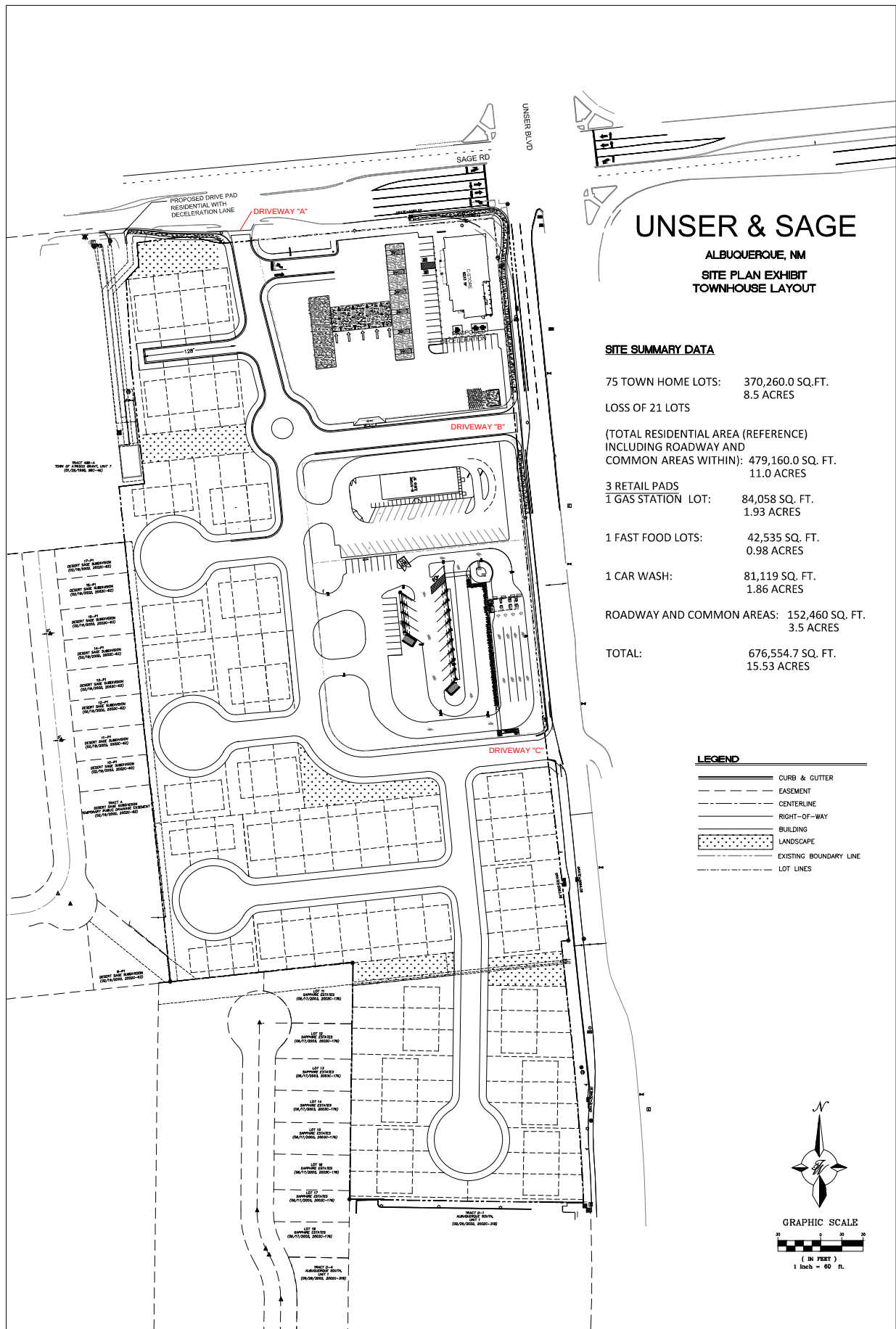


Development Description

The Unser and Sage Development is proposed for a total of 15.38 acres that is to be fully developed for the proposed 2025 Implementation Year and 2035 for the Horizon Year. The site will generate residential and commercial developments for the Westside of Albuquerque for use of the community. The Site Plan can be found in Appendix A-03.

The site is to be developed as the following:

- One Gas Station/Convenience Store with 17 Fueling Stations
- 1 Fast Food Restaurant with a drive through window totaling 3.82 per 1000 G.F.A.
- 75 Multi-Family Town Home Lots
- 1 Car Wash with One Automatic Tunnel



The anticipated Implementation Year for this project is 2025 and the Horizon Year is 2035. According to the Institute of Traffic Engineers' Trip Generation Rates, 11th Edition, ITE Codes used for the Proposed Unser and Sage Development are included as the following: Gas Station with a convenience store (ITE Code 945), Fast Food Restaurant with a Drive-Thru Window (ITE Code 934), Automated Car Wash (ITE Code 948), and Multifamily Housing (ITE Code 220).

Unser and Sage Development **Trip Generation Data (ITE Trip Generation Manual - 11th Edition)**

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet	Units					
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 4-5.5K (945)	17	4,371	230	230	193	193
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		6,660	324	336	331	312
Retail Commercial Trips		6,154	317	313	298	292
<i>Pass-By Trips</i>	30%		-95	-94	-89	-88
Total New Primary Trips			222	219	209	204
Total New Residential Trips			7	23	33	20

The Retail Commercial portion of the development (ITE Codes 934, 945, and 948) will produce 222 new entering trips and 219 new exiting trips during the weekday AM Peak Hour period and 209 new entering trips and 204 new exiting trips during the PM Peak Hour period. A 30% pass-by trip rate reduction was applied to the trip generation rates for retail trips only. The anticipated Residential Development (ITE Code 210) section of the site will generate 7 new entering trips and 23 new exiting trips during the weekday AM Peak Hour period and 33 new entering trips and 20 new exiting trips during the PM Peak Hour period. Trip Generations can be found below and in Appendix A-04. Driveway A is an existing driveway on Sage, Driveway B is a new proposed right-in and right-out and Driveway C is an existing right-in, right-out and left-in only.

Background traffic volumes were calculated by applying historical annual background traffic growth rates to the existing traffic volumes for the implementation year. **Existing traffic volumes** were collected during April of 2022 while school was in session. Summarized Volumes can be found in Appendix A-134 through A-138.

The results of the Implementation Year (2025) and Horizon Year (2035) AM and PM Peak Hour NO BUILD and BUILD Conditions are summarized in the following table:

Executive Summary Results Table

Intersection No. / Name	Signalization	Case	2025 Conditions		2035 Conditions	
			AM Peak	PM Peak	AM Peak	PM Peak
1 - Unser Blvd / Arenal Rd.	Signalized	NO BUILD	C - 20.9	B - 15.2	C - 28.9	B - 18.9
		BUILD	C - 21.2	B - 15.5	C - 34.6	C - 21.2
2 - Unser Blvd. / Sage Rd	Signalized	NO BUILD	C - 22.9	B - 19.9	D - 35.3	D - 43.1
		BUILD	D - 35.7	C - 24.4	D - 48.7	D - 54.6
3 - Unser Blvd. / Tower Rd.	Signalized	NO BUILD	B - 11.1	B - 16.8	B - 11.4	C - 26.1
		BUILD	B - 10.9	B - 16.9	B - 11.4	C - 28.6
4 - Coors Blvd. / Sage Rd.	Signalized	NO BUILD	F - 367.2	F - 140.2	F - 445.1	F - 194.0
		BUILD	F - 499.1	F - 331.9	F - 588.1	F - 420.3
5 - 86th Street / Sage Rd.	Signalized	NO BUILD	D - 35.8	D - 36.8	C - 34.1	D - 35.0
		BUILD	D - 34.8	D - 36.7	C - 33.2	D - 35.2
6 - Unser Blvd. / San Ygnacio Rd.	Unsignalized	NO BUILD	C - 16.5	C - 17.7	E - 47.2	E - 41.7
		BUILD	C - 17.1	C - 18.5	E - 49.9	F - 53.5
7 - Driveway "A" / Sage Rd.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	C - 21.9	C - 15.8	C - 15.7	B - 13.1
8 - Unser Blvd. / Driveway "B"	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	B - 12.3	C - 12.3	C - 16.6	C - 16.4
9 - Unser Blvd. / Driveway "C"	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	B - 12.5	C - 16.8	C - 14.9	C - 15.3

Mitigations made to the Intersection

Mitigations in red were applied to the intersection of Unser and Sage.

Determination of Warrants for Deceleration Lanes

Determination of Warrants for Deceleration Lanes for Driveway "A," Driveway "B" and Driveway "C" were conducted in accordance with the City of Albuquerque Development Process Manual (DPM) Criteria. The following table defines the City's warrant criteria for right and left turn lanes at driveways:

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"					
Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			Right Turn		
Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access	Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	55	30-40	50	102
Warranted (WBL Existing)			Warranted		
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	N/A	30-40	50	101
			Warranted		
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	105	30-40	50	20
Warranted (NBL Existing)			Not Warranted (SBR Existing)		

Determination of Warrants for Deceleration Lanes for Driveway “A”, indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A westbound left turn lane on Sage Rd. at Driveway “A” is warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 35 MPH. However, a westbound left-turn lane on Sage Rd. at Driveway “A” exists and it approximately 125-feet long (including transition). Therefore, no recommendation is made.
- An eastbound right turn deceleration lane is warranted at Driveway “A” per the COA DPM with a design speed of 35 MPH. This has been shown on the Site Plan at approximately 125-feet.

Determination of Warrants for Deceleration Lanes for Driveway “B”, indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A southbound right turn lane on Unser Blvd. at Driveway “B” is warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 40 MPH. This has been shown on the Site Plan at approximately 300-feet (including transition).
- Since Driveway ‘B’ is a right-in/right-out only access, a northbound left-turn lane is not required. Therefore, no recommendation is made.

Determination of Warrants for Deceleration Lanes for Driveway “C”, indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A 250-foot long (including taper) northbound left turn deceleration lane is warranted at Driveway “C”. However, a northbound left-turn lane at Unser Blvd. at Driveway “C” exists and it approximately 425-feet long (including transition). Therefore, no recommendation is made.
- A southbound right-turn lane on Unser Blvd. at Driveway “C” is not warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 40 MPH. However, a southbound right-turn lane on Unser Blvd. at Driveway “C” exists and it approximately 425-feet long (including transition). Therefore, no recommendation is made.

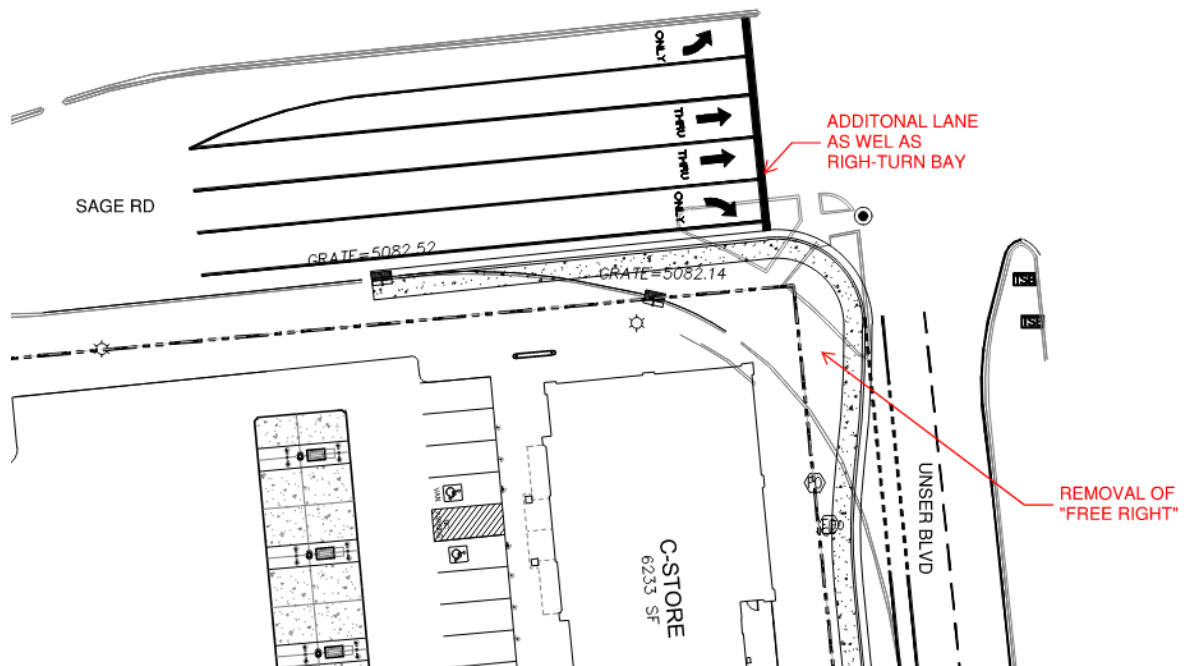
Access Justification

Driveway “A” and Driveway “C” are existing driveways. Driveway “C” was approved as a right-in, right-out, left-in only unsignalized driveway in 2008 (R-08-01-TCC) along the west side of Unser Blvd. approximately 800 feet south of Sage Rd. Approval for proposed Driveway “B” as a right-in, right-out unsignalized access approximately 360 feet south of Sage Rd. is requested with this application and with this Traffic Impact Study. An Access Evaluation Study has been prepared and will be included with a companion to this Traffic Impact Study. The Access Evaluation Study will provide arguments to justify the new access. Driveway “B” as a right-in, right-out unsignalized access along the west side of Unser Blvd. approximately 360 feet south of Sage Rd. (centerline to centerline) will require approval of not only the City of Albuquerque, but also the Transportation Coordinating Committee at the Mid-Region Council of Governments.

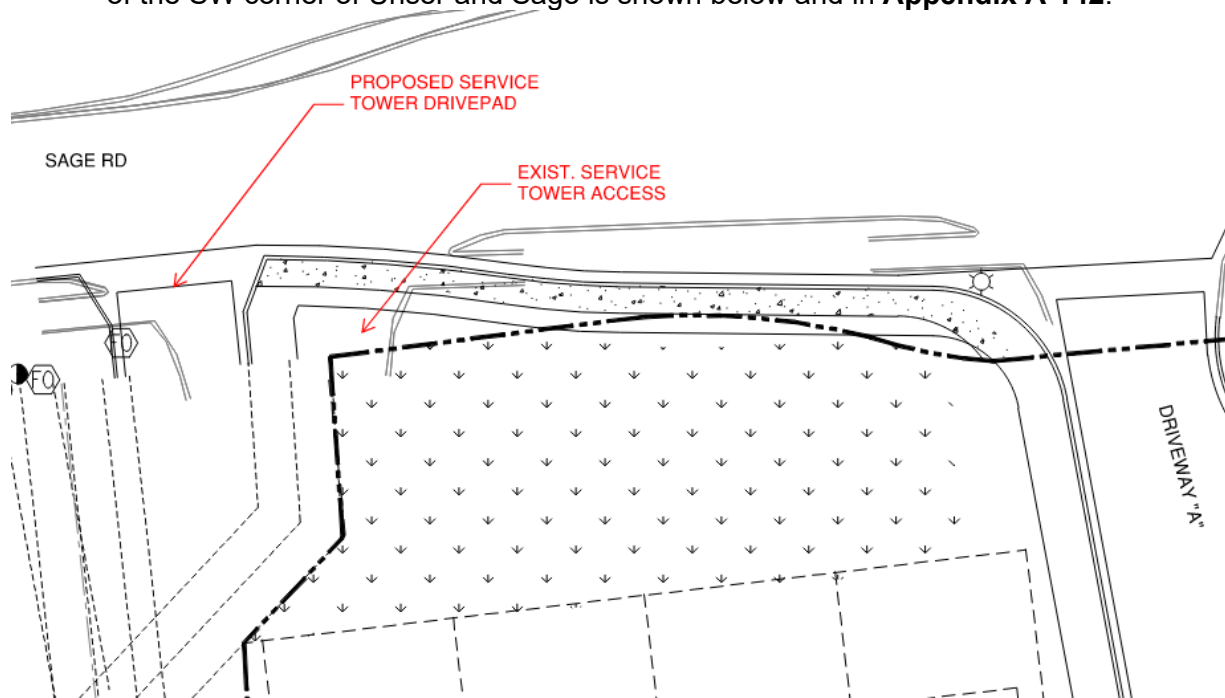
Summary of Impacts and Recommendations

There are 4 areas of concern with respect to the Executive Summary Results Table. Impacts and Recommendations are defined below:

- The results demonstrate that the signalized intersection of Unser and Sage is characterized by a marginally long delay for the projected 2035 volumes for the “AM Build” scenario. The scenario indicates that the signalized intersection is slightly congested as a result of the projected traffic volumes generated by the Unser and Sage Development (Full Development). With the additional growth in volumes from the proposed development, the projected delay for the Horizon Year (2035) increases the AM intersection delay by 12.4 seconds and raises the intersection delay to a LOS “E.” Existing lane geometry of the Unser and Sage intersection demonstrate the eastbound and westbound through movements (that travel through the intersection of Unser and Sage) are currently striped as one EB and one WB lane. Although the existing geometry demonstrates one EB and WB lane, there is sufficient pavement width for expansion of an additional EB and WB lane. **It is proposed to eliminate the existing striping and use this existing pavement section as additional through lanes as well as provide improvements the SW corner of the intersection.** These improvements also include elimination of the “free-right movement at the SW corner of Unser and Sage. This can be seen in the Exhibit below, and in Appendix-142. **The mitigations provided for this intersection include implementing an additional eastbound and westbound through lane, removal of the “free-right,” and optimizing the signal timing splits. The analysis of this report concludes that the timing splits and improving the intersection geometry of the Unser and Sage Intersection improves the Level of Service from a LOS “E” to a LOS “D.” The Sage and Unser Improvements exhibit is also shown below and in Appendix A-142.**



- A proposed change is the location of the Service Tower Driveway. Due to minimal trips taken for this access, the driveway could be changed to reflect the “once-a-month” maximum trips it experiences. The changes to this Service Tower access are shown below as 60-ft to the west of the existing driveway. Proposed changes also refer to changing the access from a driveway to a drive pad. Changing the access location also provides Driveway “A” additional length for a deceleration lane. The Mitigated Site Plan of the SW corner of Unser and Sage is shown below and in **Appendix A-142**.



- According to the COA Design Process Manual Table 7.7.67, the addition of an EB right deceleration lane into Driveway “A” is warranted. The existing access is already developed for the appropriate width according to DPM Table 7.4.47 Three-lane Drive for 30-ft wide. The warranted left-turn deceleration lane is existing with 100-ft of storage. The right-turn deceleration lane is also warranted but due to the spacing of the shifted Service Tower entrance, there is approximately 125-ft of storage. **This report concludes a deceleration lane is warranted for eastbound right access into Driveway “A”.**
- Also warranted by the COA DPM Table 7.7.67 and 7.4.68, a SB right-turn deceleration lane at Unser at Driveway “B”. The deceleration lane is proposed with 240-ft of storage length for the SB right-in right-out access point. **This report concludes that a SB right deceleration lane is warranted for Driveway “B.”**
- Driveway “C” warrants only a northbound left deceleration lane on Unser at Driveway “C” according to COA DPM Table 7.4.68 at the driveway access into the project site. The deceleration lane is currently existing and includes 400-ft of storage. The southbound right-turn deceleration lane at Driveway “C” currently is existing and is approximately 400-ft in length. **No recommendations are made for Driveway “C.”**

Recommendations

Unser Blvd / Sage Rd. – Optimizing the signal timing splits for the Implementation Year (2025) and the Horizon Year (2035) to improve the operation of the traffic signal.

Additional eastbound and westbound through lane before and after the signalized intersection of Unser Blvd and Sage Rd. – The restriping and additional geometry currently has width for the additional eastbound and westbound through lane from Driveway “A” access point to Abeyta Rd.

Removal of “Free-Right” at SW corner of Unser and Sage – Removal of the “free-right” movement at the SW corner of Sage and Unser and provide an eastbound right at the intersection. The EB right turning movement will keep the existing turn-bay storage of 280-ft.

Sage Rd. / Driveway “A” – Driveway “A” is an existing full access, unsignalized driveway north of the proposed site. This should still operate as a full access driveway and match the existing width of the access point. An additional right-turn deceleration lane is warranted for right-turn access into the proposed site development with a storage of 240-ft.

Unser Blvd. / Driveway “B” – A SB right-turn deceleration lane is warranted for southbound right-in access into the proposed site. This storage length will consist of 240-ft in storage length.

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Sage and Unser Development Unser Blvd and Sage Rd - Albuquerque, NM Traffic Impact Study

Introduction

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed Unser and Sage Site Development to determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared in accordance with the requirements of the City of Albuquerque (COA). The City of Albuquerque scoping letter for this TIS is in Appendix pages A-139 thru A-141.

Description of Proposed Development

The proposed Unser and Sage Development is to be located at the southwest corner of Unser Blvd. and Sage Rd. in the City of Albuquerque, New Mexico. See Vicinity Map below.



Land Use and Intensity

The proposed development is located at southwest corner of Unser Blvd. and Sage Rd. It is approximately 4,500-ft west of from Coors Blvd and approximately 7,000-ft from US Route 66 in the City of Albuquerque, NM. The site is to be developed as the following:

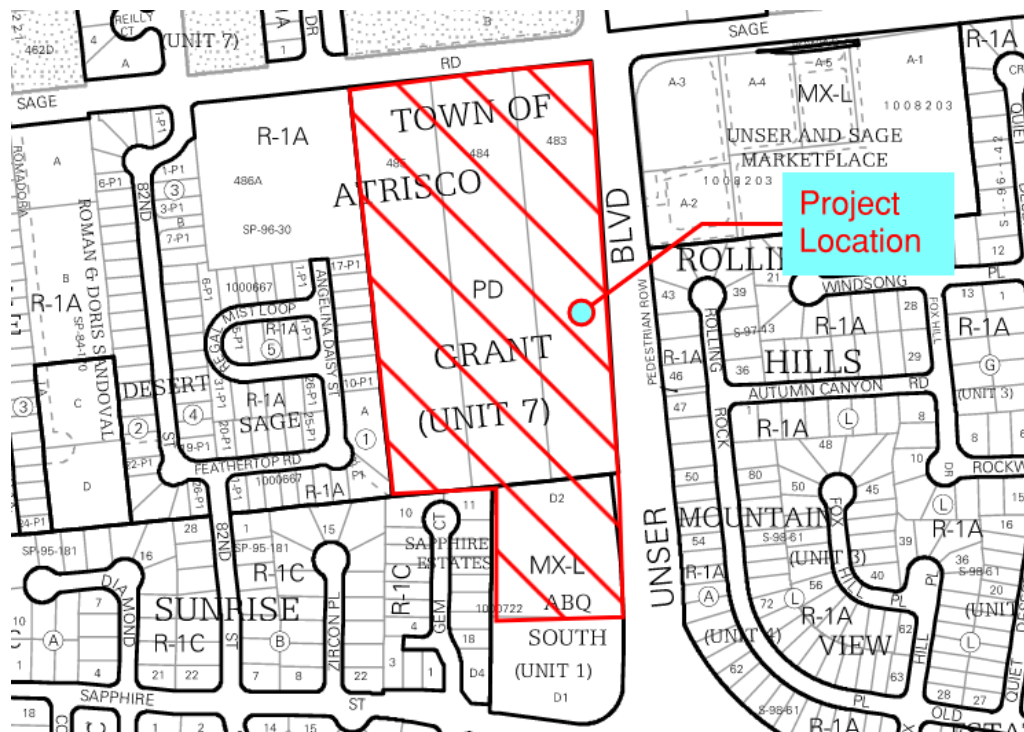
- One Gas Station/Convenience Store with 17 Fueling Stations
- 1 Fast Food Restaurant with a drive through window totaling 3.82 per 1000 G.F.A.
- 75 Multi-Family Town Home Lots
- 1 Car Wash with One Automatic Tunnel

Development Phasing and Timing

The development will be built in one phase. The anticipated implementation year for this project is 2025 and the horizon year is 2035.

Existing and Planned Zoning

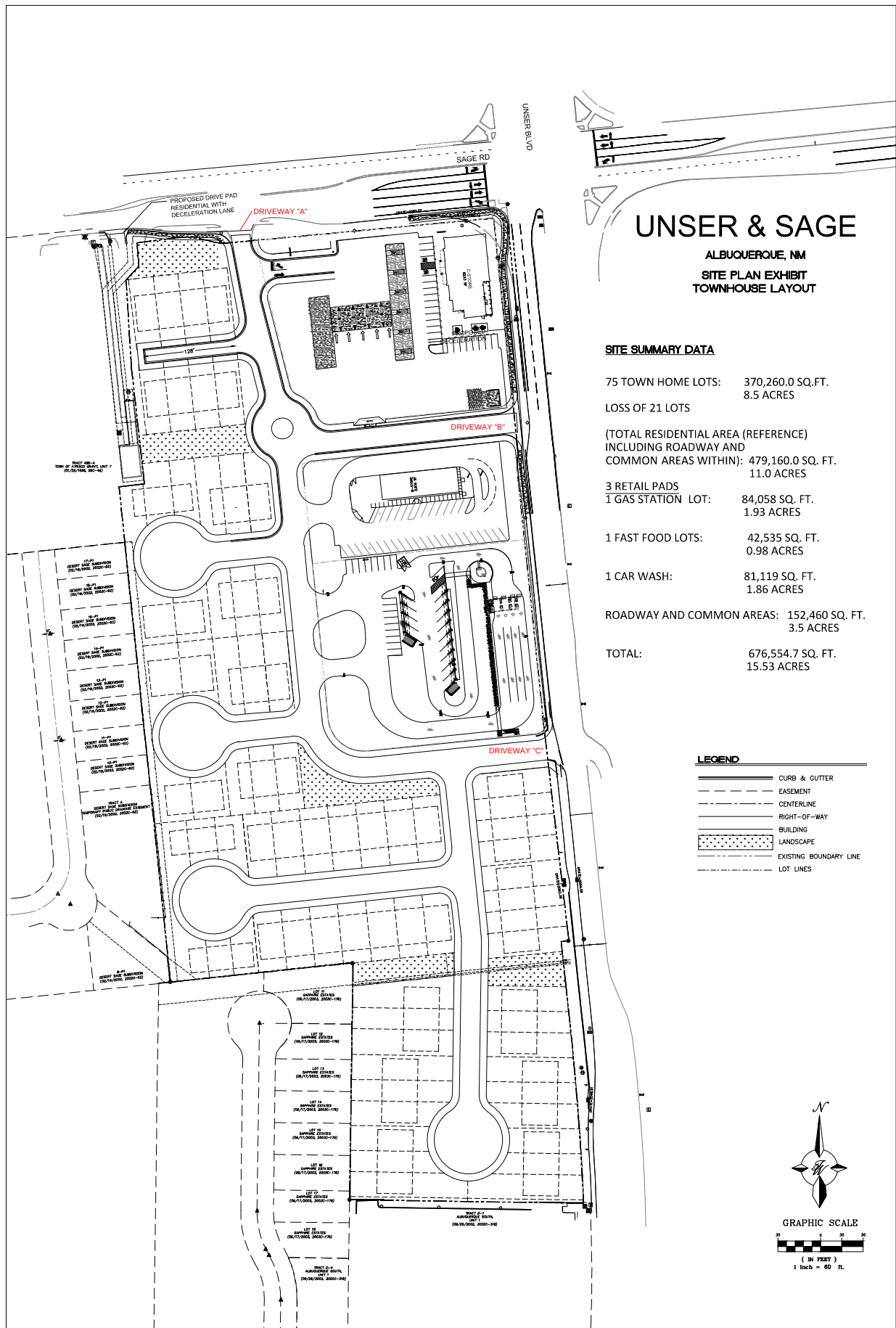
The proposed Development is located within the southwest quadrant of Albuquerque, NM. The north portion of the Proposed Development, totaling 15-acres, is currently zoned as Planned Development (PD). PD is to accommodate small to medium scale projects that do not create significant adverse impacts on nearby existing neighborhoods, City Parks or trails, or Major Public Open Space. The 15-acres will include the one fast-food restaurant, a Gas Station, and Residential town-home lots. The south portion (2.62-ac) of the Proposed Development is currently zoned as Commercial (MX-L) Low Intensity. This portion will contain one Automated Car Wash and the rest is Residential town-home lots. See Zone Atlas Map below and Appendix Page A-02.



Site Access

There are three new access driveways (Driveway 'A', Driveway 'B', and Driveway 'C'). Driveway 'A' is currently an existing full-access driveway located 430-feet to the west (centerline to centerline) of the intersection of Unser Blvd. and Sage Rd. This is the only "full-access" Driveway that will serve incoming traffic to both residential and commercial portions of the development. Driveway 'B' is a proposed right-in/right-out access located 360-feet south (centerline to centerline) from the intersection of Unser Blvd. and Sage Rd. This driveway will isolate most of the commercial traffic separate from the residential portion of the proposed development. Driveway 'C' is an existing right-in, right-out, left-in only access located 800-feet south (centerline to centerline) from the intersection of Unser Blvd. and Sage Rd. This will also provide access into the residential portion of the development but still have partial access for the left-in turn lane for northbound travelers into the commercial access. Both residential and commercial developments will be developed concurrently. The proposed site plan is shown on the next page and in Appendix page A-03.



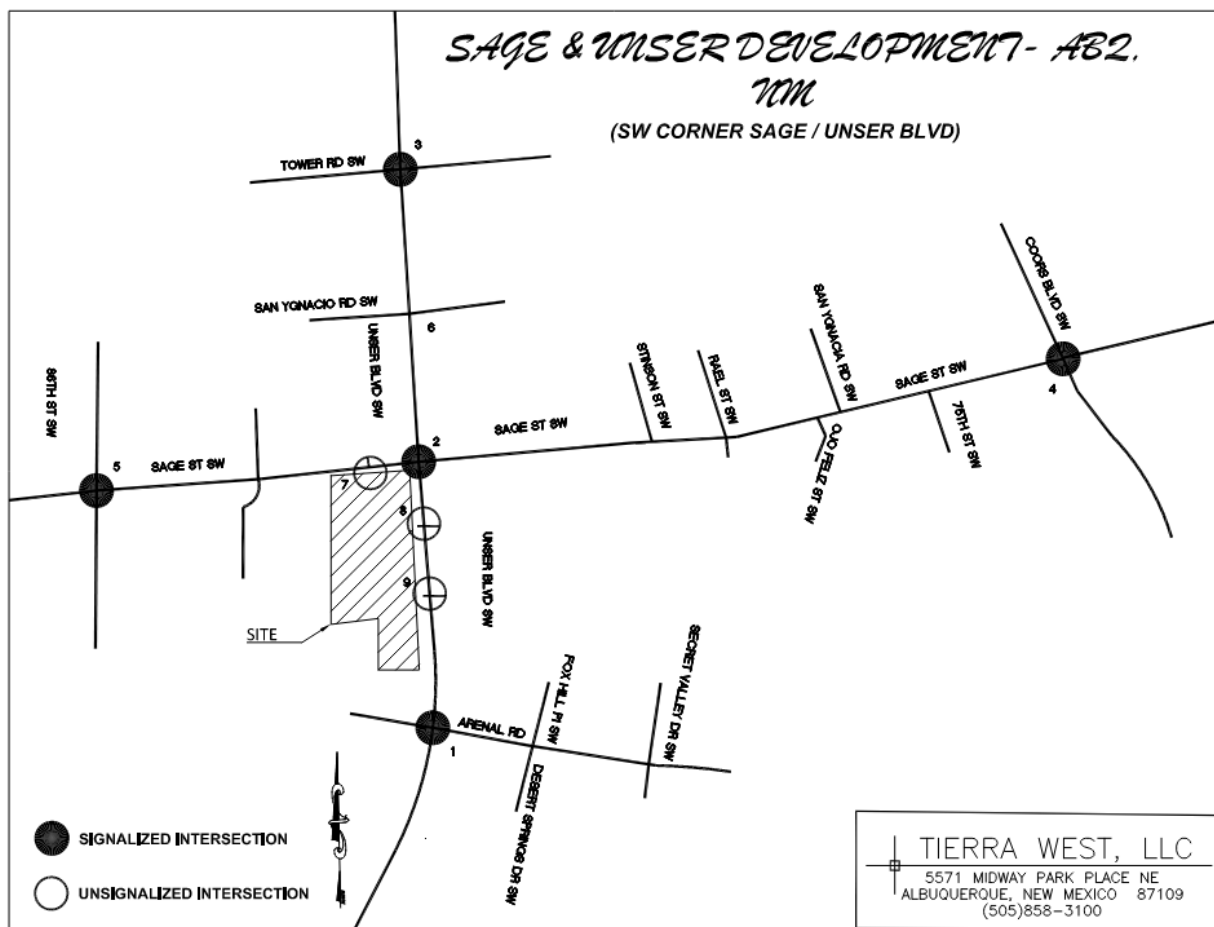


Study Area Conditions

Study Area Definition

A Traffic Impact Study Scoping Meeting was held on April 12, 2022. The attendees included Jeanne Wolfenbarger, P.E. (City of Albuquerque), Matthew Grush, P.E. (City of Albuquerque), Julie Luna, P.E. (Bernalillo County), Ronald R. Bohannon, P.E. (Tierra West LLC.), Terry Brown P.E. (Tierra West LLC.), and Amanda Herrera, P.E. (Tierra West LLC.). At the Scoping Meeting, it was determined that the study area for the TIS would include the six intersections listed below and 3 access points and shown on the following map:

1. Unser Blvd & Arenal Rd. (Signalized)
2. Unser Blvd & Sage Rd. (Signalized)
3. Unser Blvd & Tower Rd. (Signalized)
4. Coors Blvd & Sage Rd. (Signalized)
5. Sage Rd. & 86th St. (Signalized)
6. Unser Blvd & San Ygnacio Rd (Unsignalized)
7. Sage Rd. & Driveway "A"
8. Unser Blvd & Driveway "B"
9. Unser Blvd & Driveway "C"



Existing Land Use

The land for the project is undeveloped with and the study area is mostly developed with residential lots with minimal commercial in the area.

Other Planned or Approved Development and Transportation Improvements

There are two other major developments planned or approved in the influence area. Development activity in the area that was defined during the scoping of the Unser and Sage TIS Study included the MAS Charter School and Sage Park Subdivision. The MAS charter school was expanded as a Charter School in 2018. It contains 16-acres of land for education facilities K-5th Grade in the school implementation year 2018-2019. The plan has grown to a current school year of K-7th Grade in school year 2021-2022. Future expansion is projected for grades K-12th in school year 2026-2027. The volumes were taken from the MAS Charter School counts evaluated in 2022 and included in the base traffic volumes at the intersection of Sage and Coors Blvd. The volumes can be found in the tables below for AM and PM Peak:

AM Peak

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
52	0	0	48	32	72	0	76	0	0	0	4

PM Peak

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
20	0	0	40	24	56	0	28	0	0	0	0

The Sage Park Subdivision base traffic volumes were also included for the Unser and Sage TIS. The location of this subdivision is located on the northwest corner of Sage Rd. and Coors Blvd. Projected volumes were gathered from the Report completed by Lee Engineering in March 2021. The proposed subdivision includes 62 single family dwelling units with approximately 9.96-acres in total. Site access includes two access points; one access off San Ygnacio Rd, and one access off Sage Rd. Due to the traffic patterns identified in the report, the trip generated by the project have been identified in the following tables below:

AM Peak

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3	11	2	0	3	0	1	1	0	0	3	1

PM Peak

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2	7	1	0	12	0	2	4	0	0	2	3

Existing Roadway System

Tower Rd. is classified as a Major Collector on the Futures 2040 Long Range Roadway System Map. It is generally a four-lane paved roadway in the study area with raised curbs and gutters, sidewalks, and raised medians. The posted speed limit on Tower Rd. in the study area is 35 MPH.

San Ygnacio Rd. is a Local Urban Street according to the Futures 2040 Long Range Roadway System Map. It is generally a two-lane paved roadway with minimal curb and gutters, minimal sidewalks, and no medians in the study area. The posted speed limit on San Ygnacio Rd. is 35 MPH.

Arenal Rd. is classified as a Regional Principal Arterial Roadway on the Futures 2040 Long Range Roadway System Map. It is generally a four-lane paved roadway in the study area with raised curbs and gutters, sidewalks, and raised medians. The posted speed limit on Arenal Rd. in the study area is 40 MPH.

Coors Blvd. is classified as a Regional Principal Arterial Roadway on the Futures 2040 Long Range Roadway System Map. It is generally a four-lane paved roadway in the study area with raised curbs and gutters, sidewalks, and raised medians. The intersection of Coors Blvd. / Sage Rd is part of a coordinated signal system along Coors Blvd. The posted speed limit on Coors Blvd. in the study area is 40 MPH.

Alternative Travel Modes

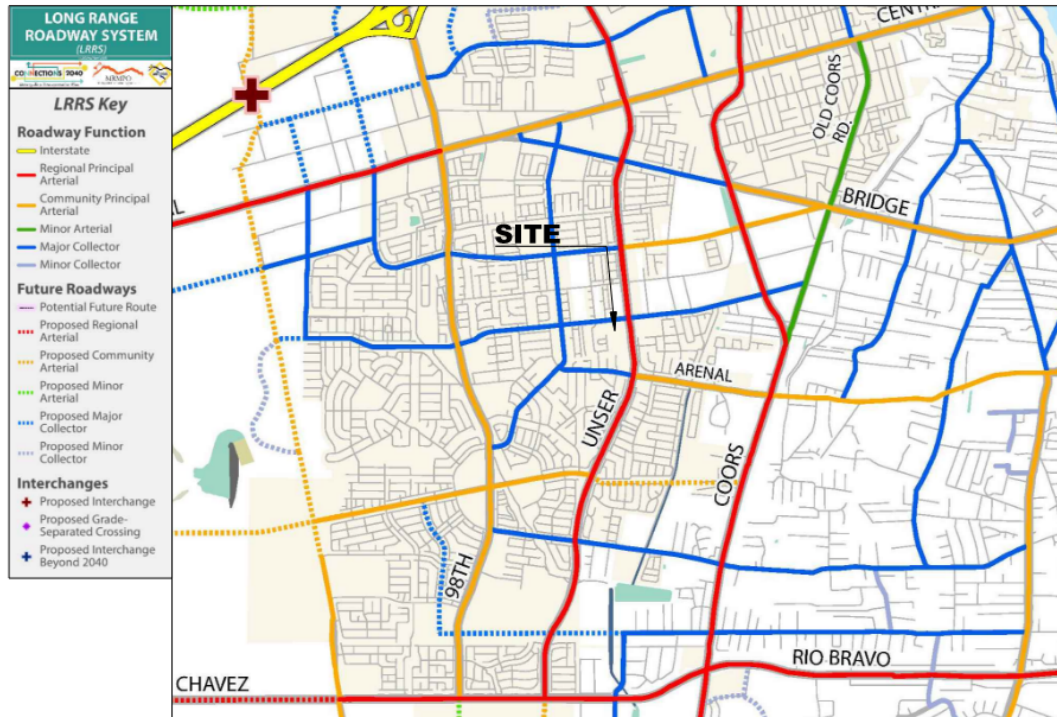
There is one Primary Route (ABQ Ride) in the area of analysis along Coors Blvd. that stretches from Gun Club Rd. to Interstate 40. The Primary Route (155) is 21.6 miles in length.

San Ygnacio Rd is the only roadway evaluated that is not equipped with bicycle facilities and not planned for future bicycle facilities according to the Futures 2040 Long Range Bikeway System Map.

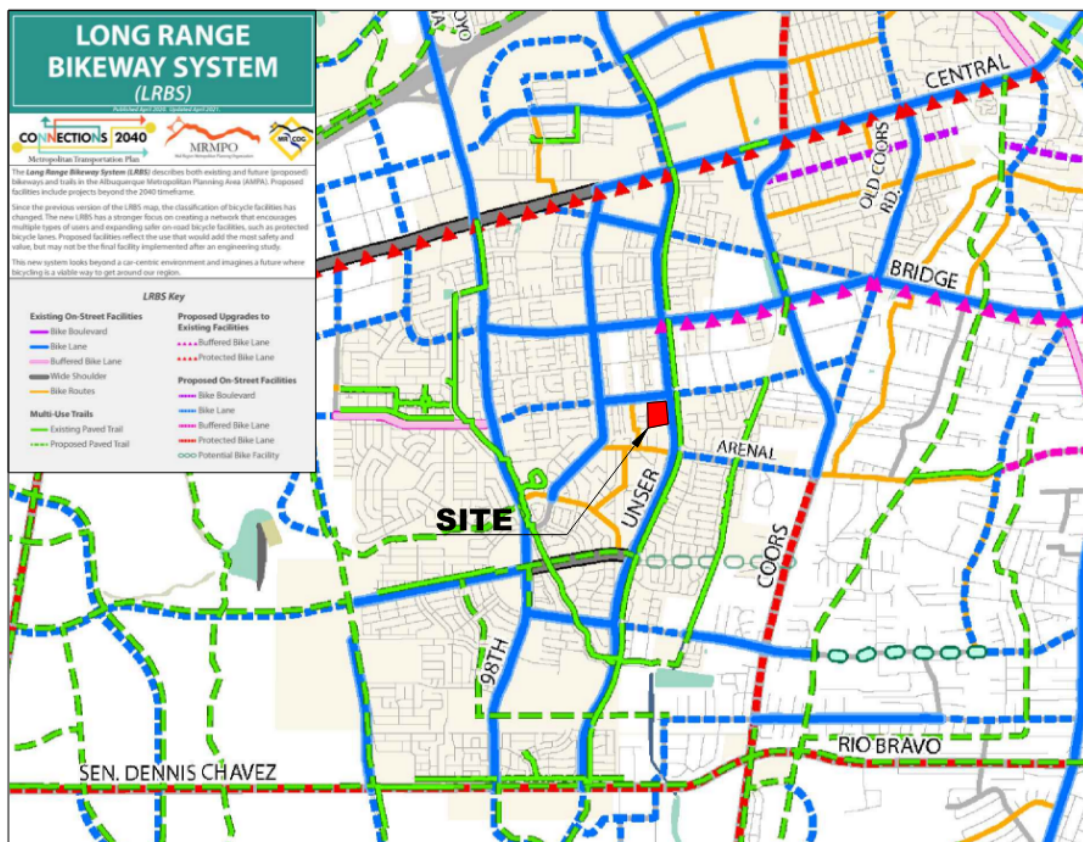
Unser Blvd., Sage Rd., Blvd., Coors Blvd., Arenal Rd, and Tower RD. all have designated transit routes. are equipped with bicycle facilities and none of them are planned for future bicycle facilities according to the Futures 2040 Long Range Bikeway System Map.

Arenal Rd. and Tower Rd are served by Regular Route 54. Coors Blvd. is served by Regular Route 155. No Rapid Routes or ABQ Transit routes are in the area of analysis.

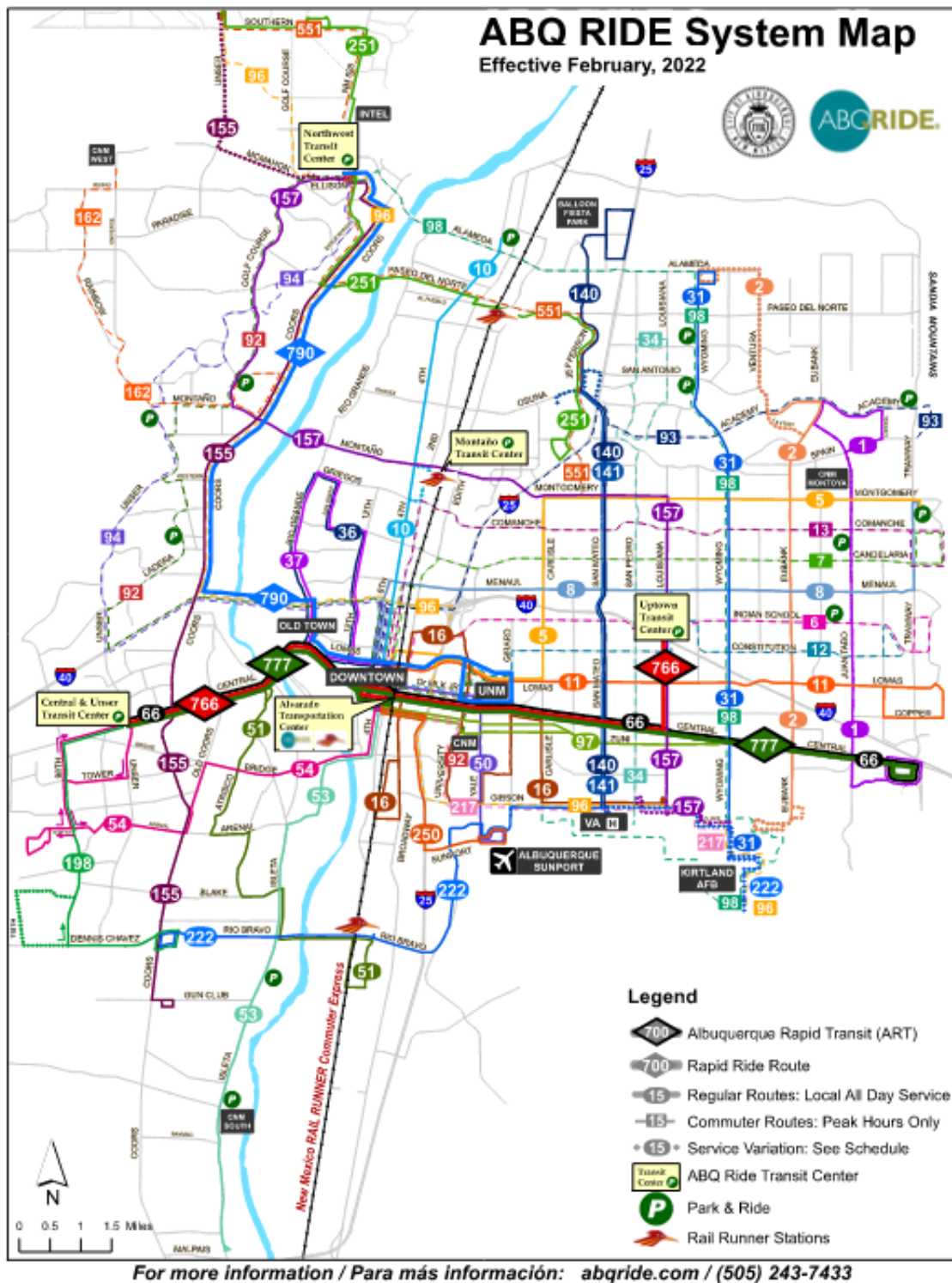
Following are the Futures 2040 maps for the Long-Range Roadway System, the Bike Route System, and the ABQ RIDE Master bus route map:



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



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



Analysis of Existing Conditions

Base traffic volumes were formulated using the historical annual background traffic growth rates from the 2019 Traffic Flow Map, shown below. Existing volumes were not analyzed since 2025 “No Build” analysis and will approximate existing conditions analysis.

Existing Traffic Volumes

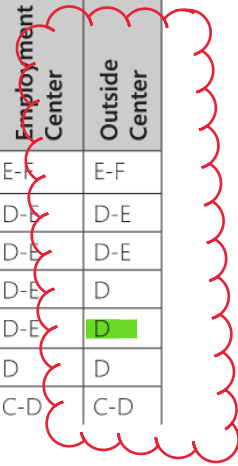
Existing traffic volumes were collected during April of 2022 while school was in session. Summarized Volumes can be found in Appendix A-134 through A-138.

Level of Service (LOS)

According to the City of Albuquerque, Design Process Manual (DPM), LOS standards are defined by Access Category. Table 7.5.89 identifies the minimum acceptable LOS standards according to Functional Classification & Roadway Type and City of Albuquerque’s ABC Comp Plan Type (see below).



Functional Classification & Roadway Type	ABC Comp Plan Center Type						
	Transit Station Area	Downtown	Urban Center	Activity Center	Village Center	Employment Center	Outside Center
Premium Transit	E-F	E-F	E-F	E-F	E-F	E-F	E-F
Major Transit	E	E-F	E	E	D-E	D-E	D-E
Multi-modal	E	E	E	E	D-E	D-E	D-E
Commuter	E	E	D-E	D-E	D-E	D-E	D
Other Arterial	E	E	E	D-E	D-E	D-E	D
Minor Arterial	E	E	D-E	D-E	D-E	D	D
Collector	E	D-E	D	D	C-D	C-D	C-D



 Unser Blvd. is considered a Principle Arterial in an Urban Center, intersections along the Unser Blvd. corridor should have a LOS E or better. Mitigations should be considered for any LOS that is higher than a LOS E for the project area (No Build) condition levels.

Analysis of Implementation Year and Horizon Year Conditions

Traffic Projections

The anticipated implementation year for this project is 2025 and the Horizon Year is 2035. MRCOG Traffic Flow Map data was used for traffic growth from 2009 to 2018 to determine the historical growth rates for the study area. The calculated **growth rate** at the intersections varies from 1.3% to 4.5% for the Implementation Year and Horizon Year. The following growth rate percentages were used for the following:

1. Unser Blvd & Arenal Rd. – 4.3%
2. Unser Blvd & Sage Rd. – 4.5%
3. Unser Blvd & Tower Rd. – 4.4%
4. Coors Blvd & Sage Rd. – 1.3%
5. Sage Rd. & 86th St. – 1.9%
6. Unser Blvd & San Ygnacio Rd – 4.3%

For a conservative approach, max growth rates experienced by the intersections above were used for evaluation of the Driveways:

7. Sage Rd. & Driveway “A” – 4.5%
8. Unser Blvd & Driveway “B” – 4.5%
9. Unser Blvd & Driveway “C” – 4.5%

See Appendix A-05 through A-10 for the Historic Growth Rate Graph.

Background Traffic

Background traffic volumes were calculated by applying historical annual background traffic growth rates to the existing collected data, and then adding Mas Charter School and Sage Park Development traffic volumes for the Implementation Year (2025) No Build volumes.

Trip Generation

Trips Generation Rates were calculated for this site using the Institute of Traffic Engineers' (ITE) Trip Generation Manual, 11th Edition. The Proposed Unser and Sage Development includes the following:

- Gas Station with a convenience store (ITE Code 945)
- Fast Food Restaurant with a Drive-Thru Window (ITE Code 934)
- Automated Car Wash (ITE Code 948)
- Multifamily Housing (ITE Code 220)

Unser and Sage Development

Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

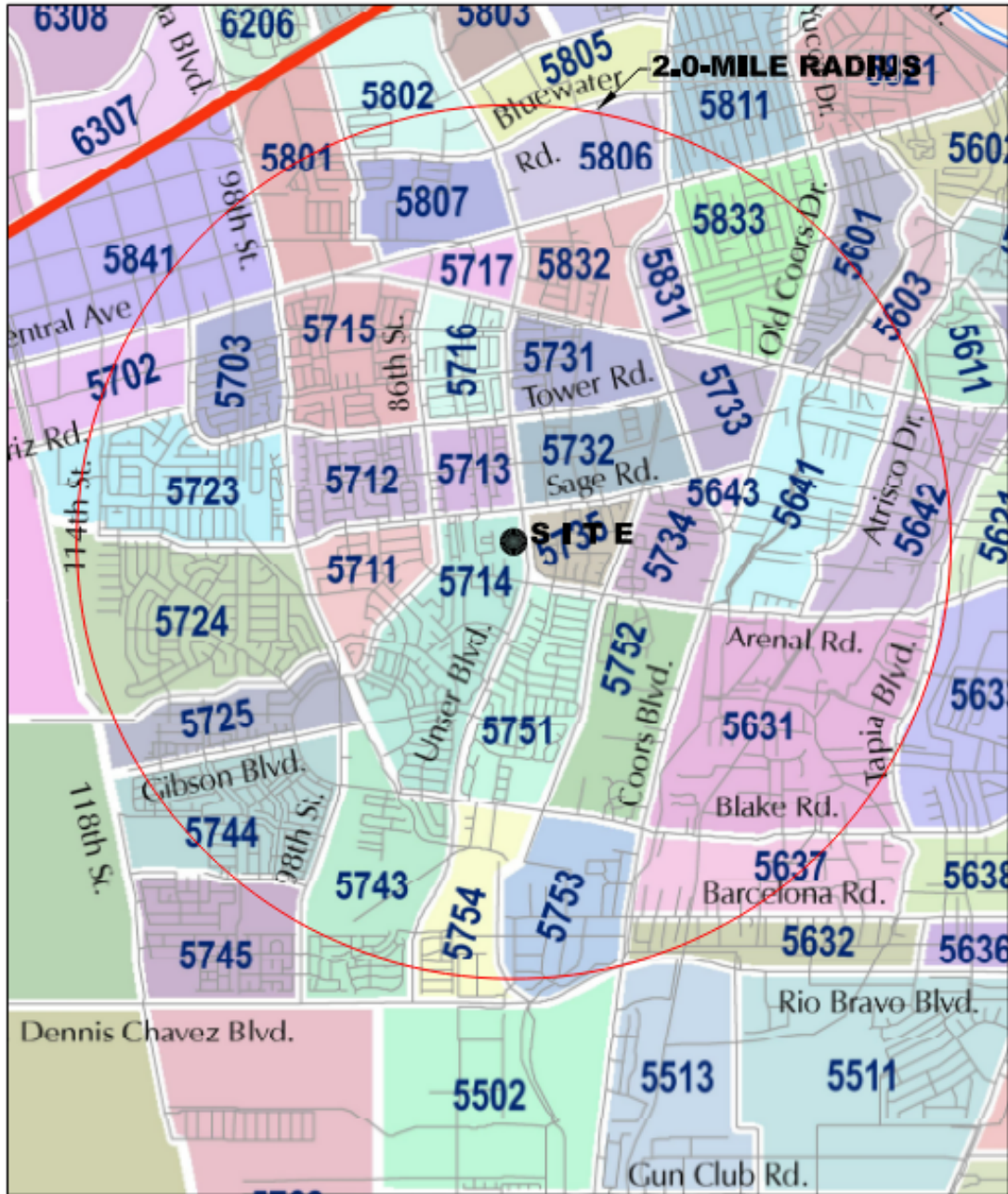
USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet		Units				
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 4-5.5K (945)	17	4,371	230	230	193	193
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		6,660	324	336	331	312
Retail Commercial Trips		6,154	317	313	298	292
<i>Pass-By Trips</i>	30%		-95	-94	-89	-88
Total New Primary Trips			222	219	209	204
Total New Residential Trips			7	23	33	20

The Retail Commercial portion of the development (ITE Codes 934, 945, and 948) will produce 222 new entering trips and 219 new exiting trips during the weekday AM Peak Hour period and 209 new entering trips and 204 new exiting trips during the PM Peak Hour period. A 30% pass-by trip rate reduction was applied to the trip generation rates for retail trips only. The anticipated Residential Development (ITE Code 210) section of the site will generate 7 new entering trips and 23 new exiting trips during the weekday AM Peak Hour period and 33 new entering trips and 20 new exiting trips during the PM Peak Hour period. Trip Generations can be found below and in Appendix A-04.

Trip Distribution and Trip Assignments

Trip assignments percentages for new trips entering and exiting are derived from data established in the trip distribution determination process and logical routing. Both residential and retail commercial trips were distributed based on Mid-Region Council of Governments' Socio-economic data (2016-2040 data set).

The retail commercial trips were assigned based on population distribution within a two-mile radius of the project. The MRCOG DASZ Map below provides a visual of the data analysis subzones for commercial trips that will be entering and exiting the site. The Data Table and Maps used to calculate the Commercial Trip Distribution percentages can be found in Appendix Pages A-18 through A-23 and the maps are shown below.

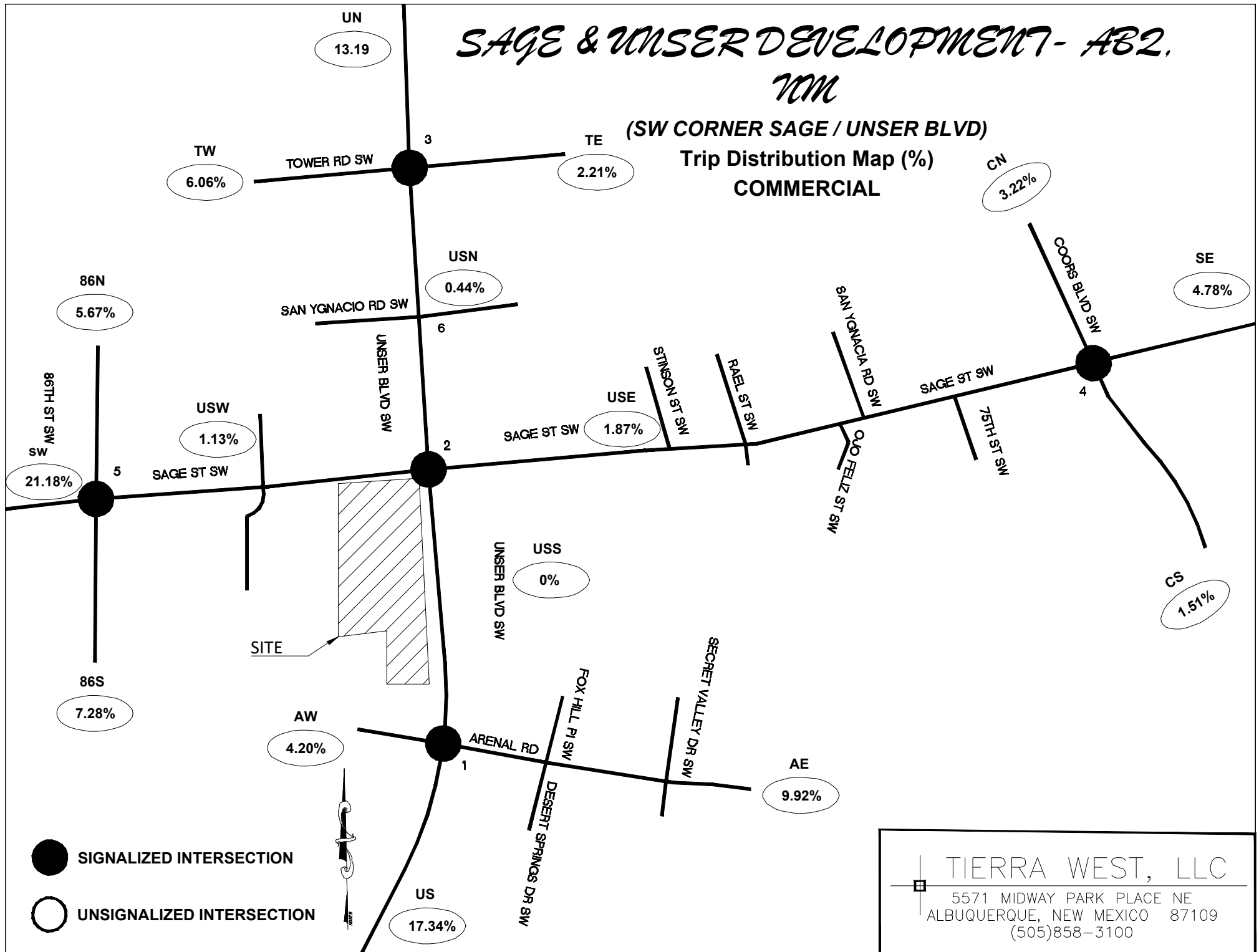


DATA ANALYSIS SUBZONE (DASZ) MAP
Sage Rd. / Unser Blvd. Development (NW Corner)

SAGE & UNSER DEVELOPMENT - AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Distribution Map (%)
COMMERCIAL

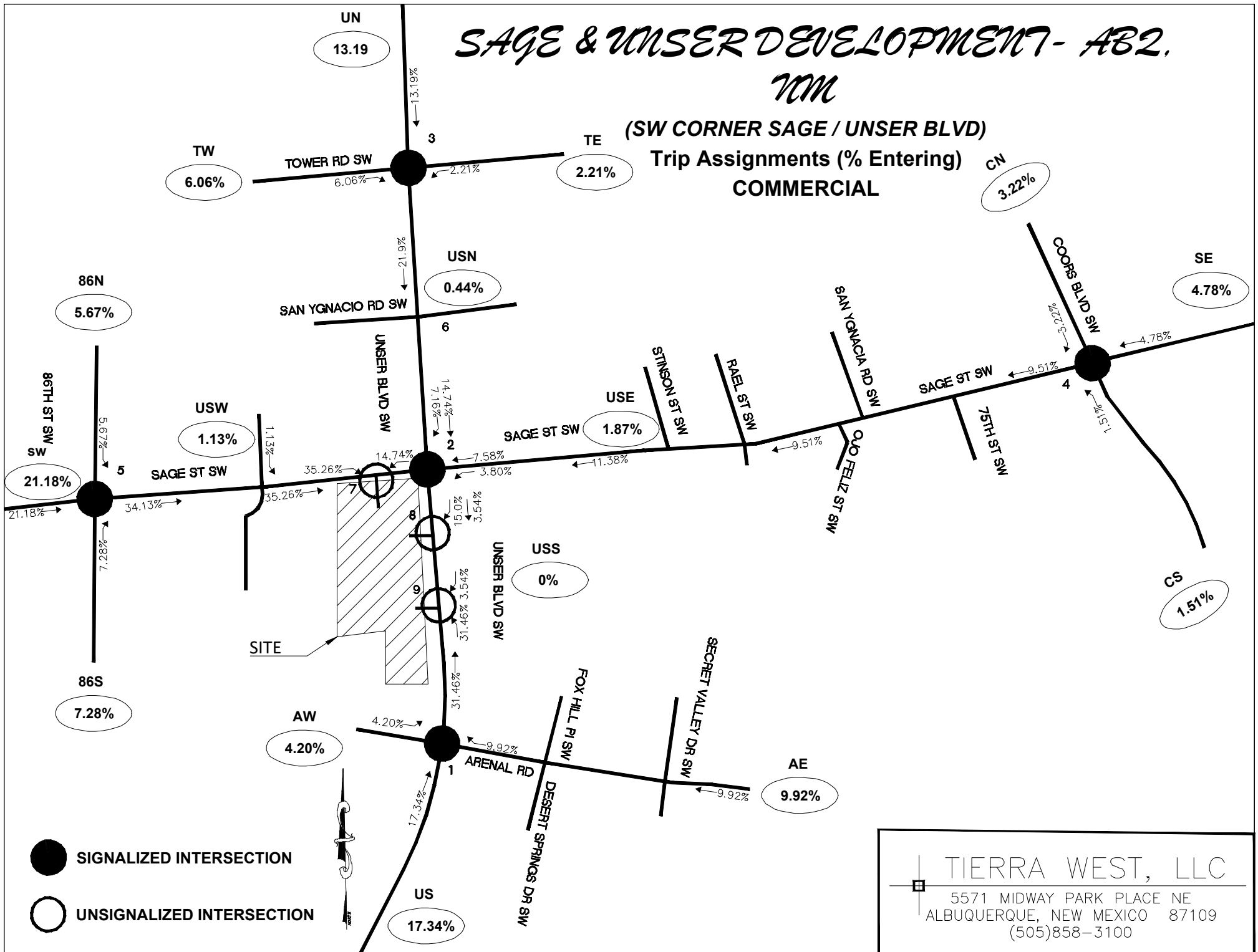


TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & USER DEVELOPMENT- AB2.
nm

(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Entering)

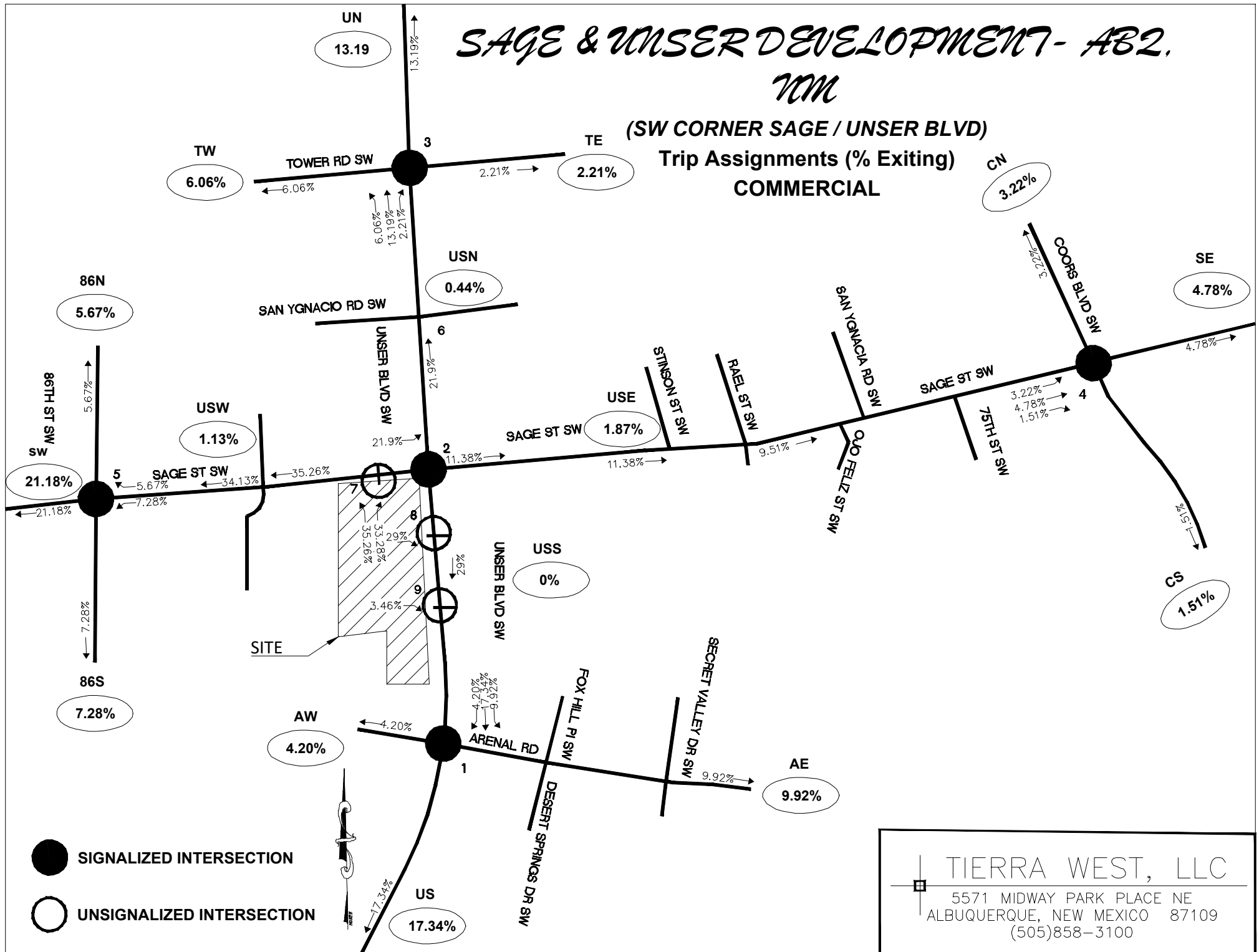


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(505)858-3100

SAGE & UNSER DEVELOPMENT - AB2. NM

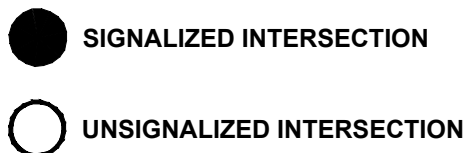
(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Exiting)
COMMERCIAL



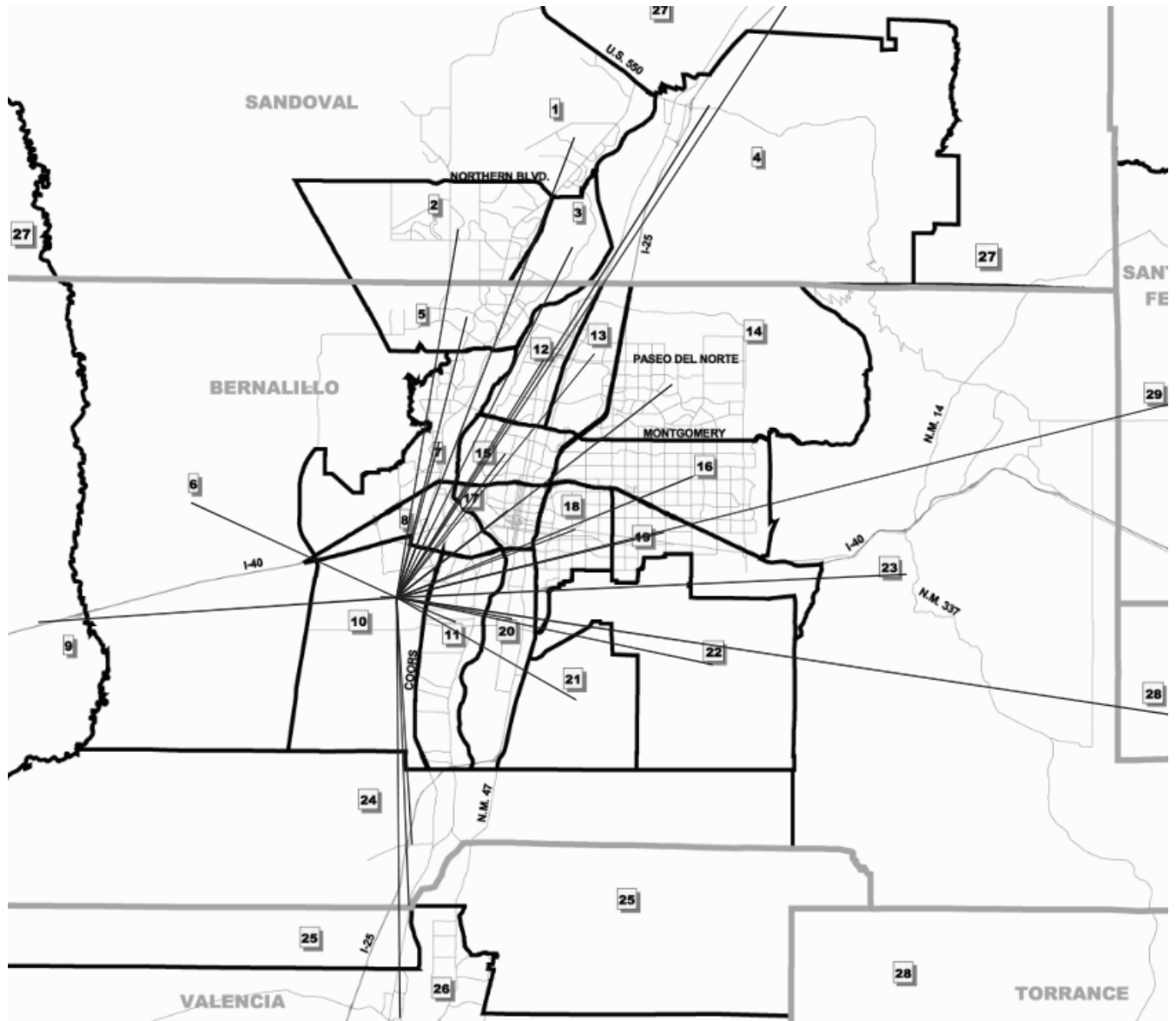
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COMMERCIAL



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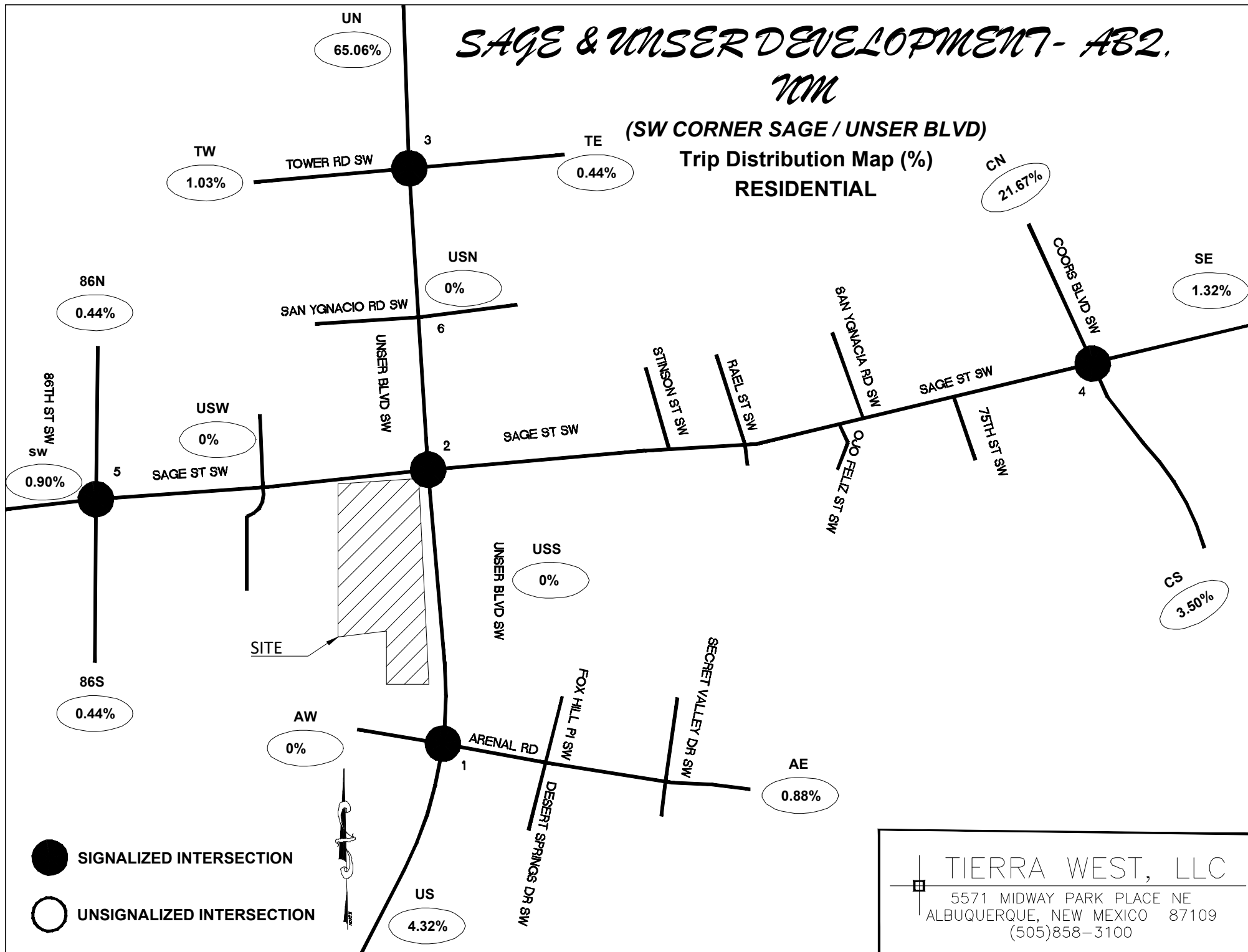
The residential trips were distributed based on the employment distribution regionally inversely proportional to the distance of the subarea from the project. The Residential Trip Distribution Maps can be found below, and the Data Table used to calculate the Residential Trip Distributions percentages can be found in Appendix A-11 through A-27.



SAGE & UNSER DEVELOPMENT- AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Distribution Map (%)
RESIDENTIAL



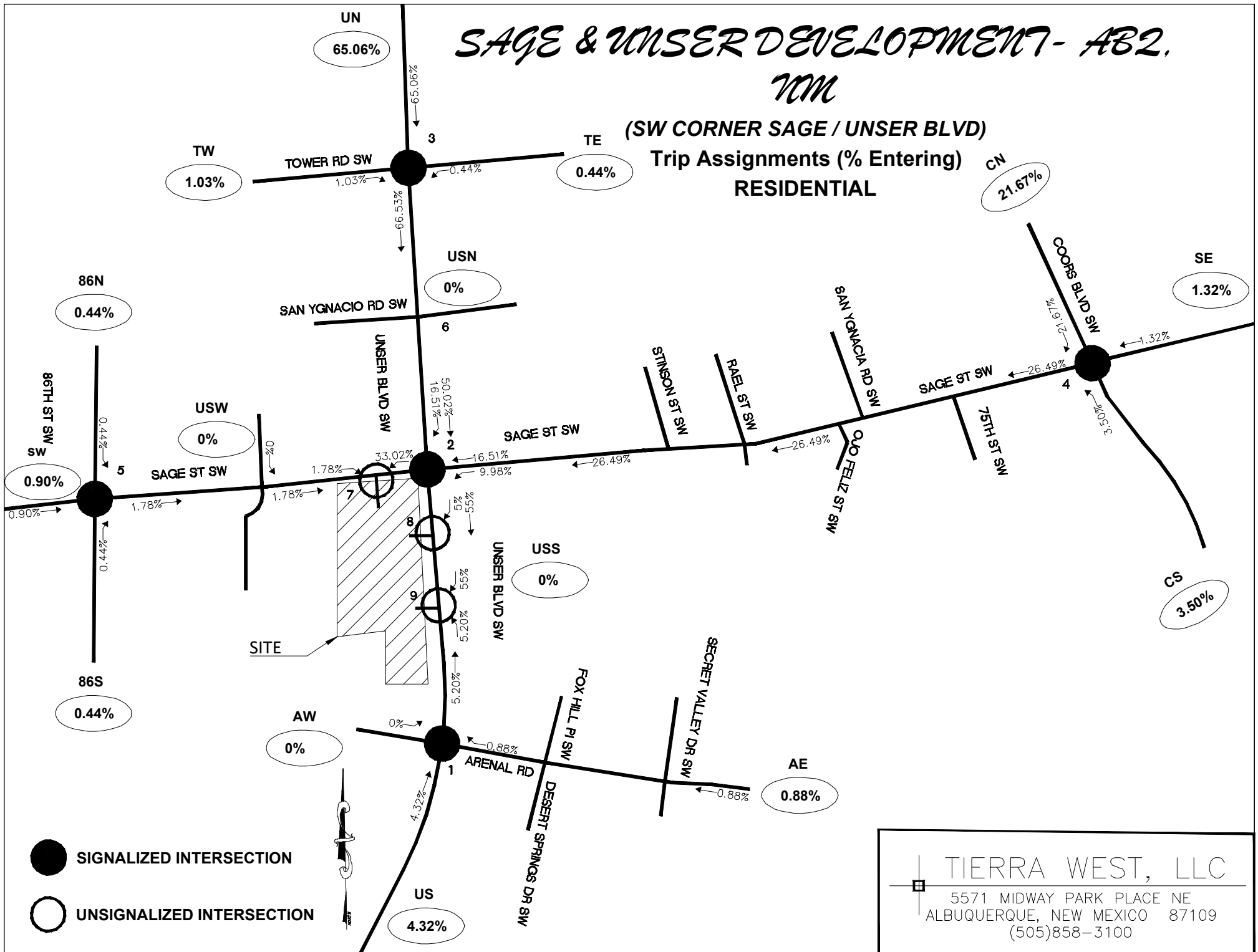
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ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

*SAGE & USER DEVELOPMENT- AB2,
NM*

(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Entering)

RESIDENTIAL



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Trip Assignments (% Exiting)

RESIDENTIAL



NO BUILD and BUILD Traffic Volumes

NO BUILD volumes were generated by adjusting the existing volumes with the background traffic growth. BUILD volumes were calculated by increasing the NO BUILD volumes by the trips generated by the project. The trip assignment percentages were used to distribute the trips generated to the individual traffic movements at each intersection. The turning movement counts for the **2025 and 2035 AM and PM Peak Hour Demand, NO BUILD, and BUILD** conditions for each movement in each intersection the study area are provided in the Appendix on Pages A-68 thru A-132.

Traffic Analysis

The Highway Capacity Manual establishes a criterion for the determinations of signalized and unsignalized levels-of-service. These levels determine if an intersection will be proficient enough to accommodate the projected volumes from the new development. The average control delay is calculated for each intersection and for each lane group of each leg of the intersection. The analysis of the calculated control delay determines the level-of-service for each lane group. However, if the v/c ratio is 1.0 or greater, then the v/c ratio overrides the calculated delay and qualifies the lane group to be LOS "F". The control delay generally determines the level-of-service based on the following tables:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

<u>Average Delay</u> <u>(secs)</u>	<u>Level-of-Service</u>
≤ 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

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

For parameter of acceptance, generally a Level-of-Service D or better is an acceptable parameter for design purposes.

In summary, the proposed Unser and Sage Development will have minimal adverse impact to the adjacent transportation system. Level of service (LOS) at the intersections in the study area meet or exceed the City of Albuquerque's minimum acceptable Level of Service Standards for the 2025 implementation year and 2035 horizon year for all intersections in the study area.

The following pages contain the Lanes / Volumes Analysis Tables for this study. The Lanes / Volumes Analysis Tables summarize graphically / numerically how this project impacts the roadway adjacent system and how those mitigation measures improve operations, and how the project driveways are expected to perform. Also, the maps show the Implementation Year (2025) and the Horizon Year (2035) NO BUILD and BUILD AM and PM Peak Hour turning movements volumes utilized in the analyses for this Study. Also shown graphically are the intersection geometries (i.e., lane groups). Further detail is found in the individual Intersection analysis summary tables for each intersection in the next section of the report.

#1 – Unser Blvd / Arenal Rd. – Signalized (Appendix Pages A-68 thru A-71)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Unser Blvd and Arenal Rd. are summarized in the following tables:

Signalized

Unser Blvd. / Arenal Rd. 2025 Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	1	1	1	2	1	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.65	0.39		0.50	0.29		0.15	0.45		0.53	0.34	
Level-of-Service	D	D		D	C		B	C		B	A	
Control Delay (Seconds)	51.2	45.1	0.0	37.6	34.7	0.0	19.0	22.1	0.0	14.0	0.4	0.0
Intersection LOS	C - 20.9											
95th Percentile Queue (veh)	8.8	5.5	0.0	7.1	6.2	0.0	1.9	11.5	0.0	4.9	0.2	0.0
2025_BUILD Volumes	181	230	63	163	149	297	63	801	235	261	753	50
V/C Ratio	0.66	0.37		0.49	0.28		0.16	0.49		0.59	0.36	
Level-of-Service	D	D		D	C		C	C		B	A	
Control Delay (Seconds)	50.8	44.3	0.0	36.8	34.0	0.0	20.3	23.9	0.0	15.3	0.5	0.0
Intersection LOS	C - 21.2											
95th Percentile Queue (veh)	9.1	5.4	0.0	7.0	6.1	0.0	2.0	12.5	0.0	5.5	0.3	0.0

PM Peak Hour

2025_NOBUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.31		0.65	0.31		0.09	0.31		0.51	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	53.5	45.3	0.0	12.6	14.3	0.0	8.4	0.4	0.0
Intersection LOS	B - 15.2											
95th Percentile Queue (veh)	4.1	2.3	0.0	9.9	5.6	0.0	0.9	8.2	0.0	4.8	0.2	0.0
2025_BUILD Volumes	77	81	63	190	113	409	36	674	163	336	1,002	140
V/C Ratio	0.49	0.29		0.63	0.30		0.10	0.34		0.56	0.40	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.0	56.9	0.0	51.8	44.4	0.0	13.6	15.6	0.0	9.3	0.5	0.0
Intersection LOS	B - 15.5											
95th Percentile Queue (veh)	4.6	2.3	0.0	9.8	5.6	0.0	1.0	9.0	0.0	5.4	0.3	0.0

Signalized

Arenal Rd. / Unser Blvd. 2035 Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	1	1	1	2	1	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	237	318	87	224	206	380	87	1,054	324	331	985	56
V/C Ratio	0.72	0.39		0.62	0.33		0.33	0.82		0.92	0.52	
Level-of-Service	D	D		D	C		C	D		D	A	
Control Delay (Seconds)	49.6	39.6	0.0	37.1	30.0	0.0	32.1	40.7	0.0	42.1	0.8	0.0
Intersection LOS	C - 28.9											
95th Percentile Queue (veh)	11.5	7.1	0.0	2.6	7.8	0.0	3.7	20.8	0.0	10.0	0.4	0.0
2035_BUILD Volumes	246	318	87	224	206	402	87	1,092	324	353	1,024	65
V/C Ratio	0.73	0.38		0.60	0.32		0.36	0.94		0.95	0.55	
Level-of-Service	D	D		D	C		D	D		E	A	
Control Delay (Seconds)	49.8	38.9	0.0	35.9	29.4	0.0	36.4	54.2	0.0	57.9	1.2	0.0
Intersection LOS	C - 34.6											
95th Percentile Queue (veh)	11.9	7.0	0.0	2.4	7.8	0.0	4.0	24.3	0.0	13.5	0.5	0.0

PM Peak Hour

2035_NOBUILD Volumes	94	112	87	262	156	536	50	879	224	437	1,335	181
V/C Ratio	0.54	0.32		0.84	0.38		0.19	0.49		0.81	0.55	
Level-of-Service	E	E		E	D		B	C		B	A	
Control Delay (Seconds)	59.9	55.2	0.0	67.4	43.7	0.0	20.0	22.4	0.0	13.0	0.1	0.0
Intersection LOS	B - 18.9											
95th Percentile Queue (veh)	5.6	3.1	0.0	6.7	7.7	0.0	1.7	13.6	0.0	5.0	0.1	0.0
2035_BUILD Volumes	103	112	87	262	156	557	50	916	224	457	1,371	190
V/C Ratio	0.56	0.30		0.81	0.37		0.20	0.53		0.86	0.57	
Level-of-Service	E	D		E	D		C	C		C	A	
Control Delay (Seconds)	59.5	54.3	0.0	63.3	42.8	0.0	21.7	24.5	0.0	26.7	1.0	0.0
Intersection LOS	C - 21.2											
95th Percentile Queue (veh)	6.1	3.1	0.0	6.1	7.6	0.0	1.8	14.8	0.0	10.1	0.6	0.0

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Arenal Rd. is operating at an acceptable level of service for all conditions evaluated in this study. The new trips generated by the Unser and Sage Development present no significant adverse impact to this signalized intersection.

#2 – Unser Blvd / Sage Rd. – Signalized (Appendix Pages A-72 thru A-77)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Unser Blvd and Sage Rd. are summarized in the following tables:

Signalized

Unser Blvd. / Sage Rd. 2025 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	1	1	0	1	2	1	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.83	0.86		0.29	0.48		0.18	0.51		0.26	0.36	
Level-of-Service	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	56.9	60.0	0.0	46.1	50.7	0.0	9.6	16.0	0.0	11.7	0.5	0.0
Intersection LOS	C - 22.9											
95th Percentile Queue (veh)	4.8	15.7	0.0	2.0	5.6	0.0	1.8	12.6	0.0	1.6	0.3	0.0
2025_BUILD Volumes	384	362	213	50	127	86	95	1,018	100	86	772	99
V/C Ratio	1.06	0.87		0.33	0.48		0.18	0.52		0.28	0.39	
Level-of-Service	F	E		D	D		B	C		B	A	
Control Delay (Seconds)	112.0	63.6	0.0	42.8	47.4	0.0	10.9	26.2	0.0	14.1	0.6	0.0
Intersection LOS	D - 35.7											
95th Percentile Queue (veh)	16.4	18.5	0.0	1.8	4.4	0.0	1.9	17.7	0.0	1.7	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2	0	1	2	1	1	2	1
2025_MITIGATIONS Volumes	384	362	213	50	127	86	95	1,018	100	86	772	99
V/C Ratio	0.75	0.37	0.43	0.24	0.36		0.23	0.57		0.33	0.44	
Level-of-Service	D	D	D	D	D		B	D		B	B	
Control Delay (Seconds)	46.5	45.3	42.2	46.4	50.5	0.0	14.8	39.5	0.0	18.8	12.9	0.0
Intersection LOS	C - 33.8											
95th Percentile Queue (veh)	16.7	9.4	10.3	1.9	2.4	0.0	2.3	21.8	0.0	2.0	7.6	0.0

PM Peak Hour

2025_NOBUILD Volumes	127	136	250	136	209	59	200	858	64	95	1,167	163
V/C Ratio	0.58	0.57		0.50	0.84		0.57	0.39		0.19	0.56	
Level-of-Service	D	E		D	E		B	A		A	B	
Control Delay (Seconds)	49.9	60.5	0.0	45.5	61.0	0.0	13.8	0.5	0.0	10.0	17.7	0.0
Intersection LOS	B - 19.9											
95th Percentile Queue (veh)	6.9	8.1	0.0	6.7	10.9	0.0	3.5	0.3	0.0	1.9	15.7	0.0
2025_BUILD Volumes	211	164	250	147	230	59	200	832	64	95	1,215	183
V/C Ratio	0.85	0.58		0.51	0.85		0.62	0.40		0.19	0.62	
Level-of-Service	E	E		D	E		B	A		B	C	
Control Delay (Seconds)	71.6	59.5	0.0	43.5	59.5	0.0	17.8	0.6	0.0	11.6	21.0	0.0
Intersection LOS	C - 24.4											
95th Percentile Queue (veh)	4.7	9.7	0.0	6.8	11.5	0.0	4.1	0.3	0.0	2.1	17.9	0.0
Mitigate Lane Geometry	1	2	1	1	2	0	1	2	1	1	2	1
2025_MITIGATIONS Volumes	211	164	250	147	230	59	200	832	64	95	1,215	183
V/C Ratio	0.62	0.28	0.69	0.46	0.51		0.63	0.41		0.23	0.62	
Level-of-Service	D	D	D	D	D		B	B		B	C	
Control Delay (Seconds)	44.0	47.8	50.2	44.7	53.0	0.0	19.3	15.8	0.0	12.8	21.6	0.0
Intersection LOS	C - 27.8											
95th Percentile Queue (veh)	9.9	4.2	12.3	5.6	4.9	0.0	4.4	10.9	0.0	2.1	18.1	0.0

Signalized

Sage Rd. / Unser Blvd. 2035 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	1	1	0	1	2	1	1	2	1
AM Peak Hour												
Untitled Volumes	399	463	298	57	152	120	133	1,471	139	120	1,027	114
V/C Ratio	0.97	0.92		0.37	0.42		0.43	0.85		0.61	0.60	
Level-of-Service	E	D		D	D		B	C		C	C	
Control Delay (Seconds)	68.8	54.7	0.0	39.1	42.7	0.0	17.7	29.4	0.0	28.1	23.9	0.0
Intersection LOS	D - 35.3											
95th Percentile Queue (veh)	12.3	19.8	0.0	2.4	6.0	0.0	3.2	22.7	0.0	3.1	15.6	0.0
Untitled Volumes	497	494	298	66	170	120	133	1,436	139	120	1,064	131
V/C Ratio	1.17	0.93		0.42	0.43		0.47	0.86		0.62	0.64	
Level-of-Service	F	E		D	D		C	C		C	C	
Control Delay (Seconds)	141.0	61.6	0.0	37.1	40.9	0.0	20.3	34.5	0.0	29.1	26.5	0.0
Intersection LOS	D - 48.7											
95th Percentile Queue (veh)	26.6	23.6	0.0	2.1	5.4	0.0	3.4	25.9	0.0	3.3	17.0	0.0
Mitigated Lane Geometry	1	2	1	1	2	0	1	2	1	1	2	1
Untitled Volumes	497	494	298	66	170	120	133	1,436	139	120	1,064	131
V/C Ratio	0.90	0.47	0.54	0.32	0.48		0.48	0.88		0.69	0.66	
Level-of-Service	E	D	D	D	D		C	E		D	C	
Control Delay (Seconds)	60.6	45.8	41.6	46.5	52.0	0.0	22.2	55.3	0.0	36.6	27.8	0.0
Intersection LOS	D - 45.2											
95th Percentile Queue (veh)	23.1	12.1	13.4	3.2	4.4	0.0	3.7	32.3	0.0	3.8	17.4	0.0
PM Peak Hour												
Untitled Volumes	178	190	349	190	292	82	279	1,198	89	133	1,629	228
V/C Ratio	0.72	0.57		0.59	0.87		1.16	0.63		0.46	0.93	
Level-of-Service	D	D		D	E		F	C		B	D	
Control Delay (Seconds)	48.4	50.2	0.0	41.4	57.9	0.0	134.0	22.2	0.0	19.1	40.9	0.0
Intersection LOS	D - 43.1											
95th Percentile Queue (veh)	8.6	9.4	0.0	8.3	14.1	0.0	19.7	16.7	0.0	3.5	33.2	0.0
Untitled Volumes	262	218	349	201	313	82	279	1,172	89	133	1,677	248
V/C Ratio	1.05	0.62		0.63	0.88		1.23	0.63		0.46	0.98	
Level-of-Service	F	D		D	E		F	C		B	D	
Control Delay (Seconds)	116.0	50.1	0.0	41.1	57.2	0.0	179.0	23.8	0.0	19.8	50.3	0.0
Intersection LOS	D - 54.6											
95th Percentile Queue (veh)	11.9	10.8	0.0	8.3	14.6	0.0	24.2	18.4	0.0	3.6	37.3	0.0
Mitigated Lane Geometry	1	2	1	1	2	0	1	2	1	1	2	1
Untitled Volumes	262	218	349	201	313	82	279	1,172	89	133	1,677	248
V/C Ratio	0.87	0.44	0.82	0.65	0.64		0.96	0.59		0.42	0.97	
Level-of-Service	E	D	E	D	E		F	B		B	D	
Control Delay (Seconds)	68.8	51.8	57.3	46.9	55.6	0.0	86.1	20.0	0.0	17.6	47.9	0.0
Intersection LOS	D - 44.8											
95th Percentile Queue (veh)	6.6	5.9	17.6	9.9	8.7	0.0	18.1	16.8	0.0	3.6	36.5	0.0

Both the Implementation Year and Horizon Year in the AM Peak are stressed due to the backup of cars heading eastbound and westbound through the intersection. With Mitigation measures of an additional eastbound, westbound through lane, optimizing the signal timing, and removal of the "free-right," the intersection has improved by 3.5 seconds in the AM and 9.8 seconds in the PM. The overall intersection delay associated with the AM and PM Peak analysis is LOS "D" which is acceptable by City of Albuquerque. The new trips generated by the Sage & Unser Development present a significant adverse impact to this signalized intersection. It is recommended that a second eastbound through lane and a second westbound thru lane be implemented on Sage Rd. though the intersection to increase capacity and mitigate the impact of this development on the intersection.

#3 – Unser Blvd / Tower Rd. – Signalized (Appendix Pages A-78 thru A-81)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Unser Blvd and Tower Rd. are summarized in the following tables:

Signalized

Unser Blvd. / Tower Rd. 2025_Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	2	1	1	2>	0	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.51	0.28		0.21	0.21		0.04	0.38		0.05	0.18	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	55.2	48.8	0.0	52.1	48.2	0.0	4.3	0.4	0.0	4.3	5.5	0.0
Intersection LOS	B - 11.1											
95th Percentile Queue (veh)	5.2	2.9	0.0	1.9	2.1	0.0	0.3	0.3	0.0	0.3	3.0	0.0
2025_BUILD Volumes	95	118	81	41	86	63	45	1,013	41	27	496	59
V/C Ratio	0.51	0.28		0.24	0.21		0.06	0.39		0.06	0.19	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	55.2	48.8	0.0	52.4	48.2	0.0	4.3	0.5	0.0	4.4	5.7	0.0
Intersection LOS	B - 10.9											
95th Percentile Queue (veh)	5.2	2.9	0.0	2.1	2.1	0.0	0.5	0.3	0.0	0.3	3.2	0.0

PM Peak Hour

2025_NOBUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.43	0.23		0.26	0.51		0.40	0.37		0.11	0.55	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	56.1	45.4	0.0	49.4	48.0	0.0	9.6	8.4	0.0	6.7	11.5	0.0
Intersection LOS	B - 16.8											
95th Percentile Queue (veh)	3.5	2.8	0.0	2.7	6.7	0.0	1.8	7.9	0.0	0.7	13.0	0.0
2025_BUILD Volumes	63	118	113	59	267	77	148	946	37	50	1,344	131
V/C Ratio	0.43	0.23		0.28	0.51		0.46	0.39		0.11	0.57	
Level-of-Service	E	D		D	D		B	A		A	B	
Control Delay (Seconds)	56.1	45.4	0.0	49.7	48.0	0.0	10.6	8.5	0.0	6.8	11.9	0.0
Intersection LOS	B - 16.9											
95th Percentile Queue (veh)	3.5	2.8	0.0	3.0	6.7	0.0	2.0	8.3	0.0	0.7	13.7	0.0

Signalized

Tower Rd. / Unser Blvd. 2025_Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	2	1	1	2>	0	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	132	163	94	50	119	88	44	1,346	50	38	641	82
V/C Ratio	0.59	0.29		0.25	0.21		0.08	0.56		0.10	0.27	
Level-of-Service	D	D		D	D		A	A		A	A	
Control Delay (Seconds)	53.3	44.9	0.0	49.4	44.2	0.0	5.9	0.9	0.0	5.8	7.9	0.0
Intersection LOS	B - 11.4											
95th Percentile Queue (veh)	7.2	3.9	0.0	2.5	2.8	0.0	0.6	0.6	0.0	0.5	5.4	0.0
2035_BUILD Volumes	132	163	107	55	119	88	57	1,390	55	38	675	82
V/C Ratio	0.59	0.29		0.27	0.21		0.10	0.58		0.11	0.28	
Level-of-Service	D	D		D	D		A	A		A	A	
Control Delay (Seconds)	53.3	44.9	0.0	49.7	44.2	0.0	6.0	1.0	0.0	6.0	8.2	0.0
Intersection LOS	B - 11.4											
95th Percentile Queue (veh)	7.2	3.9	0.0	2.8	2.8	0.0	0.7	0.6	0.0	0.5	5.8	0.0

PM Peak Hour

2035_NOBUILD Volumes	88	163	138	75	371	107	189	1,258	44	69	1,798	182
V/C Ratio	0.52	0.23		0.29	0.52		0.87	0.57		0.23	0.86	
Level-of-Service	D	D		D	D		D	B		B	C	
Control Delay (Seconds)	54.9	40.4	0.0	45.5	43.4	0.0	53.1	14.1	0.0	11.5	25.0	0.0
Intersection LOS	C - 26.1											
95th Percentile Queue (veh)	4.8	3.6	0.0	3.6	8.6	0.0	8.1	14.2	0.0	1.3	27.5	0.0
2035_BUILD Volumes	88	163	151	80	371	107	201	1,298	49	69	1,847	182
V/C Ratio	0.52	0.23		0.31	0.52		0.88	0.59		0.24	0.90	
Level-of-Service	D	D		D	D		E	B		B	C	
Control Delay (Seconds)	54.9	40.4	0.0	45.8	43.4	0.0	63.5	14.5	0.0	12.2	29.4	0.0
Intersection LOS	C - 28.6											
95th Percentile Queue (veh)	4.8	3.6	0.0	3.9	8.6	0.0	12.2	14.9	0.0	1.3	30.5	0.0

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Tower Rd. is operating at an acceptable level of service for all conditions evaluated in this study. The new trips generated by the Unser and Sage Development present no significant adverse impact to this signalized intersection.

#4 – Coors Blvd. / Sage Rd. – Signalized (Appendix Pages A-82 thru A-85)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Coors Blvd. and Sage Rd. are summarized in the following tables:

Signalized

Coors Blvd. / Sage Rd. 2025 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	249	199	66	46	129	162	21	1,060	17	54	582	75
V/C Ratio	5.33	0.00	0.15	0.81	0.00	0.38	0.05	0.99	0.04	0.15	0.44	0.13
Level-of-Service	F	A	B	D	A	C	B	D	B	B	B	B
Control Delay (Seconds)	999.0	0.0	18.7	41.4	0.0	20.3	13.4	49.6	16.7	13.7	16.9	14.4
Intersection LOS	F - 367.2											
95th Percentile Queue (veh)	79.5	0.0	1.3	5.8	0.0	3.5	0.3	16.4	0.3	0.7	5.4	1.3
2025_BUILD Volumes	316	220	72	94	175	234	25	1,137	17	54	585	80
V/C Ratio	6.25	0.00	0.17	1.76	0.00	0.55	0.06	1.07	0.04	0.15	0.46	0.14
Level-of-Service	F	A	B	F	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	18.8	393.0	0.0	22.3	13.1	70.6	16.7	13.9	17.6	15.0
Intersection LOS	F - 499.1											
95th Percentile Queue (veh)	96.2	0.0	1.5	31.1	0.0	5.4	0.4	21.1	0.3	0.7	5.6	1.4

PM Peak Hour

2025_NOBUILD Volumes	58	66	4	91	266	199	83	860	179	91	790	112
V/C Ratio	1.16	0.00	0.01	2.80	0.00	0.41	0.19	0.74	0.35	0.22	0.67	0.21
Level-of-Service	F	A	C	F	A	C	B	C	C	B	C	C
Control Delay (Seconds)	170.0	0.0	21.4	860.0	0.0	24.9	15.1	31.1	24.7	15.7	28.9	22.5
Intersection LOS	F - 140.2											
95th Percentile Queue (veh)	11.3	0.0	0.1	55.9	0.0	5.9	1.5	12.8	5.3	1.7	11.5	3.1
2025_BUILD Volumes	91	83	9	131	312	255	89	892	179	91	792	129
V/C Ratio	1.75	0.00	0.02	5.25	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F	A	C	F	A	C	B	C	C	B	C	C
Control Delay (Seconds)	409.0	0.0	21.5	999.0	0.0	26.4	15.1	32.1	24.7	16.0	29.3	23.2
Intersection LOS	F - 331.9											
95th Percentile Queue (veh)	22.5	0.0	0.2	80.2	0.0	7.8	1.6	13.5	5.3	1.7	11.6	3.6

Signalized

Sage Rd. / Coors Blvd. 2035 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	281	224	75	51	145	182	23	1,192	19	61	655	75
V/C Ratio	6.08	0.00	0.18	0.91	0.00	0.43	0.06	1.13	0.04	0.16	0.50	0.13
Level-of-Service	F	A	B	E	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	19.2	60.6	0.0	21.2	13.6	94.7	17.0	13.5	17.7	14.5
Intersection LOS	F - 445.1											
95th Percentile Queue (veh)	90.6	0.0	1.5	8.1	0.0	4.1	0.4	26.3	0.4	0.8	6.4	1.3
2035_BUILD Volumes	348	245	81	99	191	254	27	1,269	19	61	658	89
V/C Ratio	7.00	0.00	0.19	2.03	0.00	0.60	0.06	1.20	0.04	0.16	0.51	0.16
Level-of-Service	F	A	B	F	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	19.3	514.0	0.0	23.9	13.2	125.0	17.0	13.7	18.4	15.2
Intersection LOS	F - 588.1											
95th Percentile Queue (veh)	107.3	0.0	1.7	37.4	0.0	6.3	0.4	33.0	0.4	0.8	6.6	1.6

PM Peak Hour

2035_NOBUILD Volumes	65	75	5	103	299	224	94	968	201	103	888	126
V/C Ratio	1.31	0.00	0.01	3.65	0.00	0.46	0.23	0.84	0.39	0.26	0.76	0.24
Level-of-Service	F	A	C	F	A	C	B	D	C	B	C	C
Control Delay (Seconds)	225.0	0.0	21.6	999.0	0.0	25.7	16.0	35.6	25.7	17.0	31.8	23.2
Intersection LOS	F - 194.0											
95th Percentile Queue (veh)	14.4	0.0	0.1	67.9	0.0	6.8	1.8	15.2	6.1	1.9	13.4	3.5
2035_BUILD Volumes	98	92	10	143	345	280	100	1,000	201	103	890	143
V/C Ratio	1.90	0.00	0.02	6.57	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Level-of-Service	F	A	C	F	A	C	B	D	C	B	C	C
Control Delay (Seconds)	475.0	0.0	21.7	999.0	0.0	27.8	16.1	37.4	25.7	17.3	32.2	23.8
Intersection LOS	F - 420.3											
95th Percentile Queue (veh)	25.9	0.0	0.3	90.6	0.0	8.7	1.9	16.0	6.1	1.9	13.5	4.1

Both the Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Coors Blvd. / Sage Rd. is stressed. The operation of the intersection is currently LOS “F” for No Build. The intersection carries traffic from many other networks and very minimal from the Unser and Sage development. The basic problem with the operation of the intersection lies with its design. The east-west street (Sage Rd.) operates on a single phase to serve left / thru / right turn traffic. The operation of the signal should be changed to permitted / protected phasing to serve the eastbound / westbound left turn movements, but the design and construction of the intersection is not conducive to such a change. It would require significant modifications to the design / construction of the intersection to accommodate the forecast NO BUILD volumes for which the developer should not be responsible. Therefore, no recommendation is made for this intersection regarding this development.

#5 – 86th Street / Sage Rd. – Signalized (Appendix Pages A-86 thru A-89)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of 86th St. and Sage Rd. are summarized in the following tables:

Signalized

86th St. / Sage Rd. 2025 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (86th St.)			SB (86th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
AM Peak Hour												
2025_NOBUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.80	0.80	0.27	0.46	0.48	0.00	0.00	0.17	0.05	0.00	0.07
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	40.1	50.7	50.6	41.0	37.0	37.2	7.3	0.0	7.8	8.8	0.0	7.1
Intersection LOS	D - 35.8											
95th Percentile Queue (veh)	2.6	12.7	13.1	1.7	5.2	5.3	0.1	0.0	3.4	0.8	0.0	1.3
2025_BUILD Volumes	59	588	13	54	257	71	4	114	96	55	30	51
V/C Ratio	0.24	0.81	0.81	0.34	0.48	0.50	0.00	0.00	0.19	0.07	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A	A	A	B	A	A
Control Delay (Seconds)	37.9	49.6	49.5	38.4	33.9	34.1	8.4	0.0	9.0	10.5	0.0	8.1
Intersection LOS	C - 34.8											
95th Percentile Queue (veh)	2.5	13.5	14.0	2.3	6.0	6.0	0.1	0.0	4.1	1.2	0.0	1.4

PM Peak Hour

2025_NOBUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.55	0.56	0.25	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	46.0	50.7	50.8	43.1	47.3	47.6	8.4	0.0	6.9	7.5	0.0	7.6
Intersection LOS	D - 36.8											
95th Percentile Queue (veh)	2.8	8.8	9.0	2.4	9.7	9.9	0.3	0.0	1.9	0.5	0.0	3.7
2025_BUILD Volumes	55	344	42	66	453	67	17	85	40	42	110	93
V/C Ratio	0.36	0.59	0.60	0.31	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.18
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	44.5	50.6	50.8	41.1	46.1	46.4	9.3	0.0	7.8	8.6	0.0	8.3
Intersection LOS	D - 36.7											
95th Percentile Queue (veh)	2.7	9.8	10.0	3.1	11.0	11.2	0.3	0.0	2.3	0.8	0.0	3.9

Signalized

Sage Rd. / 86th St. 2035 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (86th St.)			SB (86th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
AM Peak Hour												
2035_NOBUILD Volumes	70	638	15	45	249	70	5	135	95	50	35	60
V/C Ratio	0.26	0.81	0.81	0.30	0.46	0.48	0.01	0.00	0.21	0.07	0.00	0.09
Level-of-Service	D	D	D	D	C	C	A	A	A	B	A	A
Control Delay (Seconds)	36.9	48.4	48.3	38.3	32.9	33.1	9.1	0.0	9.7	11.4	0.0	8.7
Intersection LOS	C - 34.1											
95th Percentile Queue (veh)	3.0	14.4	14.9	1.9	5.7	5.8	0.1	0.0	4.7	1.1	0.0	1.8
2035_BUILD Volumes	70	685	15	61	295	82	5	135	111	63	35	60
V/C Ratio	0.25	0.82	0.82	0.37	0.49	0.50	0.01	0.00	0.23	0.09	0.00	0.09
Level-of-Service	D	D	D	D	C	C	B	A	B	B	A	A
Control Delay (Seconds)	35.0	47.4	47.3	36.1	30.0	30.2	10.3	0.0	11.2	13.4	0.0	9.8
Intersection LOS	C - 33.2											
95th Percentile Queue (veh)	2.9	15.1	15.7	2.5	6.3	6.3	0.1	0.0	5.5	1.6	0.0	1.9

PM Peak Hour

2035_NOBUILD Volumes	65	354	50	60	484	65	20	100	30	35	130	110
V/C Ratio	0.40	0.57	0.58	0.28	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Level-of-Service	D	D	D	D	D	D	B	A	A	A	A	A
Control Delay (Seconds)	43.6	48.5	48.7	40.2	43.4	43.6	10.6	0.0	8.5	9.3	0.0	9.3
Intersection LOS	D - 35.0											
95th Percentile Queue (veh)	3.1	10.0	10.2	2.7	10.5	10.7	0.4	0.0	2.5	0.7	0.0	5.0
2035_BUILD Volumes	65	398	50	75	527	77	20	100	45	47	130	110
V/C Ratio	0.40	0.60	0.61	0.34	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.22
Level-of-Service	D	D	D	D	D	D	B	A	A	B	A	B
Control Delay (Seconds)	42.2	48.4	48.5	38.5	42.8	43.0	11.6	0.0	9.4	10.5	0.0	10.2
Intersection LOS	D - 35.2											
95th Percentile Queue (veh)	3.1	10.9	11.1	3.3	12.1	12.2	0.5	0.0	3.0	1.0	0.0	5.3

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Tower Rd. is operating at an acceptable level of service for all conditions evaluated in this study. The new trips generated by the Unser and Sage Development present no significant adverse impact to this signalized intersection.

#6 – Unser Blvd / San Ygnacio Rd. – Unsignalized (Appendix Pages A-90 thru A-93)



The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of San Ygnacio Rd. and Sage Rd. are summarized in the following tables:

Unsignalized

Unser Blvd. / San Ygnacio Rd. 2025_Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
AM Peak Hour												
2025_NOBUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.07			0.03						
Level-of-Service			B			C						
Control Delay (Seconds)			12.6			16.5						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.2			0.1						
2025_BUILD Volumes	0	0	34	0	0	11	0	1,672	11	0	1,073	11
V/C Ratio			0.07			0.04						
Level-of-Service			B			C						
Control Delay (Seconds)			13.0			17.1						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.2			0.1						

PM Peak Hour

2025_NOBUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.11			0.03						
Level-of-Service			C			B						
Control Delay (Seconds)			17.7			13.3						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.4			0.1						
2025_BUILD Volumes	0	0	34	0	0	11	0	1,237	11	0	1,677	34
V/C Ratio			0.11			0.03						
Level-of-Service			C			B						
Control Delay (Seconds)			18.5			13.6						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.4			0.1						

Unsignalized

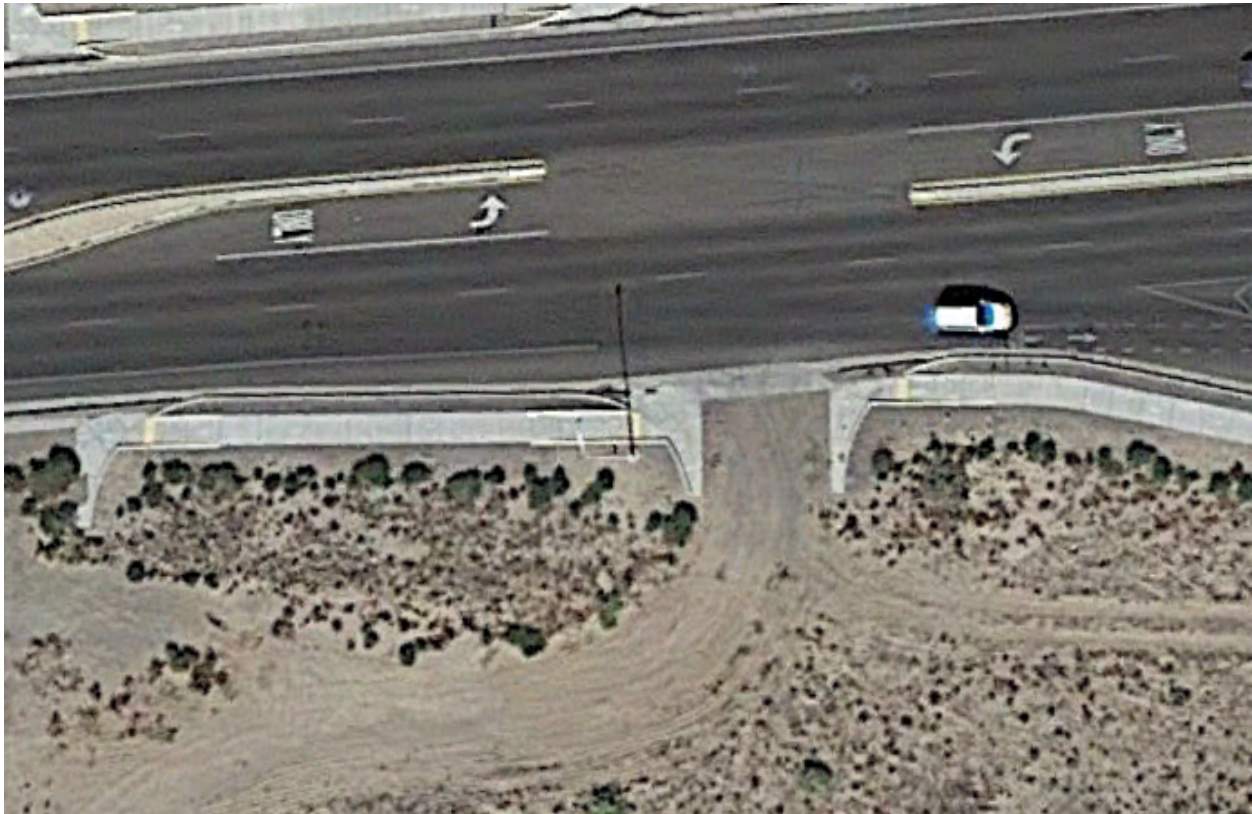
San Ygnacio Rd. / Unser Blvd. 2035_Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
AM Peak Hour												
2035_NOBUILD Volumes	0	0	47	0	0	16	0	3,102	16	0	1,966	16
V/C Ratio			0.19			0.16						
Level-of-Service			C			E						
Control Delay (Seconds)			23.1			47.2						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.7			0.5						
2035_BUILD Volumes	0	0	47	0	0	16	0	3,165	16	0	2,020	16
V/C Ratio			0.20			0.17						
Level-of-Service			C			E						
Control Delay (Seconds)			24.1			49.9						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.7			0.6						

PM Peak Hour

2035_NOBUILD Volumes	0	0	47	0	0	16	0	2,273	16	0	3,102	47
V/C Ratio						0.14						
Level-of-Service						E						
Control Delay (Seconds)						41.7						
Intersection LOS	TWSC											
95th Percentile Queue (veh)						0.5						
2035_BUILD Volumes	0	0	47	0	0	16	0	2,331	16	0	3,170	47
V/C Ratio						0.18						
Level-of-Service						F						
Control Delay (Seconds)						53.5						
Intersection LOS	TWSC											
95th Percentile Queue (veh)						0.6						

The Implementation Year analysis in the above table shows that the unsignalized intersection of Unser Blvd and San Ygnacio Rd. is operating at an acceptable level of service for all 2025 conditions evaluated in this study. The Horizon Year (2035) analysis in the above table demonstrates a LOS “F” for the westbound-right movement. Since our proposed development is not contributing to this failing movement for the westbound-right movement, no recommendation is made for the Unser Blvd and San Ygnacio Rd. intersection.

#7 – Sage Rd. / Driveway “A” – Unsignalized (Appendix Pages A-94 thru A-95)



Driveway “A” is proposed as a full access, unsignalized driveway located on the south side of Sage Rd approximately 430-feet west of Unser Blvd. (centerline to centerline). The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Sage Rd. and Driveway “A” are summarized in the following tables:

Unsignalized

Driveway "A" / Sage Rd. 2025 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry									
AM Peak Hour									
2025_BUILD Volumes		830	102	44	286		85		152
V/C Ratio				0.06			0.53		
Level-of-Service				B			C		
Control Delay (Seconds)				10.2			21.9		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.2			3.0		

PM Peak Hour

2025_BUILD Volumes		513	87	55	572		85		126
V/C Ratio				0.06			0.39		
Level-of-Service				A			C		
Control Delay (Seconds)				8.9			15.8		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.2			1.8		

Unsignalized

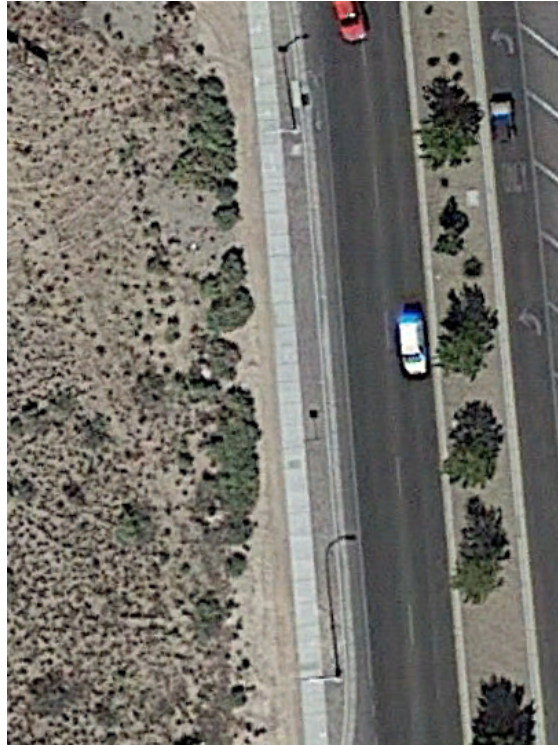
Sage Rd. / Driveway "A" 2035 Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry		2	1	1	2		1>		0
AM Peak Hour									
2035_BUILD Volumes		1,160	102	44	399		85		152
V/C Ratio				0.05			0.42		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			15.7		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.1			2.0		

PM Peak Hour

2035_BUILD Volumes		717	87	55	799		85		126
V/C Ratio				0.05			0.32		
Level-of-Service				A			B		
Control Delay (Seconds)				8.2			13.1		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.1			1.4		

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Driveway "A" is operating at an acceptable level of service for all conditions evaluated in this study. Driveway "A" currently exists and should be designed and constructed as a full access unsignalized intersection with a minimum of one lane entering and one lane exiting. Driveway "A" can be widened within the constraints of the City of Albuquerque Development Process Manual, but the design of Driveway "A" should maintain proper alignment with the existing driveway on the north side of Sage Rd. An eastbound right-turn deceleration lane on Sage Rd. at Driveway "A" is warranted and should be constructed to the length required by the City of Albuquerque to the degree possible. Relocation of the driveway to the west of Driveway "A" and converting that driveway to a "residential type" driveway is recommended. Also, the existing westbound left turn lane on Sage Rd. at Driveway "A" should be maintained.

#8 – Unser Blvd / Driveway “B” – Unsignalized (Appendix Pages A-96 thru A-97)



Driveway “B” is proposed as a right-in/right-out, unsignalized driveway located on the west side of Unser Blvd. approximately 360-feet south of the intersections of Unser Blvd. and Sage Rd on the south side of Sage Rd (centerline to centerline). The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Unser Blvd. and Driveway “B” are summarized in the following tables:

Unsignalized

Unser Blvd. / Driveway "B" 2025 Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	0	2			2	1
AM Peak Hour									
2025_BUILD Volumes	0		13	105	1,213			1,025	13
V/C Ratio			0.03	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.3	11.4					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.1						

PM Peak Hour

2025_BUILD Volumes	0		13	105	1,213			1,025	13
V/C Ratio			0.03	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.3	11.4					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.1						

Unsignalized

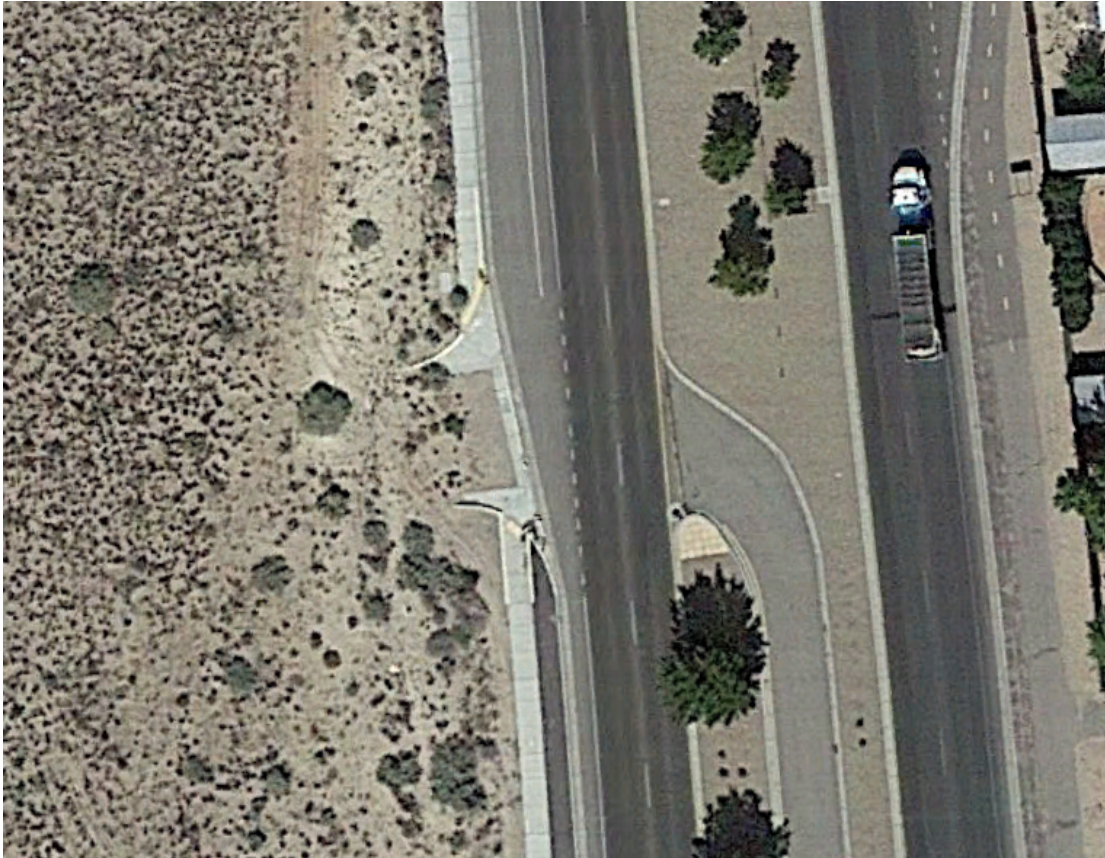
Driveway "B" / Unser Blvd. 2035 Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	0	2			2	1
AM Peak Hour									
2035_BUILD Volumes	0		69	0	1,401			1,404	85
V/C Ratio			0.18						
Level-of-Service			C						
Control Delay (Seconds)			16.5						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.7						

PM Peak Hour

2035_BUILD Volumes	0		64	0	1,417			1,409	75
V/C Ratio			0.17						
Level-of-Service			C						
Control Delay (Seconds)			16.4						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.6						

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Driveway "B" is operating at an acceptable level of service for all conditions evaluated in this study. Proposed Driveway "B" should be designed and constructed as a right-in, right-out only unsignalized intersection with one lane entering and one lane exiting. Driveway "B" should be constructed to comply with the requirements of the City of Albuquerque Development Process Manual. A southbound right turn deceleration lane on Unser Blvd. at Driveway "B" is warranted and, therefore, should be designed and constructed. In order to be constructed to full required length, the signalized intersection of Sage Rd. / Unser Blvd. will need to be reconfigured to eliminate the eastbound to southbound free right turn so that it becomes a standard signalized right turn movement.

#9 – Unser Blvd / Driveway “C” – Unsignalized (Appendix Pages A-98 thru A-99)



Driveway “C” is an existing approved right-in/right-out and left-in only, unsignalized driveway located on the west side of Unser Blvd. approximately 800-feet south of the intersections of Unser Blvd. and Sage Rd (centerline to centerline). The results of the 2025 (Implementation Year) and 2035 (Horizon Year) analysis of the signalized intersections of Unser Blvd. and Driveway “C” are summarized in the following tables:

Unsignalized

Unser Blvd. / Driveway "C" 2025 Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	1	2			2	1
AM Peak Hour									
2025_BUILD Volumes	0		34	105	1,213			1,005	18
V/C Ratio			0.07	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.5	11.3					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.2	0.5					

PM Peak Hour

2025_BUILD Volumes	0		33	95	1,095			1,558	20
V/C Ratio			0.10	0.23					
Level-of-Service			C	C					
Control Delay (Seconds)			16.8	16.3					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.3	0.9					

Unsignalized

Driveway "B" / Unser Blvd. 2035 Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	0	2			2	1
AM Peak Hour									
2035_BUILD Volumes	0		69	0	1,401			1,404	85
V/C Ratio			0.18						
Level-of-Service			C						
Control Delay (Seconds)			16.5						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.7						

PM Peak Hour

2035_BUILD Volumes	0		64	0	1,417			1,409	75
V/C Ratio			0.17						
Level-of-Service			C						
Control Delay (Seconds)			16.4						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.6						

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of Unser Blvd and Driveway "C" is operating at an acceptable level of service for all conditions evaluated in this study. Driveway "C" is an existing approved right-in, right-out, left-in only intersection. It should be maintained as a right-in, right-out, left-in only unsignalized intersection with one lane entering (minimum) and one lane exiting. The existing southbound right turn deceleration lane on Unser Blvd. at Driveway "C" is warranted and, therefore, should be maintained.

Determination of Warrants for Deceleration Lanes

Determination of Warrants for Deceleration Lanes for Driveway "A," Driveway "B" and Driveway "C" were conducted in accordance with the City of Albuquerque Development Process Manual (DPM) Criteria. The following table defines the City's warrant criteria for right and left turn lanes at driveways:

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"					
Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			Right Turn		
Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access	Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	55	30-40	50	102
Warranted (WBL Existing)			Warranted		
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	N/A	30-40	50	101
			Warranted		
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	105	30-40	50	20
Warranted (NBL Existing)			Not Warranted (SBR Existing)		

Determination of Warrants for Deceleration Lanes for Driveway "A", indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A westbound left turn lane on Sage Rd. at Driveway "A" is warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 35 MPH. However, a westbound left-turn lane on Sage Rd. at Driveway "A" exists and it approximately 125-feet long (including transition). Therefore, no recommendation is made.
- An eastbound right turn deceleration lane is warranted at Driveway "A" per the COA DPM with a design speed of 35 MPH. This has been shown on the Site Plan at approximately 125-feet.

Determination of Warrants for Deceleration Lanes for Driveway "B", indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A southbound right turn lane on Unser Blvd. at Driveway "B" is warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 40 MPH. This has been shown on the Site Plan at approximately 300-feet (including transition).
- Since Driveway 'B' is a right-in/right-out only access, a northbound left-turn lane is not required. Therefore, no recommendation is made.

Determination of Warrants for Deceleration Lanes for Driveway "C", indicate the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A 250-foot long (including taper) northbound left turn deceleration lane is warranted at Driveway “C”. However, a northbound left-turn lane at Unser Blvd. at Driveway “C” exists and it approximately 425-foot long (including transition). Therefore, no recommendation is made.
- A southbound right-turn lane on Unser Blvd. at Driveway “C” is not warranted based on City of Albuquerque DPM criteria Table 7.4.67 with a design speed of 40 MPH. However, a southbound right-turn lane on Unser Blvd. at Driveway “C” exists and it approximately 425-foot long (including transition). Therefore, no recommendation is made.

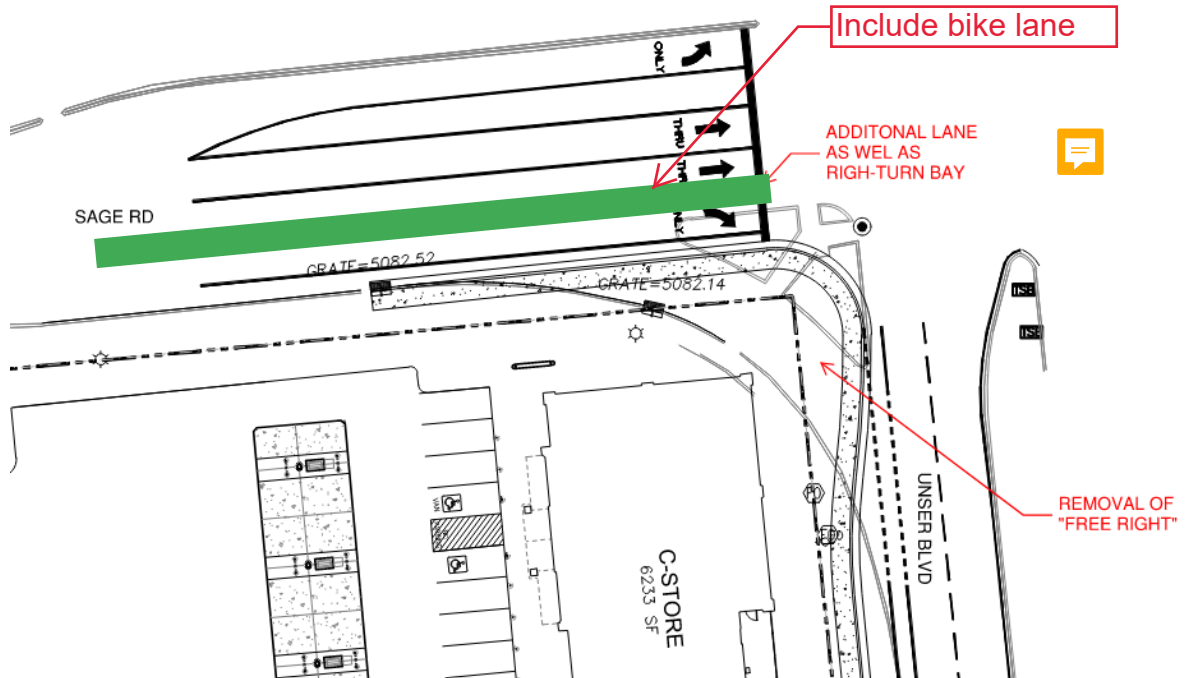
Driveway “A” and Driveway “C” are existing driveways. Driveway “C” was approved as a right-in, right-out, left-in only unsignalized driveway in 2008 (R-08-01-TCC) along the west side of Unser Blvd. approximately 800 feet south of Sage Rd. Approval for proposed Driveway “B” as a right-in, right-out unsignalized access approximately 360 feet south of Sage Rd. is requested with this application and with this Traffic Impact Study. An Access Evaluation Study is considered as a companion to this Traffic Impact Study. The Access Evaluation Study will provide arguments to justify the new access. Driveway “B” as a right-in, right-out unsignalized access along the west side of Unser Blvd. approximately 360 feet south of Sage Rd. (centerline to centerline) will require approval of not only the City of Albuquerque, but also the Transportation Coordinating Committee at the Mid-Region Council of Governments.

Summary of Impacts and Recommendations

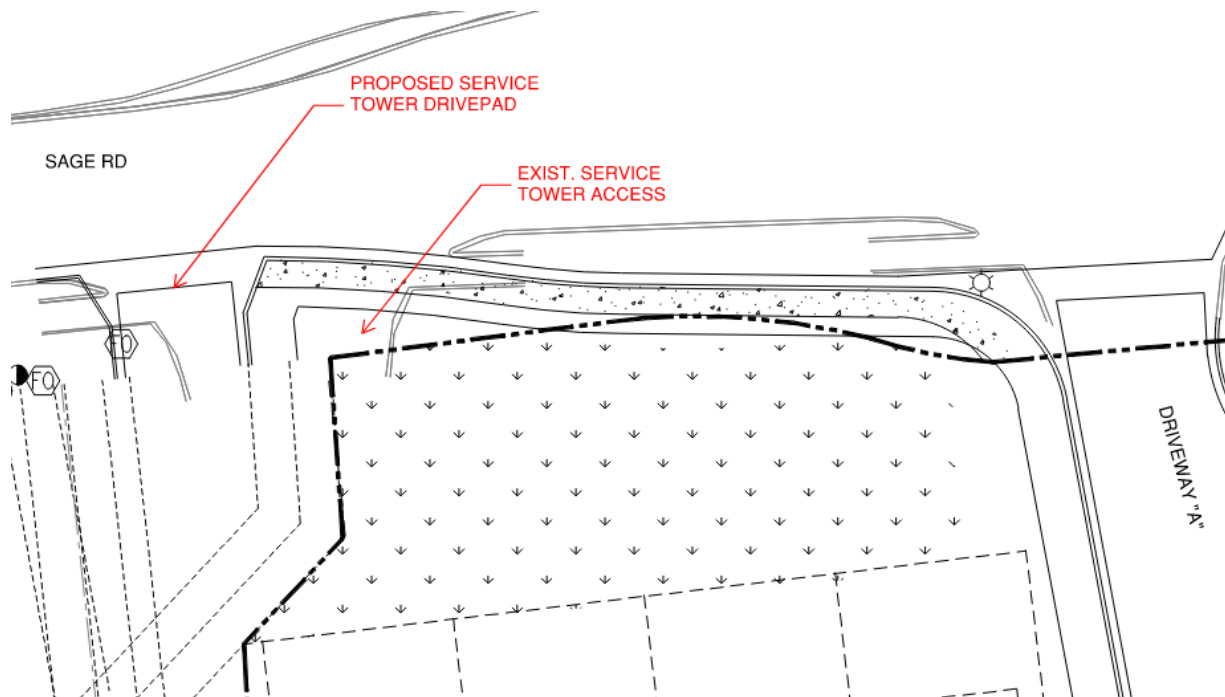
There are 4 areas of concern with respect to the Executive Summary Results Table. Impacts and Recommendations are defined below:

- The results demonstrate that the signalized intersection of Unser and Sage is characterized by a marginally long delay for the projected 2035 volumes for the “AM Build” scenario. The scenario indicates that the signalized intersection is slightly congested as a result of the projected traffic volumes generated by the Unser and Sage Development (Full Development). With the additional growth in volumes from the proposed development, the projected delay for the Horizon Year (2035) increases the AM intersection delay by 12.4 seconds and raises the intersection delay to a LOS “E.” Existing lane geometry of the Unser and Sage intersection demonstrate the eastbound and westbound through movements (that travel through the intersection of Unser and Sage) are currently striped as one EB and one WB lane. Although the existing geometry demonstrates one EB and WB lane, there is sufficient pavement width for expansion of an additional EB and WB lane. It is proposed to eliminate the existing striping and use this existing pavement section as additional through lanes as well as provide improvements the SW corner of the intersection. These improvements also include elimination of the “free-right movement at the SW corner of Unser and Sage. This can be seen in the Exhibit below, and in Appendix-142. **The mitigations provided for this intersection include implementing an additional eastbound and westbound through lane, removal of the “free-right,” and optimizing the signal timing splits. The analysis of this report concludes that the**

timing splits and improving the intersection geometry of the Unser and Sage Intersection improves the Level of Service from a LOS “E” to a LOS “D.” The Sage and Unser Improvements exhibit is also shown below and in Appendix A-142.



- A proposed change is the location of the Service Tower Driveway. Due to minimal trips taken for this access, the driveway could be changed to reflect the “once-a-month” maximum trips it experiences. The changes to this Service Tower access are shown below as 60-ft to the west of the existing driveway. Proposed changes also refer to changing the access from a driveway to a drive pad. Changing the access location also provides Driveway “A” additional length for a deceleration lane. The Mitigated Site Plan of the SW corner of Unser and Sage is shown below and in **Appendix A-142**.



- According to the COA Design Process Manual Table 7.7.67, the addition of an EB right deceleration lane into Driveway “A” is warranted. The existing access is already developed for the appropriate width according to DPM Table 7.4.47 Three-lane Drive for 30-ft wide. The warranted left-turn deceleration lane is existing with 100-ft of storage. The right-turn deceleration lane is also warranted but due to the spacing of the shifted Service Tower entrance, there is approximately 125-ft of storage. **This report concludes a deceleration lane is warranted for eastbound right access into Driveway “A”.**
- Also warranted by the COA DPM Table 7.7.67 and 7.4.68, a SB right-turn deceleration lane at Unser at Driveway “B”. The deceleration lane is proposed with 240-ft of storage length for the SB right-in right-out access point. **This report concludes that a SB right deceleration lane is warranted for Driveway “B.”**
- Driveway “C” warrants only a northbound left deceleration lane on Unser at Driveway “C” according to COA DPM Table 7.4.68 at the driveway access into the project site. The deceleration lane is currently existing and includes 400-ft of storage. The southbound right-turn deceleration lane at Driveway “C” currently is existing and is approximately 400-ft in length. **No recommendations are made for Driveway “C.”**

Recommendations

Unser Blvd / Sage Rd. – Optimizing the signal timing splits for the Implementation Year (2025) and the Horizon Year (2035) to improve the operation of the traffic signal.

Additional eastbound and westbound through lane before and after the signalized intersection of Unser Blvd and Sage Rd. – The restriping and additional geometry currently has width for the additional eastbound and westbound through lane from Driveway “A” access point to Abeyta Rd.

Removal of “Free-Right” at SW corner of Unser and Sage – Removal of the “free-right” movement at the SW corner of Sage and Unser and provide an eastbound right at the intersection. The EB right turning movement will keep the existing turn-bay storage of 280-ft.

Sage Rd. / Driveway “A” – Driveway “A” is an existing full access, unsignalized driveway north of the proposed site. This should still operate as a full access driveway and match the existing width of the access point. An additional right-turn deceleration lane is warranted for right-turn access into the proposed site development with a storage of 240-ft.

Unser Blvd. / Driveway “B” – A SB right-turn deceleration lane is warranted for southbound right-in access into the proposed site. This storage length will consist of 240-ft in storage length.

APPENDIX

<u>Site Information</u>	
<i>Vicinity Map - Zone Atlas</i>	<i>A-01</i>
<i>Vicinity Map - Google Earth</i>	<i>A-02</i>
<i>Site Plan</i>	<i>A-03</i>
<u>Trip Generation</u>	
<i>Trip Generation Summary & Worksheets</i>	<i>A-04</i>
<u>Background Growth</u>	
<i>Background Growth Worksheet</i>	<i>A-05</i>
<i>Historic Background Growth Graph</i>	<i>A-06 thru A-10</i>
<u>Trip Distribution and Trip Assignments</u>	
<i>Trip Distribution Subarea Map (MRCOG)</i>	<i>A-11</i>
<i>Trip Distribution Worksheet</i>	<i>A-12 thru A-16</i>
<i>Residential Trip Distribution Map</i>	<i>A-17</i>
<i>Residential Trip Assignments Map (% Entering)</i>	<i>A-18</i>
<i>Residential Trip Assignments Map (% Exiting)</i>	<i>A-19</i>
<i>Trip Distribution Subarea Map (DASZ)</i>	<i>A-20</i>
<i>Trip Distribution Worksheet</i>	<i>A-21 thru A-24</i>
<i>Commercial Trip Distribution Map</i>	<i>A-25</i>
<i>Commercial Trip Assignments Map (% Entering)</i>	<i>A-26</i>
<i>Commercial Trip Assignments Map (% Exiting)</i>	<i>A-27</i>
<u>2025 Turning Movement Counts</u>	
<i>Turning Movement Volumes Summary Sheet</i>	<i>A-28 thru A-29</i>
<i>Intersection 1- Unser and Arenal</i>	<i>A-30 thru A-31</i>
<i>Intersection 2- Sage and Unser</i>	<i>A-32 thru A-33</i>
<i>Intersection 3- Unser and Tower</i>	<i>A-34 thru A-35</i>
<i>Intersection 4- Sage and Coors</i>	<i>A-36 thru A-37</i>
<i>Intersection 5- Sage and 86th Street</i>	<i>A-38 thru A-39</i>
<i>Intersection 6- Unser and San Ygnacio</i>	<i>A-40 thru A-41</i>
<i>Intersection 7 - Sage and Driveway "A"</i>	<i>A-42 thru A-43</i>
<i>Intersection 8 - Unser and Driveway "B"</i>	<i>A-44 thru A-45</i>
<i>Intersection 9 - Unser and Driveway "C"</i>	<i>A-46 thru A-47</i>
<u>2035 Turning Movement Counts</u>	

<i>Turning Movement Volumes Summary Sheet</i>	<i>A-48 thru A-49</i>
<i>Intersection 1- Unser and Arenal</i>	<i>A-50 thru A-51</i>
<i>Intersection 2- Sage and Unser</i>	<i>A-52 thru A-53</i>
<i>Intersection 3- Unser and Tower</i>	<i>A-54 thru A-55</i>
<i>Intersection 4- Sage and Coors</i>	<i>A-56 thru A-57</i>
<i>Intersection 5- Sage and 86th Street</i>	<i>A-58 thru A-59</i>
<i>Intersection 6- Unser and San Ygnacio</i>	<i>A-60 thru A-61</i>
<i>Intersection 7 - Sage and Driveway "A"</i>	<i>A-62 thru A-63</i>
<i>Intersection 8 - Unser and Driveway "B"</i>	<i>A-64 thru A-65</i>
<i>Intersection 9 - Unser and Driveway "C"</i>	<i>A-66 thru A-67</i>
<u>2025 Intersection Analysis</u>	
<i>Intersection 1- Unser and Arenal</i>	<i>A-68 thru A-71</i>
<i>Intersection 2- Sage and Unser</i>	<i>A-72 thru A-77</i>
<i>Intersection 3- Unser and Tower</i>	<i>A-78 thru A-81</i>
<i>Intersection 4- Sage and Coors</i>	<i>A-82 thru A-85</i>
<i>Intersection 5- Sage and 86th Street</i>	<i>A-86 thru A-89</i>
<i>Intersection 6- Unser and San Ygnacio</i>	<i>A-90 thru A-93</i>
<i>Intersection 7 - Sage and Driveway "A"</i>	<i>A-94 thru A-95</i>
<i>Intersection 8 - Unser and Driveway "B"</i>	<i>A-96 thru A-97</i>
<i>Intersection 9 - Unser and Driveway "C"</i>	<i>A-98 thru A-99</i>
<u>2035 Intersection Analysis</u>	
<i>Intersection 1- Unser and Arenal</i>	<i>A-100 thru A-104</i>
<i>Intersection 2- Sage and Unser</i>	<i>A-105 thru A-110</i>
<i>Intersection 3- Unser and Tower</i>	<i>A-111 thru A-114</i>
<i>Intersection 4- Sage and Coors</i>	<i>A-115 thru A-118</i>
<i>Intersection 5- Sage and 86th Street</i>	<i>A-119 thru A-122</i>
<i>Intersection 6- Unser and San Ygnacio</i>	<i>A-123 thru A-126</i>
<i>Intersection 7 - Sage and Driveway "A"</i>	<i>A-127 thru A-128</i>
<i>Intersection 8 - Unser and Driveway "B"</i>	<i>A-129 thru A-130</i>
<i>Intersection 9 - Unser and Driveway "C"</i>	<i>A-131 thru A-132</i>
<u>Safety Analysis</u>	
<i>Auxiliary Lane Analysis</i>	<i>A-133</i>
<u>Traffic Data</u>	
<i>Traffic Count Data Sheets</i>	<i>A-134 thru A-138</i>

<i>Traffic Impact Study Scope</i>	<i>A-139 thru A-141</i>
<i>Exhibit A</i>	<i>A-142</i>
<i>Exhibit B</i>	<i>A-143</i>
<i>2025 Conditions - LVAM Maps</i>	<i>A-144 thru A-146</i>
<i>2025 Conditions - LVAM Excel Tables</i>	<i>A-147 thru A-155</i>
<i>2035 Conditions - LVAM Maps</i>	<i>A-156 thru A-158</i>
<i>2035 Conditions - LVAM Maps Excel Tables</i>	<i>A-159 thru A-167</i>

UNSER AND SAGE DEVELOPMENT



TOWER RD

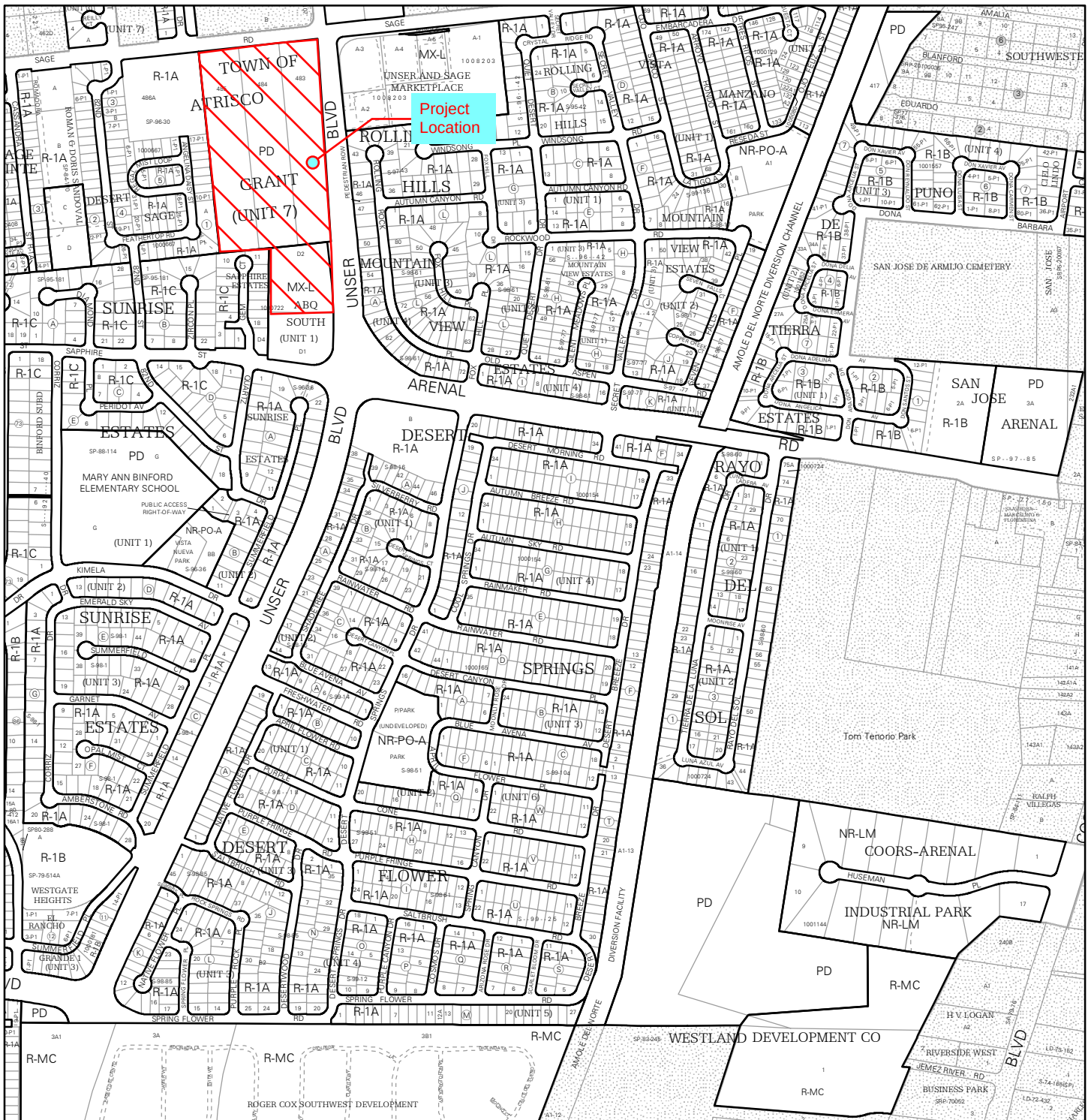
UNSER BLVD

86TH ST

SAGE RD

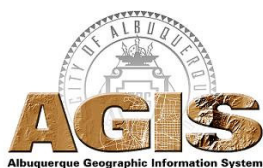
SITE

ARENAL RD

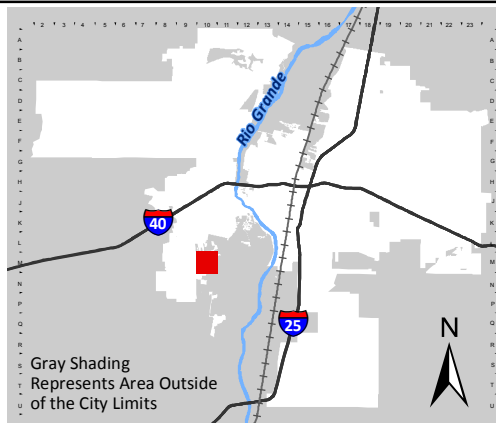


For more details about the Integrated Development Ordinance visit: <http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance>

IDO Zone Atlas May 2018

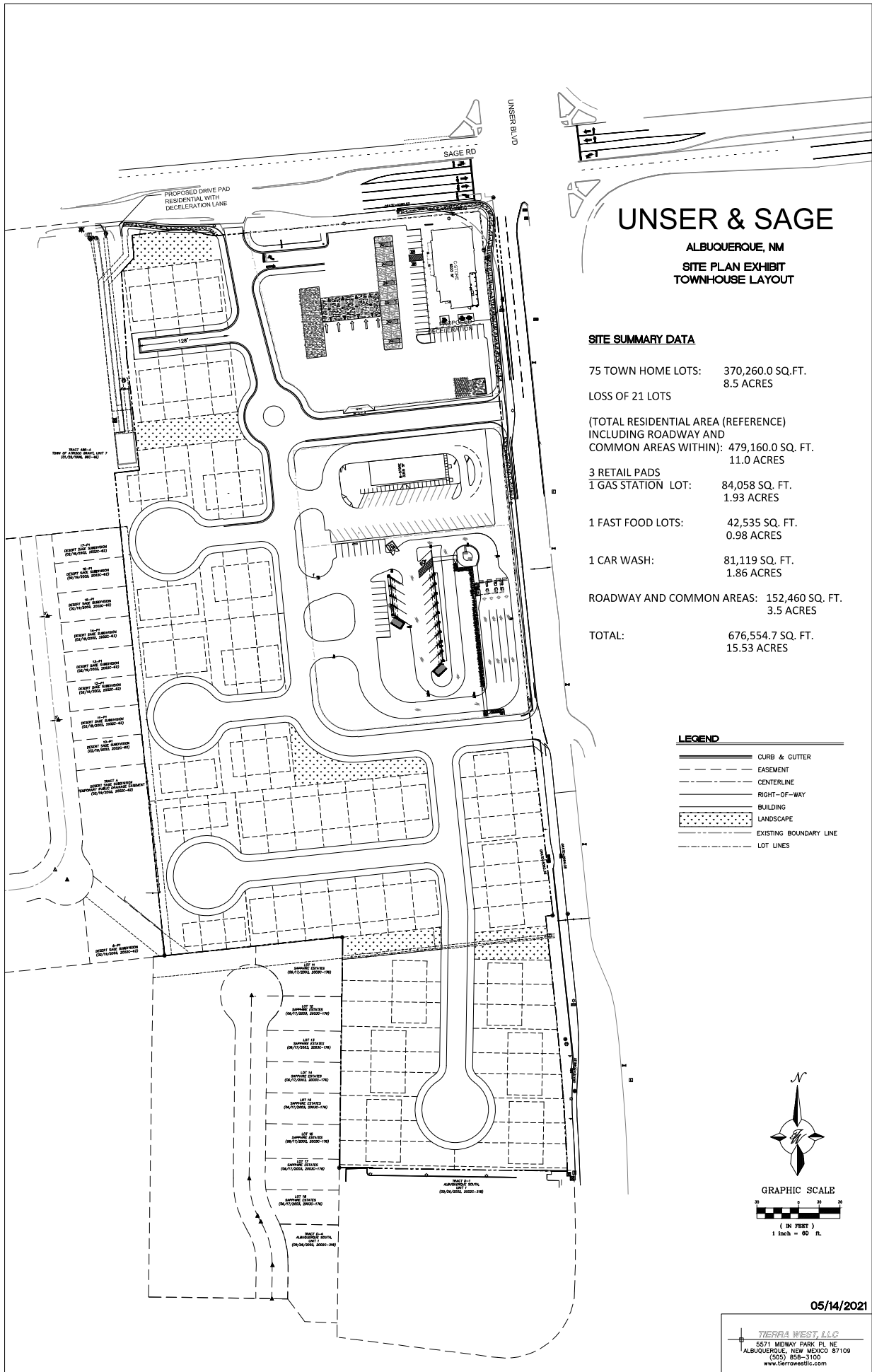


IDO Zoning information as of May 17, 2018
The Zone Districts and Overlay Zones
are established by the
Integrated Development Ordinance (IDO).



Zone Atlas Page:
M-10-Z

- Easement
 - Escarpment
 - Petroglyph National Monument
 - Areas Outside of City Limits
 - Airport Protection Overlay (APO) Zone
 - Character Protection Overlay (CPO) Zone
 - Historic Protection Overlay (HPO) Zone
 - View Protection Overlay (VPO) Zone
- 0 250 500 1,000 Feet



Unser and Sage Development
Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet						
	Units					
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 4-5.5K (945)	17	4,371	230	230	193	193
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		6,660	324	336	331	312
Retail Commercial Trips		6,154	317	313	298	292
<i>Pass-By Trips</i>	30%		<i>-95</i>	<i>-94</i>	<i>-89</i>	<i>-88</i>
Total New Primary Trips			222	219	209	204
Total New Residential Trips			7	23	33	20

Historic Growth Data Table

Unser and Sage Development (Unser and Sage)

Traffic Flows (AWDT) from Mid-Region Council of Governments

COG ID	Location												
Intersection #1:	ARENAL / UNSER BLVD.												
Street:	From:	To:		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
26584	ARENAL	EAST OF UNSER	WEST OF COORS	10,270	10,116	9,565	9,402	9,252	10,331	10,589	10,991	12,163	12,689
26581	ARENAL	EAST OF 86TH	WEST OF UNSER	3,084	3,038	2,999	2,948	2,901	2,901	2,659	2,760	2,908	3,049
25054	UNSER BLVD.	NORTH OF ARENAL	SOUTH OF SAGE	10,205	10,052	13,609	13,378	13,164	17,015	17,440	18,103	18,790	19,602
25063	UNSER BLVD.	NORTH OF GIBSON WEST	SOUTH OF ARENAL	9,555	9,412	13,781	13,547	13,330	15,227	15,608	16,201	16,886	17,616
Total Intersection Traffic Flows				33,114	32,618	39,954	39,275	38,647	45,474	46,296	48,055	50,747	52,956

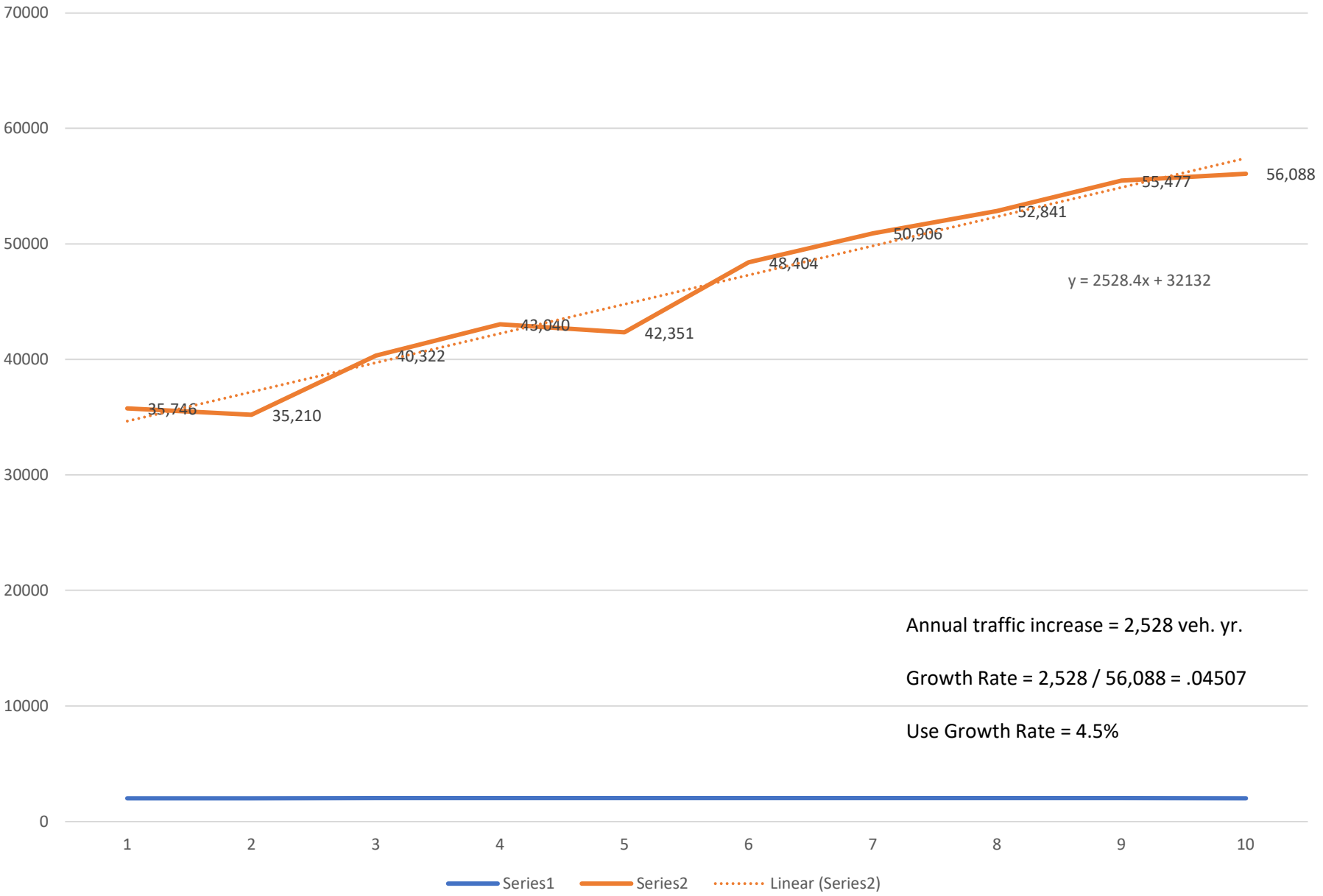
COG ID	Location												
Intersection #2: SAGE / UNSER BLVD.													
Street:	From:	To:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26528	SAGE	EAST OF 86TH	WEST OF UNSER BLVD.	7,955	7,836	7,759	7,627	7,505	8,210	8,415	8,735	9,425	9,832
25053	UNSER BLVD.	NORTH OF SAGE	SOUTH OF TOWER	12,571	12,382	12,221	15,416	15,169	15,169	16,841	17,481	18,416	19,985
25054	UNSER BLVD.	NORTH OF ARENAL	SOUTH OF SAGE	10,205	10,052	13,609	13,378	13,164	17,015	17,440	18,103	18,790	19,602
Total Intersection Traffic Flows			35,746	35,210	40,322	43,040	42,351	48,404	50,906	52,841	55,477	56,088	

COG ID	Location												
Intersection #3:	TOWER / UNSER BLVD.												
	Street:	From:	To:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
24669	TOWER	EAST OF 86TH ST.	WEST OF UNSER BLVD.	5,887	5,799	5,724	7,128	7,014	7,014	7,416	7,698	8,110	7,843
24670	TOWER	EAST OF UNSER	WEST OF COORS BLVD.	4,976	4,901	4,837	5,162	5,079	5,079	6,491	6,738	7,099	6,159
25053	UNSER BLVD.	NORTH OF SAGE	SOUTH OF TOWER	12,571	12,382	12,221	15,416	15,169	15,169	16,841	17,481	18,416	19,985
25052	UNSER BLVD.	NORTH OF TOWER	SW OF BRIDGE BLVD.	11,010	10,845	10,704	16,798	16,695	16,695	17,112	17,675	18,621	19,426
Total Intersection Traffic Flows				34,444	33,927	33,486	44,504	43,957	43,957	47,860	49,592	52,246	53,413

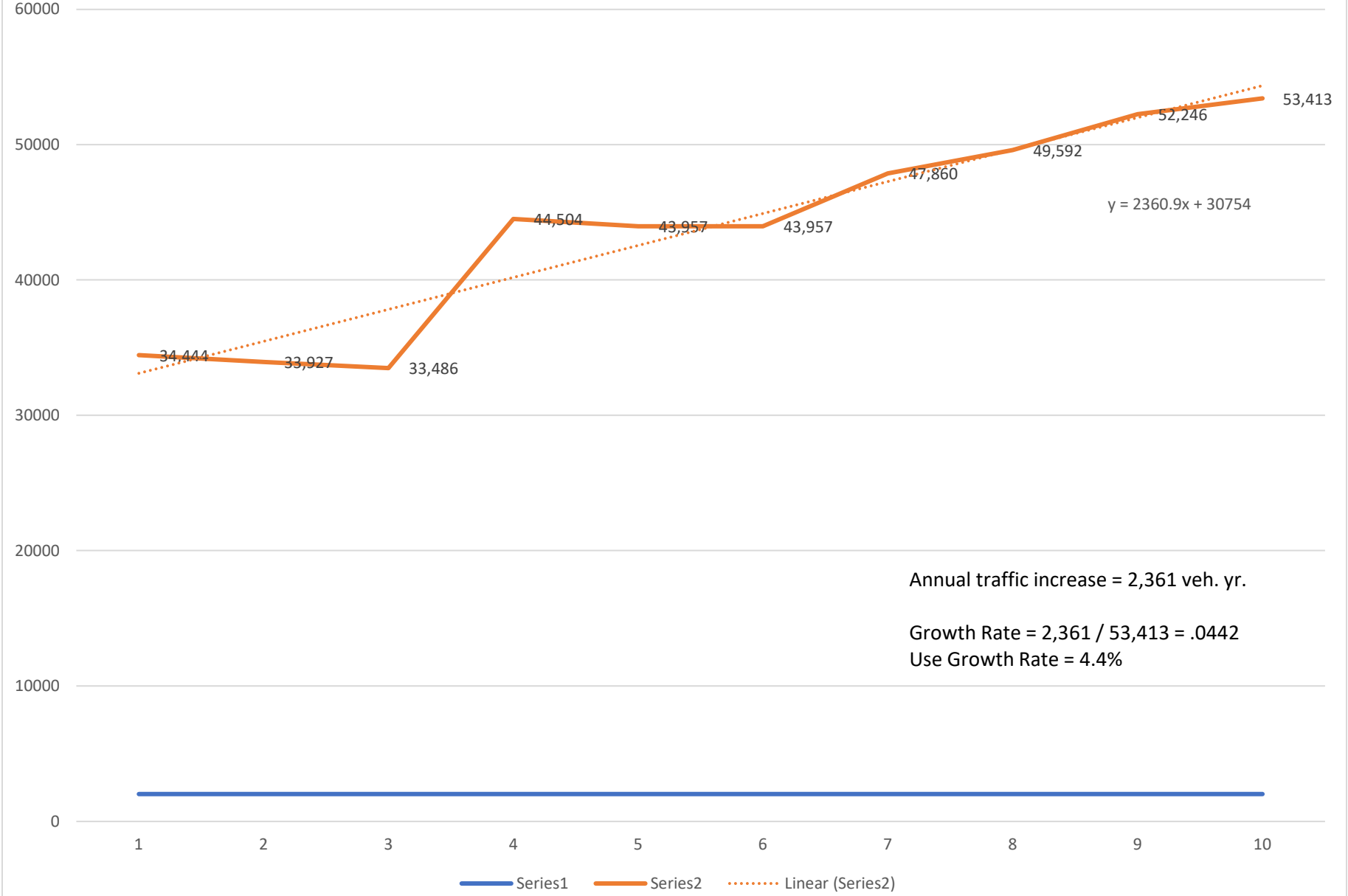
COG ID		Location											
Intersection #4:		SAGE / COORS											
Street:	From:	To:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26352	SAGE	EAST OF COORS	WEST OF OLD COORS RD.	6,104	6,012	4,460	4,384	4,314	4,742	4,861	5,046	5,300	5,529
26524	COORS	NORTHWEST OLD COORS RD.	SOUTH OF SAGE	17,546	16,755	16,537	15,689	13,572	13,572	13,911	16,579	17,466	18,221
26339	COORS	NORTH OF SAGE	SOUTH OF TOWER	19,775	19,478	19,225	19,880	19,562	19,562	20,051	21,023	22,148	23,105
Total Intersection Traffic Flows				48,440	47,185	46,955	46,572	43,961	45,886	47,033	51,170	53,760	53,524

COG ID	Location		**No Data for Serracino										
Intersection #5:	SAGE / 86TH STREET												
	Street:	From:	To:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
26523	SAGE	EAST OF 98TH ST.	WEST OF 86TH ST.	6,592	7,903	7,801	7,715	8,414	8,414	8,624	8,368	8,816	9,196
26528	SAGE	EAST OF 86TH	WEST OF UNSER BLVD.	7,955	7,836	7,759	7,627	7,505	8,210	8,415	8,735	9,425	9,832
22386	86TH STREET	NORTH OF ARENAL	SOUTH OF SAGE	2,425	2,758	2,722	2,676	2,422	2,422	2,483	2,422	2,552	2,662
22389	86TH STREET	NORTH OF SAGE	SOUTH OF TOWER	3,667	4,653	4,593	4,515	4,303	4,303	4,411	4,644	4,892	5,103
Total Intersection Traffic Flows				20,639	23,150	22,875	22,533	22,644	23,349	23,933	24,169	25,685	26,793

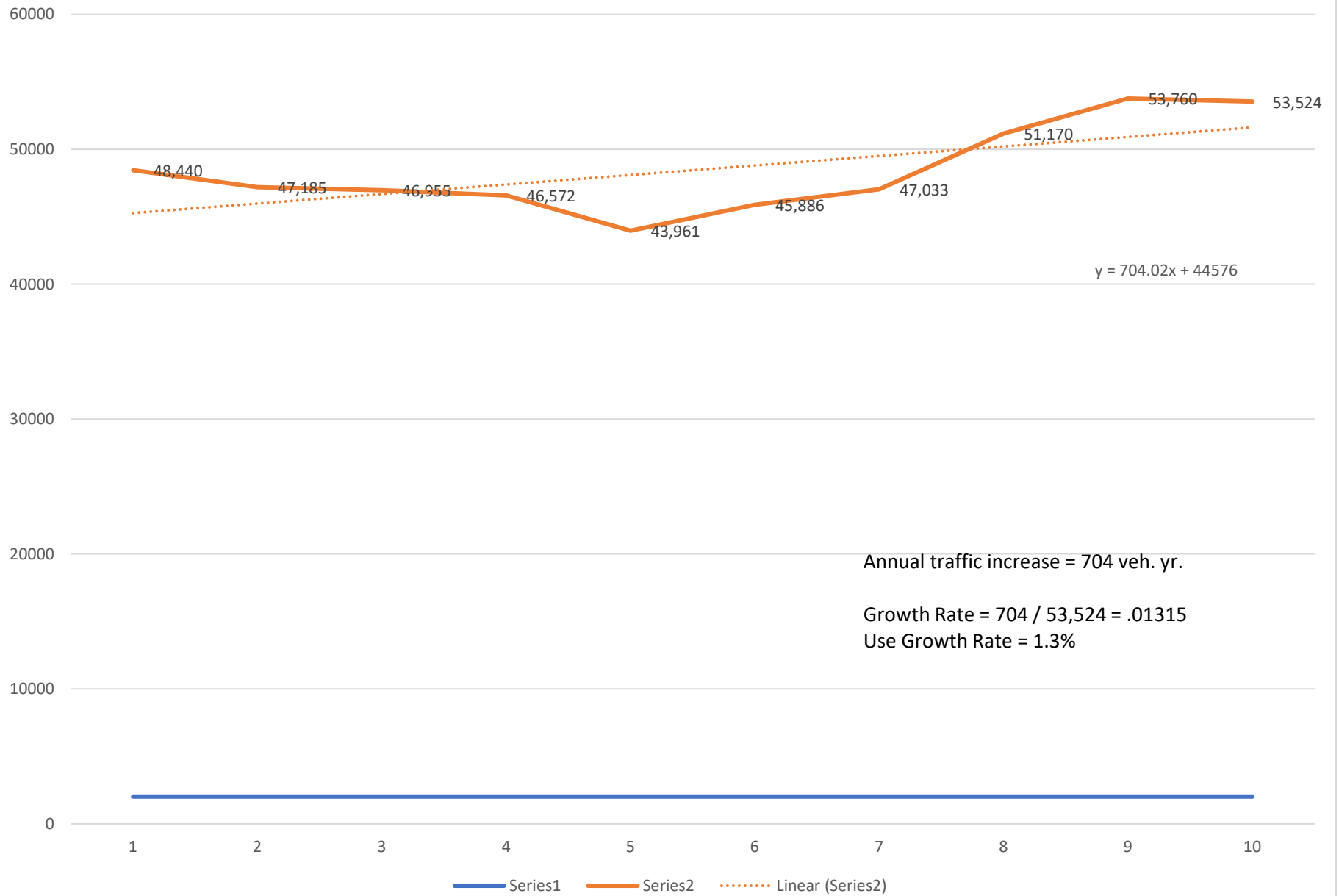
Unser / Sage



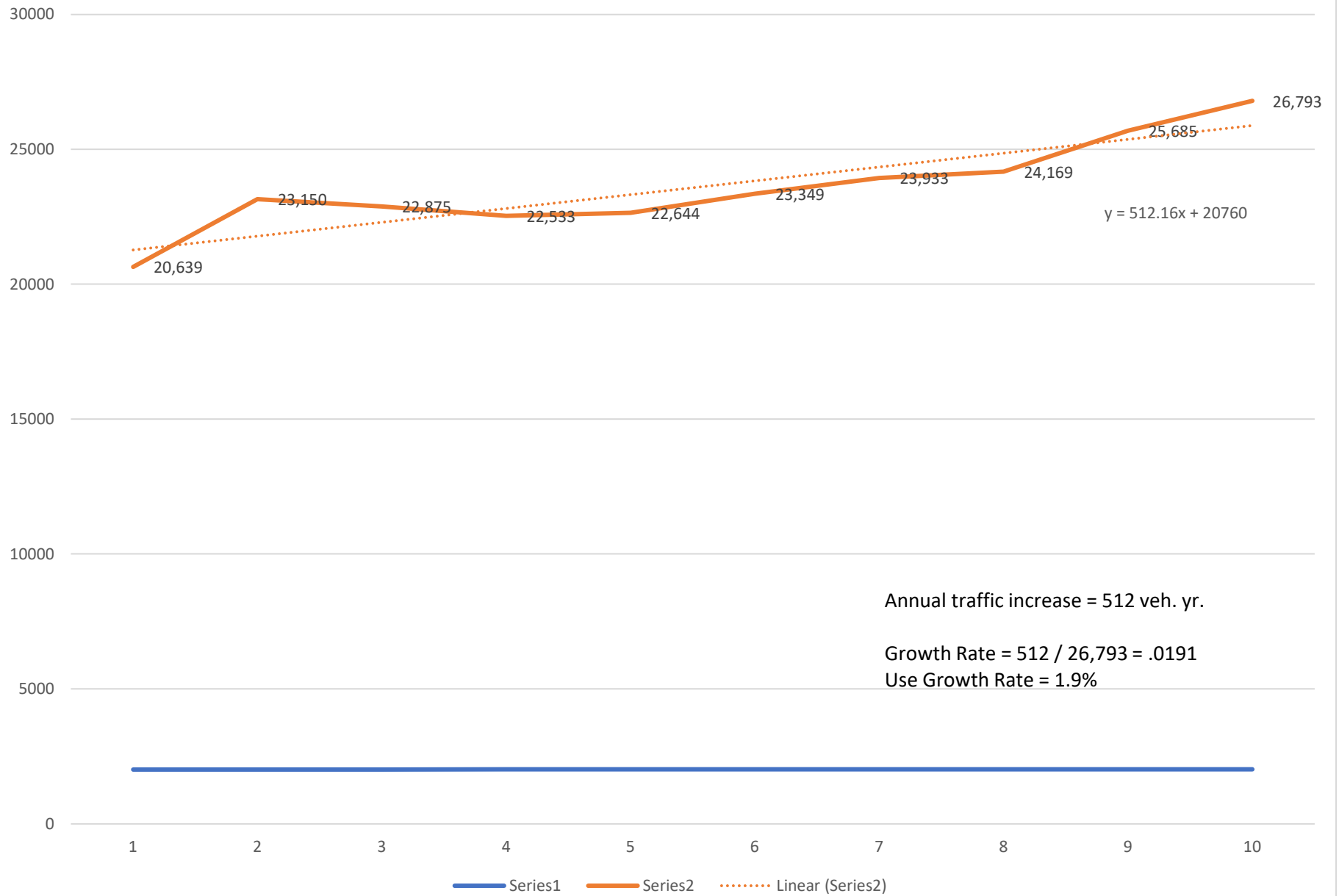
Unser / Tower Rd



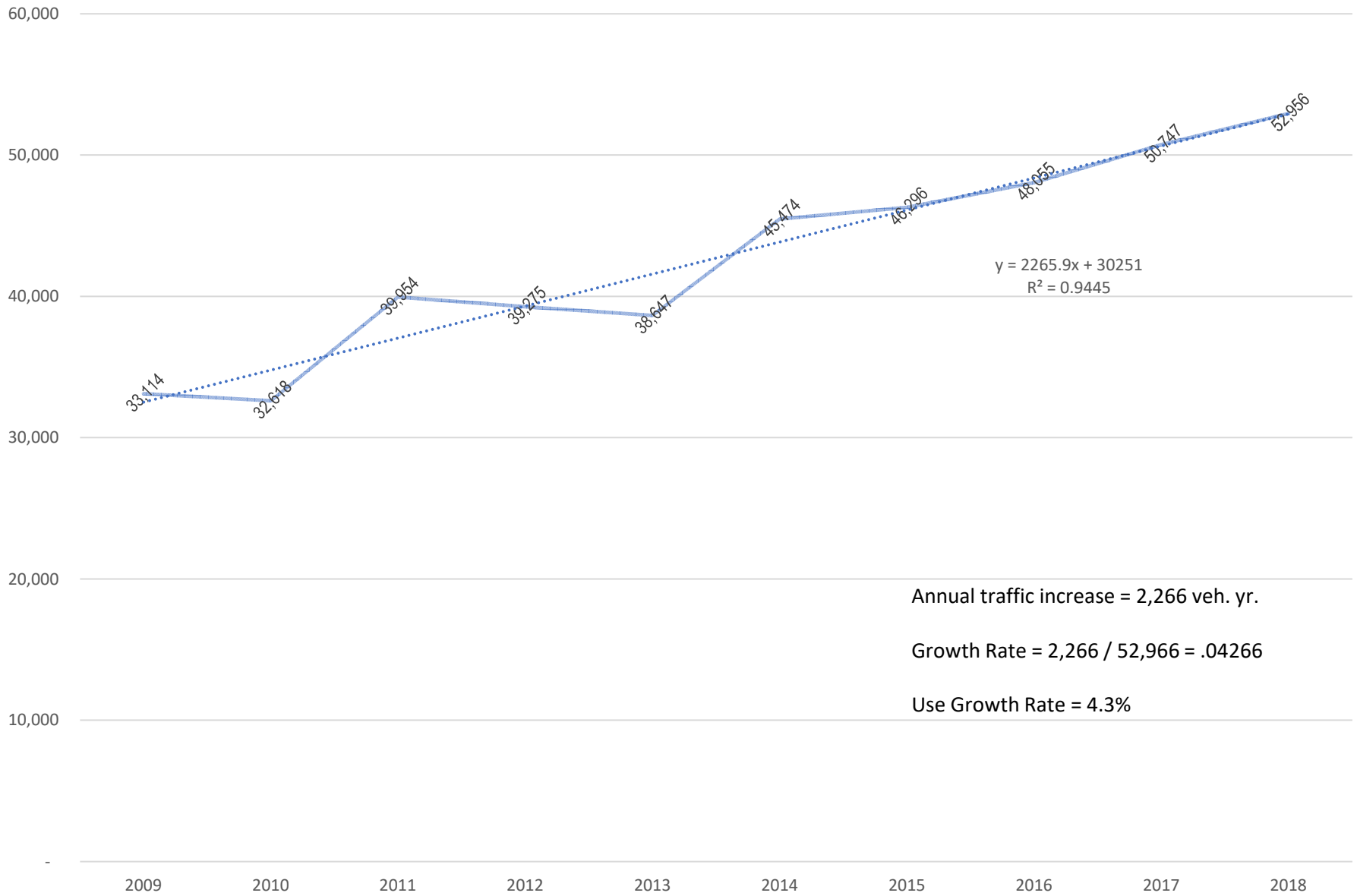
Sage and Coors



Sage and 86th St



Historic Traffic Flow Graph Intersection #1:Arenal Rd. / Unser Blvd..



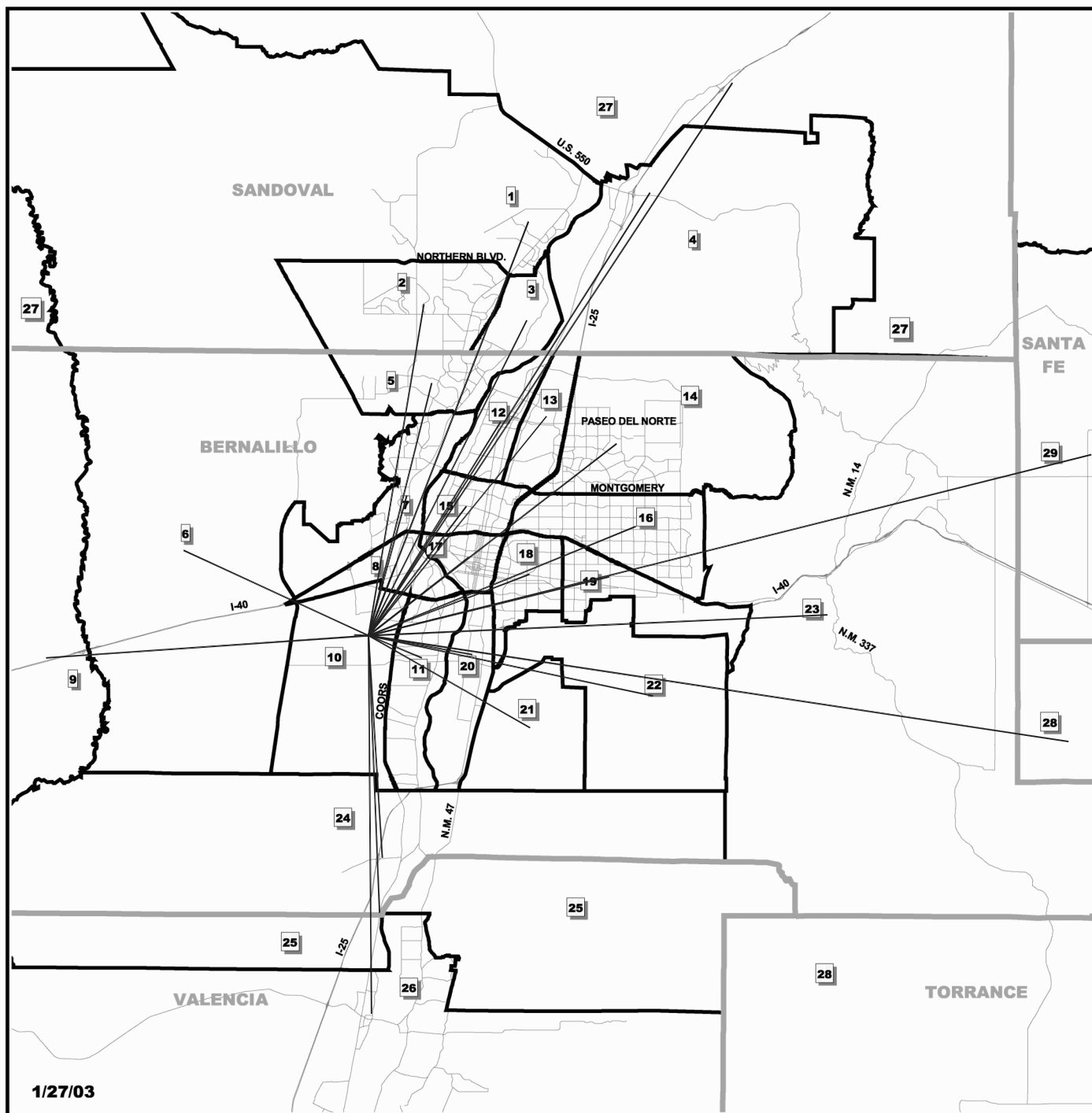


Figure 6

22 Subarea Identification Number

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.

**Sage / Unser Development
(SW Corner)
Trip Distribution Subarea Map**

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:

For determination of Trip Distribution for Proposed Residential Development Trips

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(TW) Tower Rd West			(UN) Unser North			(TE) Tower Rd East		
Sub Area I.D.#	% Sub Area in Study	2016 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	2040	2025													
1	100%	8,354	11,675	9,599	9,599	19.5	492	1.05%	0%	0.00%	0	100%	1.05%	492	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	1,204	2.57%	0%	0.00%	0	100%	2.57%	1,204	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	115	0.25%	0%	0.00%	0	100%	0.25%	115	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	168	0.36%	0%	0.00%	0	100%	0.36%	168	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	1,220	2.61%	0%	0.00%	0	100%	2.61%	1,220	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	276	0.59%	20%	0.12%	55	80%	0.47%	221	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	1,506	3.22%	0%	0.00%	0	80%	2.57%	1,205	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	2,693	5.75%	0%	0.00%	0	80%	4.60%	2,154	0%	0.00%	0
9	100%	724	1,023	836	836	13	64	0.14%	20%	0.03%	13	80%	0.11%	51	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	4,129	8.82%	10%	0.88%	413	10%	0.88%	413	5%	0.44%	206
11	100%	5,699	6,882	6,143	6,143	2.9	2,118	4.53%	0%	0.00%	0	100%	4.53%	2,118	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	591	1.26%	0%	0.00%	0	100%	1.26%	591	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	3,134	6.69%	0%	0.00%	0	100%	6.69%	3,134	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	2,734	5.84%	0%	0.00%	0	100%	5.84%	2,734	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	2,453	5.24%	0%	0.00%	0	100%	5.24%	2,453	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	4,345	9.28%	0%	0.00%	0	50%	4.64%	2,173	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	6,974	14.90%	0%	0.00%	0	50%	7.45%	3,487	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	4,288	9.16%	0%	0.00%	0	80%	7.33%	3,430	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	2,346	5.01%	0%	0.00%	0	80%	4.01%	1,877	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	1,382	2.95%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	349	0.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	2,277	4.86%	0%	0.00%	0	50%	2.43%	1,139	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	153	0.33%	0%	0.00%	0	50%	0.16%	77	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	141	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	10	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	1,228	2.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	205	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	152	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	59	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		46,809	100.00%		1.03%	481		65.06%	30,456		0.44%	206
											1.03%			65.06%			0.44%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:

For determination of Trip Distribution for Proposed Residential Development Trips

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(USN) Unser and Sage North			(USS) Unser and Sage South			(USW) Unser and Sage West		
Sub Area I.D.#	% Sub Area in Study	2016 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	2040	2025													
1	100%	8,354	11,675	9,599	9,599	19.5	492	1.05%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	1,204	2.57%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	115	0.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	168	0.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	1,220	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	276	0.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	1,506	3.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	2,693	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	724	1,023	836	836	13	64	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	4,129	8.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	5,699	6,882	6,143	6,143	2.9	2,118	4.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	591	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	3,134	6.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	2,734	5.84%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	2,453	5.24%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	4,345	9.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	6,974	14.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	4,288	9.16%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	2,346	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	1,382	2.95%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	349	0.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	2,277	4.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	153	0.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	141	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	10	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	1,228	2.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	205	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	152	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	59	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		46,809	100.00%		0.00%	0		0.00%	0		0.00%	0
											0.00%			0.00%			0.00%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:

For determination of Trip Distribution for Proposed Residential Development Trips

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(SW) Sage West			(SE) Sage East			(86N) 86th North		
Sub Area I.D.#	% Sub Area in Study	2016 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	2040	2025													
1	100%	8,354	11,675	9,599	9,599	19.5	492	1.05%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	1,204	2.57%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	115	0.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	168	0.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	1,220	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	276	0.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	1,506	3.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	2,693	5.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	724	1,023	836	836	13	64	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	4,129	8.82%	10%	0.88%	413	15%	1.32%	619	5%	0.44%	206
11	100%	5,699	6,882	6,143	6,143	2.9	2,118	4.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	591	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	3,134	6.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	2,734	5.84%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	2,453	5.24%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	4,345	9.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	6,974	14.90%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	4,288	9.16%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	2,346	5.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	1,382	2.95%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	349	0.75%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	2,277	4.86%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	153	0.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	141	0.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	10	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	1,228	2.62%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	205	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	152	0.32%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	59	0.13%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		46,809	100.00%		0.88%	413		1.32%	619		0.44%	206
											0.88%			1.32%			0.44%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:

For determination of Trip Distribution for Proposed Residential Development Trips

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(86S) 86th South			(CN) Coors North			(CS) Coors South		
Sub Area I.D.#	% Sub Area in Study	2016 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	2040	2025													
1	100%	8,354	11,675	9,599	9,599	19.5	492	1.05%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	1,204	2.57%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	115	0.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	168	0.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	1,220	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	276	0.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	1,506	3.22%	0%	0.00%	0	20%	0.64%	301	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	2,693	5.75%	0%	0.00%	0	20%	1.15%	539	0%	0.00%	0
9	100%	724	1,023	836	836	13	64	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	4,129	8.82%	5%	0.44%	206	10%	0.88%	413	10%	0.88%	413
11	100%	5,699	6,882	6,143	6,143	2.9	2,118	4.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	591	1.26%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	3,134	6.69%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	2,734	5.84%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	2,453	5.24%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	4,345	9.28%	0%	0.00%	0	50%	4.64%	2,173	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	6,974	14.90%	0%	0.00%	0	50%	7.45%	3,487	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	4,288	9.16%	0%	0.00%	0	20%	1.83%	858	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	2,346	5.01%	0%	0.00%	0	20%	1.00%	469	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	1,382	2.95%	0%	0.00%	0	50%	1.48%	691	50%	1.48%	691
21	100%	1,755	4,714	2,865	2,865	8.2	349	0.75%	0%	0.00%	0	0%	0.00%	0	50%	0.37%	175
22	100%	28,349	31,083	29,374	29,374	12.9	2,277	4.86%	0%	0.00%	0	50%	2.43%	1,139	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	153	0.33%	0%	0.00%	0	50%	0.16%	77	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	141	0.30%	0%	0.00%	0	0%	0.00%	0	20%	0.06%	28
25	100%	112	112	112	112	11.3	10	0.02%	0%	0.00%	0	0%	0.00%	0	20%	0.00%	2
26	100%	17,882	21,300	19,164	19,164	15.6	1,228	2.62%	0%	0.00%	0	0%	0.00%	0	20%	0.52%	246
27	100%	5,846	6,024	5,913	5,913	28.8	205	0.44%	0%	0.00%	0	0%	0.00%	0	20%	0.09%	41
28	100%	4,338	5,143	4,640	4,640	30.6	152	0.32%	0%	0.00%	0	0%	0.00%	0	20%	0.06%	30
29	100%	1,784	2,111	1,907	1,907	32.3	59	0.13%	0%	0.00%	0	0%	0.00%	0	20%	0.03%	12
		394,731	466,547	421,662	421,662		46,809	100.00%		0.44%	206		21.67%	10,146		3.50%	1,638
											0.44%			21.67%			3.50%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:
For determination of Trip Distribution for Proposed Residential Development Trips

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

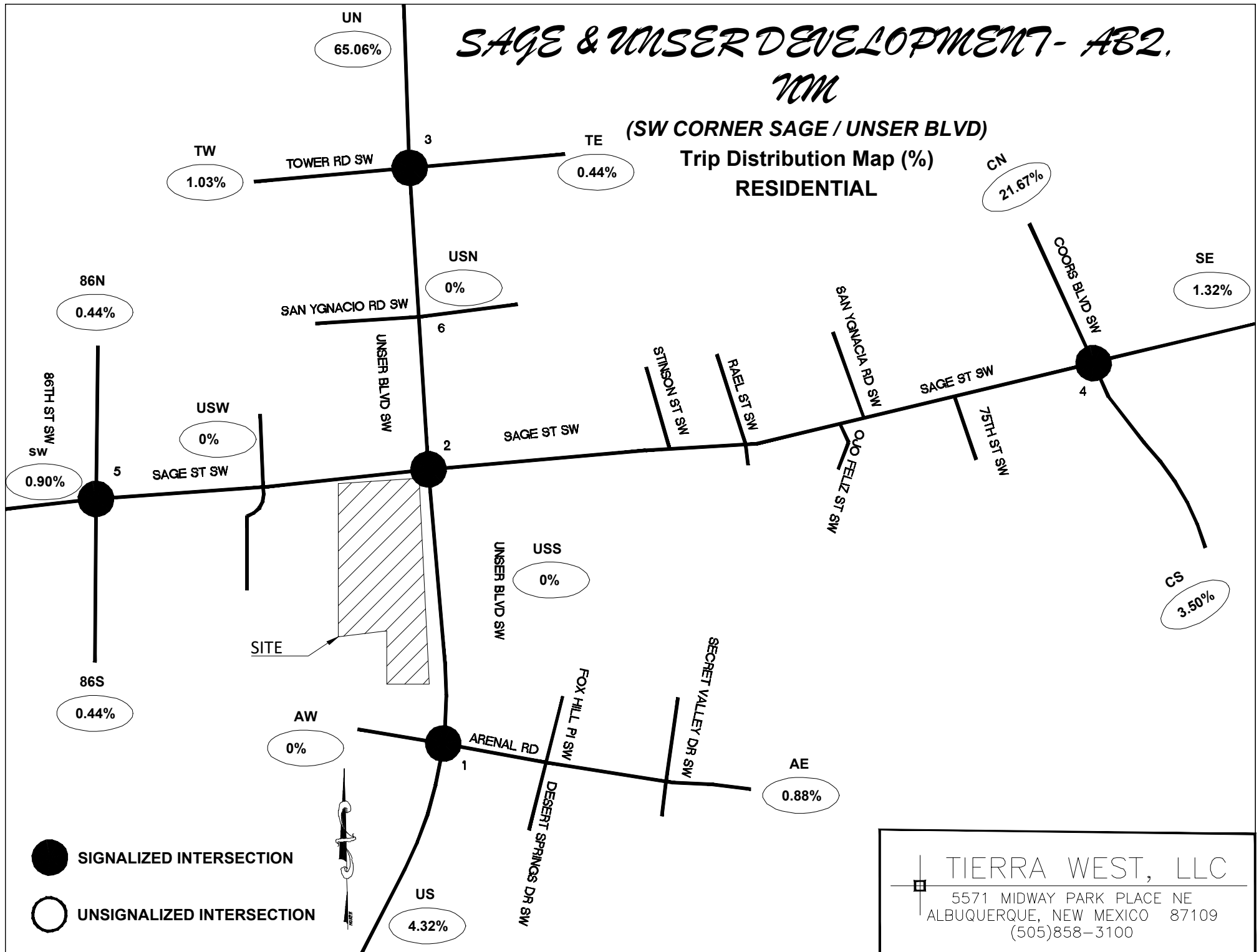
									(US) Unser South		
Sub Area I.D.#	% Sub Area in Study	2016 Employment	2040 Employment	Interpolated Employment for the Year	Employment in Study	Dist. (Mi.)	Employment / Distance	% Employment / Distance	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	2040	2025							
1	100%	8,354	11,675	9,599	9,599	19.5	492	1.05%	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	1,204	2.57%	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	115	0.25%	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	168	0.36%	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	1,220	2.61%	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	276	0.59%	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	1,506	3.22%	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	2,693	5.75%	0%	0.00%	0
9	100%	724	1,023	836	836	13	64	0.14%	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	4,129	8.82%	10%	0.88%	413
11	100%	5,699	6,882	6,143	6,143	2.9	2,118	4.53%	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	591	1.26%	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	3,134	6.69%	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	2,734	5.84%	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	2,453	5.24%	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	4,345	9.28%	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	6,974	14.90%	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	4,288	9.16%	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	2,346	5.01%	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	1,382	2.95%	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	349	0.75%	50%	0.37%	175
22	100%	28,349	31,083	29,374	29,374	12.9	2,277	4.86%	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	153	0.33%	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	141	0.30%	80%	0.24%	113
25	100%	112	112	112	112	11.3	10	0.02%	80%	0.02%	8
26	100%	17,882	21,300	19,164	19,164	15.6	1,228	2.62%	80%	2.10%	983
27	100%	5,846	6,024	5,913	5,913	28.8	205	0.44%	80%	0.35%	164
28	100%	4,338	5,143	4,640	4,640	30.6	152	0.32%	80%	0.26%	121
29	100%	1,784	2,111	1,907	1,907	32.3	59	0.13%	80%	0.10%	47
		394,731	466,547	421,662	421,662		46,809	100.00%		4.32%	2,024
											4.32%

* - Subarea in which the site it located.

SAGE & UNSER DEVELOPMENT- AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Distribution Map (%)
RESIDENTIAL

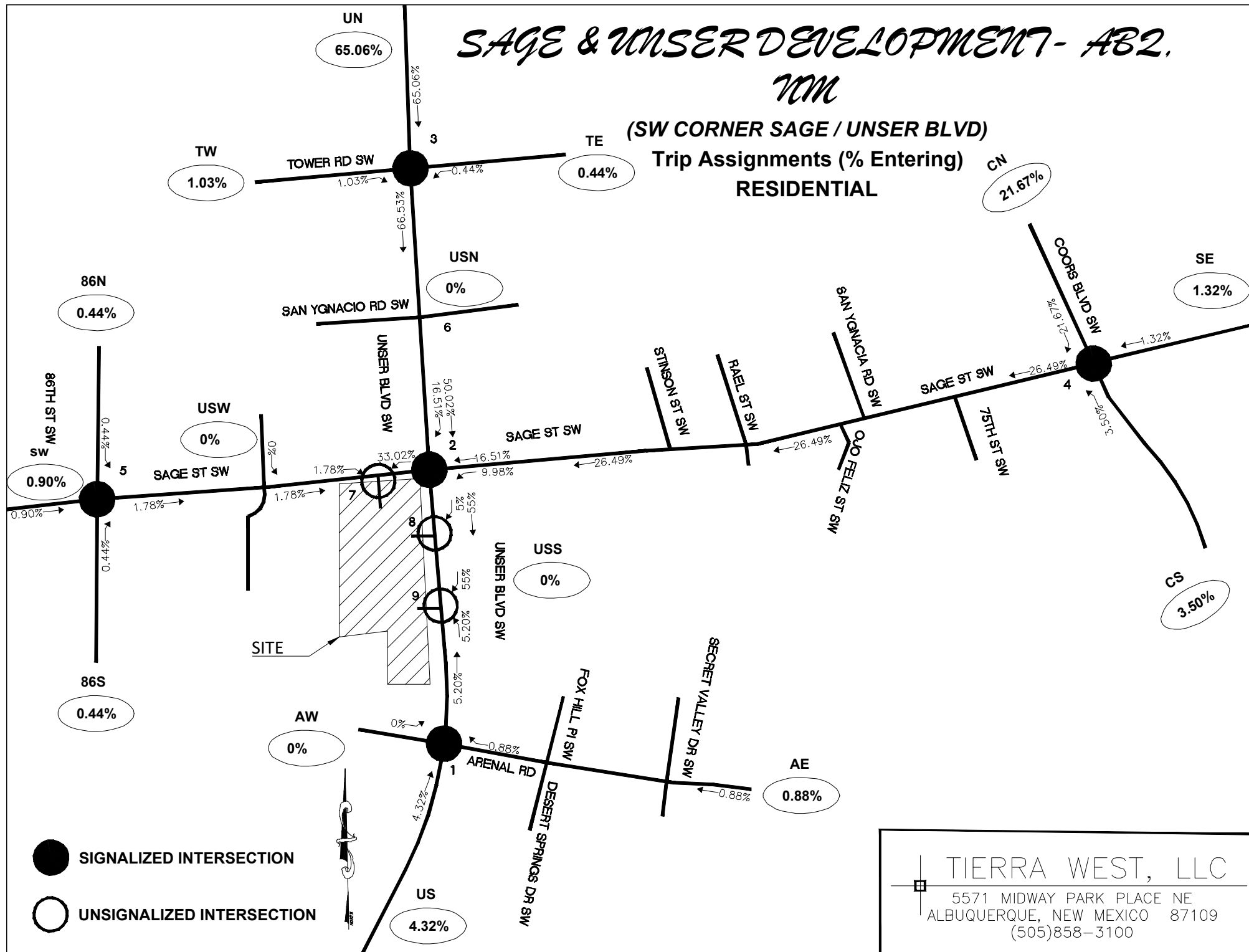


TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & UNSER DEVELOPMENT - AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Entering)
RESIDENTIAL



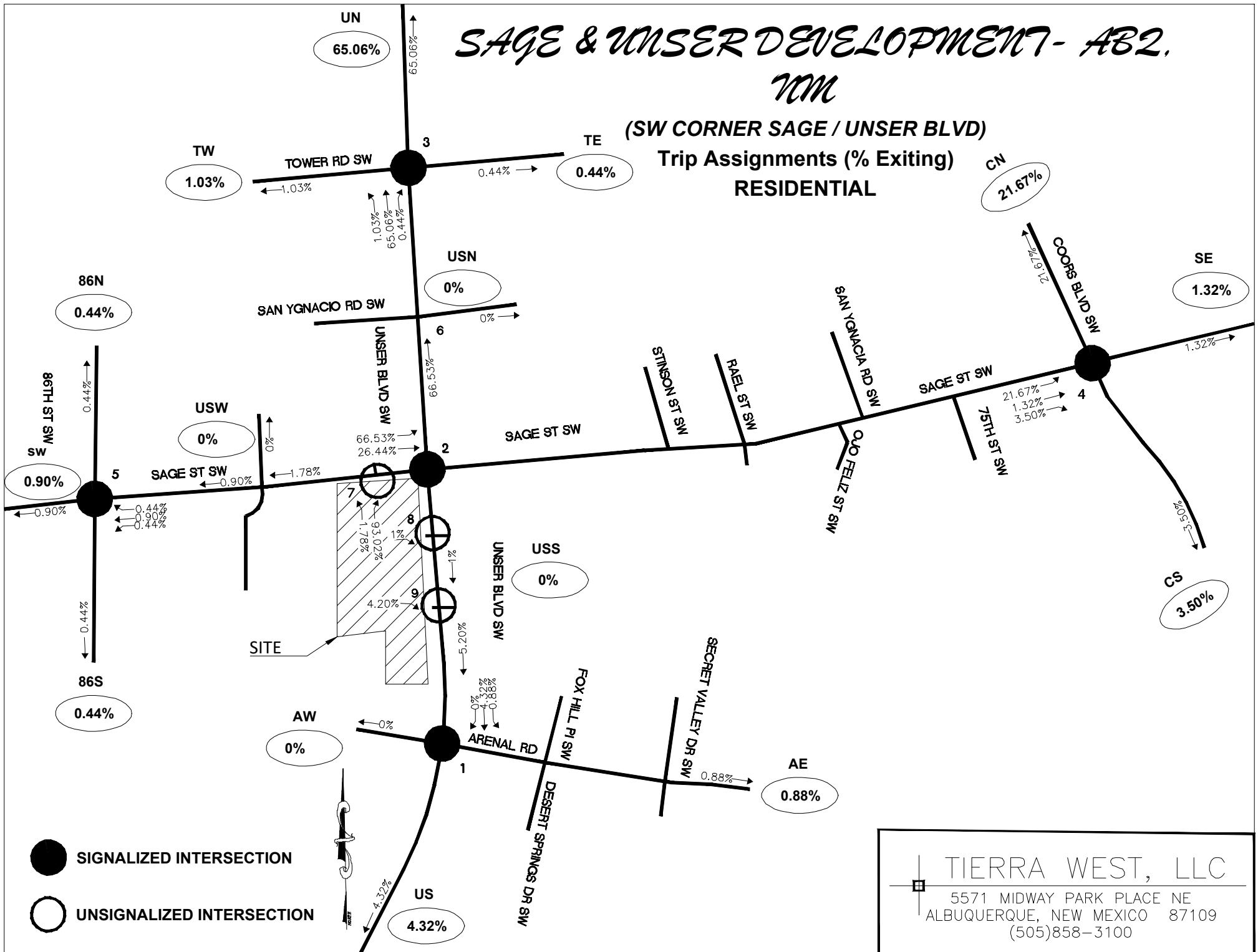
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & USER DEVELOPMENT- AB2.
nm

(SW CORNER SAGE / UNSER BLVD)

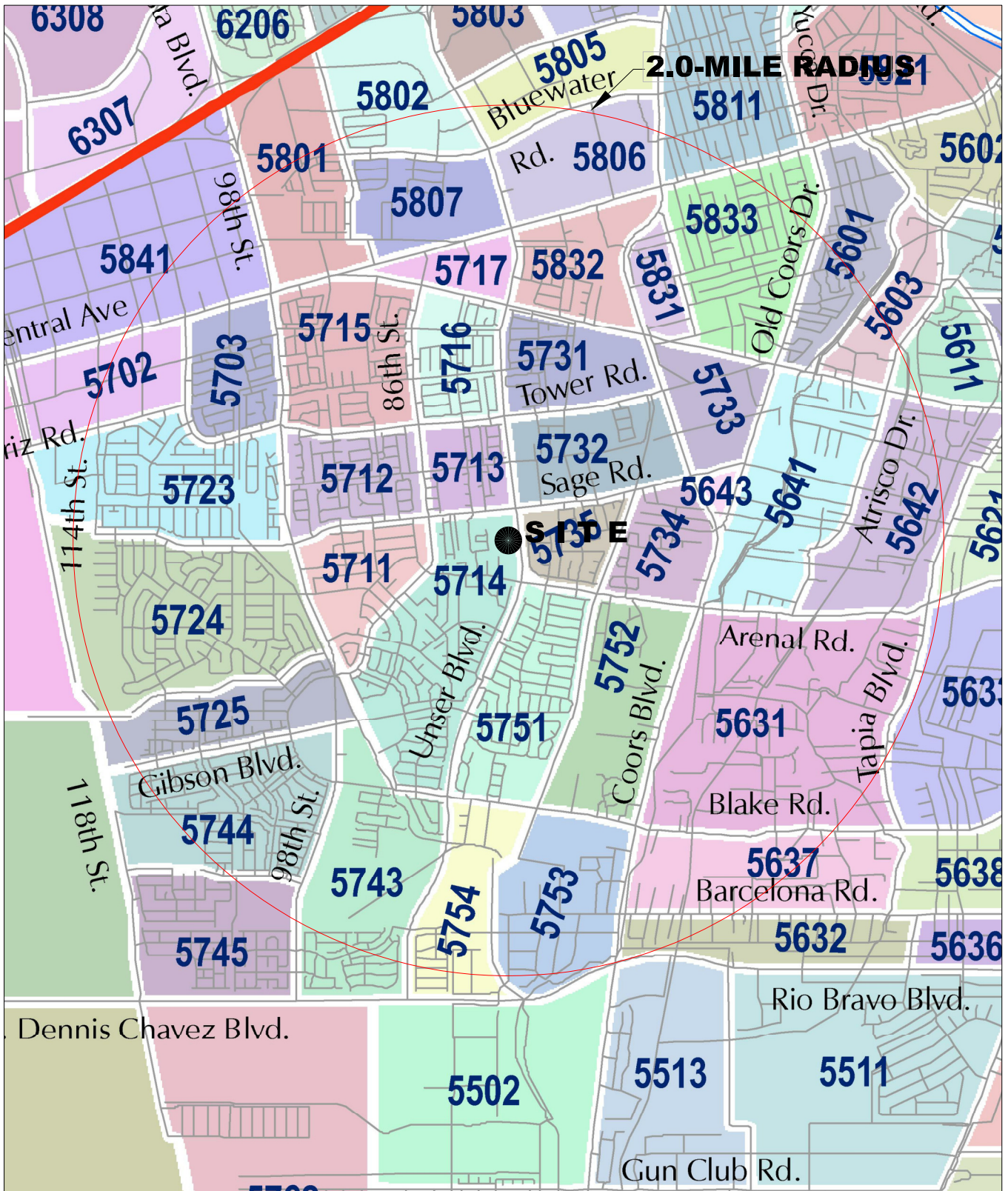
Trip Assignments (% Exiting)

RESIDENTIAL



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DATA ANALYSIS SUBZONE (DASZ) MAP
Sage Rd. / Unser Blvd. Development (NW Corner)

Trip Distribution Table
Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(TW) Tower Rd West			(UN) Unser North			(TE) Tower Rd East			(USN) Unser and Sage North			(USS) Unser and Sage S	
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
		2012	2040	2023																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5603	33%	834	813	826	273	0.38%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5611	5%	735	673	711	36	0.05%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5631	95%	2428	2504	2,458	2,335	3.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5632	5%	822	852	834	42	0.06%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5637	50%	857	954	895	448	0.63%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5641	100%	1610	1626	1,616	1,616	2.27%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5642	80%	1601	1577	1,592	1,274	1.79%	0%	0.00%	0	20%	0.36%	255	20%	0.36%	255	0%	0.00%	0	0%	0.00%
5643	100%	140	132	137	137	0.19%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5702	55%	28	105	58	32	0.04%	50%	0.02%	16	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5703	100%	2470	2412	2,447	2,447	3.43%	50%	1.72%	1,224	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5711	100%	1866	1827	1,851	1,851	2.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5712	100%	2769	2324	2,594	2,594	3.64%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5713	100%	995	859	942	942	1.32%	7%	0.09%	66	0%	0.00%	0	0%	0.00%	0	33%	0.44%	311	0%	0.00%
5714	100%	5423	5000	5,257	5,257	7.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5715	100%	4039	4232	4,115	4,115	5.77%	50%	2.88%	2,058	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5716	100%	2780	2608	2,712	2,712	3.80%	35%	1.33%	949	50%	1.90%	1,356	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5717	100%	6	1529	604	604	0.85%	0%	0.00%	0	100%	0.85%	604	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5723	100%	4569	5779	5,044	5,044	7.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5724	100%	4793	5913	5,233	5,233	7.34%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5725	100%	2332	2916	2,561	2,561	3.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5731	100%	1330	1632	1,449	1,449	2.03%	0%	0.00%	0	50%	1.02%	725	50%	1.02%	725	0%	0.00%	0	0%	0.00%
5732	100%	389	1086	663	663	0.93%	0%	0.00%	0	0%	0.00%	0	25%	0.23%	166	0%	0.00%	0	0%	0.00%
5733	100%	100	94	98	98	0.14%	0%	0.00%	0	0%	0.00%	0	5%	0.01%	5	0%	0.00%	0	0%	0.00%
5734	100%	961	1000	976	976	1.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5735	100%	1721	1612	1,678	1,678	2.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5743	60%	2583	3912	3,105	1,863	2.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5744	80%	3396	5971	4,408	3,526	4.94%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5745	5%	2777	3394	3,019	151	0.21%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5751	100%	5698	4668	5,293	5,293	7.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5752	100%	1088	1212	1,137	1,137	1.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5753	85%	1953	1728	1,865	1,585	2.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5754	75%	997	1373	1,145	859	1.20%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5801	95%	1452	3303	2,179	2,070	2.90%	0%	0.00%	0	50%	1.45%	1,035	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5802	75%	592	758	657	493	0.69%	0%	0.00%	0	100%	0.69%	493	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5805	10%	138	343	219	22	0.03%	0%	0.00%	0	100%	0.03%	22	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5806	90%	847	2144	1,357	1,221	1.71%	0%	0.00%	0	100%	1.71%	1,221	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5807	100%	1730	2227	1,925	1,925	2.70%	0%	0.00%	0	100%	2.70%	1,925	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5811	10%	4435	4231	4,355	436	0.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5831	100%	668	671	669	669	0.94%	0%	0.00%	0	0%	0.00%	0	40%	0.38%	268	0%	0.00%	0	0%	0.00%
5832	100%	1221	1808	1,452	1,452	2.04%	0%	0.00%	0	100%	2.04%	1,452	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5833	85%	3969	3511	3,789	3,221	4.52%	0%	0.00%	0	10%	0.45%	322	5%	0.23%	161	0%	0.00%	0	0%	0.00%
5841	20%	161	269	203	41	0.06%	25%	0.01%	10	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
				86,230	71,327	100.00%			4,322			9,409			1,579			311		
									6.06%			13.19%			2.21%			0.44%		

Trip Distribution Table
Sage and Unser Development [2021113]

Data Analysis Subzone Population Data for determination of Local Trip Distribution for ProposedRetail Commercial

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

South								(USW) Unser and Sage West			(USE) Unser and Sage East			(SW) Sage West			(SE) Sage East			
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	Population in Study	Percent Population	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing
		2012	2040	2023																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	1.33%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	1.33%	946	0%
5603	33%	834	813	826	273	0.38%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.38%	273	0%
5611	5%	735	673	711	36	0.05%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	0.05%	36	0%
5631	95%	2428	2504	2,458	2,335	3.27%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5632	5%	822	852	834	42	0.06%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5637	50%	857	954	895	448	0.63%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5641	100%	1610	1626	1,616	1,616	2.27%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	40%	0.91%	646	0%
5642	80%	1601	1577	1,592	1,274	1.79%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	5%	0.09%	64	0%
5643	100%	140	132	137	137	0.19%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	0.10%	69	0%
5702	55%	28	105	58	32	0.04%	0	0%	0.00%	0	0%	0.00%	0	50%	0.02%	16	0%	0.00%	0	0%
5703	100%	2470	2412	2,447	2,447	3.43%	0	0%	0.00%	0	0%	0.00%	0	50%	1.72%	1,224	0%	0.00%	0	0%
5711	100%	1866	1827	1,851	1,851	2.60%	0	0%	0.00%	0	0%	0.00%	0	33%	0.86%	611	0%	0.00%	0	0%
5712	100%	2769	2324	2,594	2,594	3.64%	0	0%	0.00%	0	0%	0.00%	0	50%	1.82%	1,297	0%	0.00%	0	50%
5713	100%	995	859	942	942	1.32%	0	30%	0.40%	283	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	30%
5714	100%	5423	5000	5,257	5,257	7.37%	0	10%	0.74%	526	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5715	100%	4039	4232	4,115	4,115	5.77%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%
5716	100%	2780	2608	2,712	2,712	3.80%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	15%
5717	100%	6	1529	604	604	0.85%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5723	100%	4569	5779	5,044	5,044	7.07%	0	0%	0.00%	0	0%	0.00%	0	100%	7.07%	5,044	0%	0.00%	0	0%
5724	100%	4793	5913	5,233	5,233	7.34%	0	0%	0.00%	0	0%	0.00%	0	100%	7.34%	5,233	0%	0.00%	0	0%
5725	100%	2332	2916	2,561	2,561	3.59%	0	0%	0.00%	0	0%	0.00%	0	10%	0.36%	256	0%	0.00%	0	0%
5731	100%	1330	1632	1,449	1,449	2.03%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5732	100%	389	1086	663	663	0.93%	0	0%	0.00%	0	75%	0.70%	497	0%	0.00%	0	0%	0.00%	0	0%
5733	100%	100	94	98	98	0.14%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	5%	0.01%	5	0%
5734	100%	961	1000	976	976	1.37%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5735	100%	1721	1612	1,678	1,678	2.35%	0	0%	0.00%	0	50%	1.18%	839	0%	0.00%	0	0%	0.00%	0	0%
5743	60%	2583	3912	3,105	1,863	2.61%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5744	80%	3396	5971	4,408	3,526	4.94%	0	0%	0.00%	0	0%	0.00%	0	10%	0.49%	353	0%	0.00%	0	0%
5745	5%	2777	3394	3,019	151	0.21%	0	0%	0.00%	0	0%	0.00%	0	5%	0.01%	8	0%	0.00%	0	0%
5751	100%	5698	4668	5,293	5,293	7.42%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5752	100%	1088	1212	1,137	1,137	1.59%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5753	85%	1953	1728	1,865	1,585	2.22%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5754	75%	997	1373	1,145	859	1.20%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5801	95%	1452	3303	2,179	2,070	2.90%	0	0%	0.00%	0	0%	0.00%	0	50%	1.45%	1,035	0%	0.00%	0	0%
5802	75%	592	758	657	493	0.69%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5805	10%	138	343	219	22	0.03%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5806	90%	847	2144	1,357	1,221	1.71%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5807	100%	1730	2227	1,925	1,925	2.70%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5811	10%	4435	4231	4,355	436	0.61%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5831	100%	668	671	669	669	0.94%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5832	100%	1221	1808	1,452	1,452	2.04%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5833	85%	3969	3511	3,789	3,221	4.52%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	43%	1.92%	1,369	0%
5841	20%	161	269	203	41	0.06%	0	0%	0.00%	0	0%	0.00%	0	75%	0.04%	31	0%	0.00%	0	0%
				86,230	71,327	100.00%	-			808			1,336			15,106			3,407	
							0.00%			1.13%			1.87%			21.18%			4.78%	

Trip Distribution Table

Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

(86N) 86th North									(86S) 86th South			(CN) Coors North			(CS) Coors South			(US) Unser South		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	2040	2023																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	1.33%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5603	33%	834	813	826	273	0.38%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5611	5%	735	673	711	36	0.05%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,458	2,335	3.27%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	5%	822	852	834	42	0.06%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	0.03%	21
5637	50%	857	954	895	448	0.63%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	0.47%	336
5641	100%	1610	1626	1,616	1,616	2.27%	0.00%	0	0%	0.00%	0	0%	0.00%	0	20%	0.45%	323	0%	0.00%	0
5642	80%	1601	1577	1,592	1,274	1.79%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	100%	140	132	137	137	0.19%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	0.10%	69	0%	0.00%	0
5702	55%	28	105	58	32	0.04%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	100%	2470	2412	2,447	2,447	3.43%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,851	1,851	2.60%	0.00%	0	33%	0.86%	611	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,594	2,594	3.64%	1.82%	1,297	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	942	942	1.32%	0.40%	283	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,257	5,257	7.37%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	45%	3.32%	2,366
5715	100%	4039	4232	4,115	4,115	5.77%	2.88%	2,058	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	100%	2780	2608	2,712	2,712	3.80%	0.57%	407	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5717	100%	6	1529	604	604	0.85%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	100%	4569	5779	5,044	5,044	7.07%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,233	5,233	7.34%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,561	2,561	3.59%	0.00%	0	60%	2.15%	1,537	0%	0.00%	0	0%	0.00%	0	30%	1.08%	768
5731	100%	1330	1632	1,449	1,449	2.03%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	100%	389	1086	663	663	0.93%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5733	100%	100	94	98	98	0.14%	0.00%	0	0%	0.00%	0	90%	0.12%	88	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	976	976	1.37%	0.00%	0	0%	0.00%	0	0%	0.00%	0	70%	0.96%	683	0%	0.00%	0
5735	100%	1721	1612	1,678	1,678	2.35%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	60%	2583	3912	3,105	1,863	2.61%	0.00%	0	50%	1.31%	932	0%	0.00%	0	0%	0.00%	0	50%	1.31%	932
5744	80%	3396	5971	4,408	3,526	4.94%	0.00%	0	60%	2.97%	2,116	0%	0.00%	0	0%	0.00%	0	30%	1.48%	1,058
5745	5%	2777	3394	3,019	151	0.21%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	95%	0.20%	143
5751	100%	5698	4668	5,293	5,293	7.42%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	80%	5.94%	4,234
5752	100%	1088	1212	1,137	1,137	1.59%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	20%	0.32%	227
5753	85%	1953	1728	1,865	1,585	2.22%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	90%	2.00%	1,427
5754	75%	997	1373	1,145	859	1.20%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	100%	1.20%	859
5801	95%	1452	3303	2,179	2,070	2.90%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5802	75%	592	758	657	493	0.69%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5805	10%	138	343	219	22	0.03%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5806	90%	847	2144	1,357	1,221	1.71%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5807	100%	1730	2227	1,925	1,925	2.70%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5811	10%	4435	4231	4,355	436	0.61%	0.00%	0	0%	0.00%	0	100%	0.61%	436	0%	0.00%	0	0%	0.00%	0
5831	100%	668	671	669	669	0.94%	0.00%	0	0%	0.00%	0	60%	0.56%	401	0%	0.00%	0	0%	0.00%	0
5832	100%	1221	1808	1,452	1,452	2.04%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5833	85%	3969	3511	3,789	3,221	4.52%	0.00%	0	0%	0.00%	0	43%	1.92%	1,369	0%	0.00%	0	0%	0.00%	0
5841	20%	161	269	203	41	0.06%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0

Trip Distribution Table

Sage and Unser Development [202113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

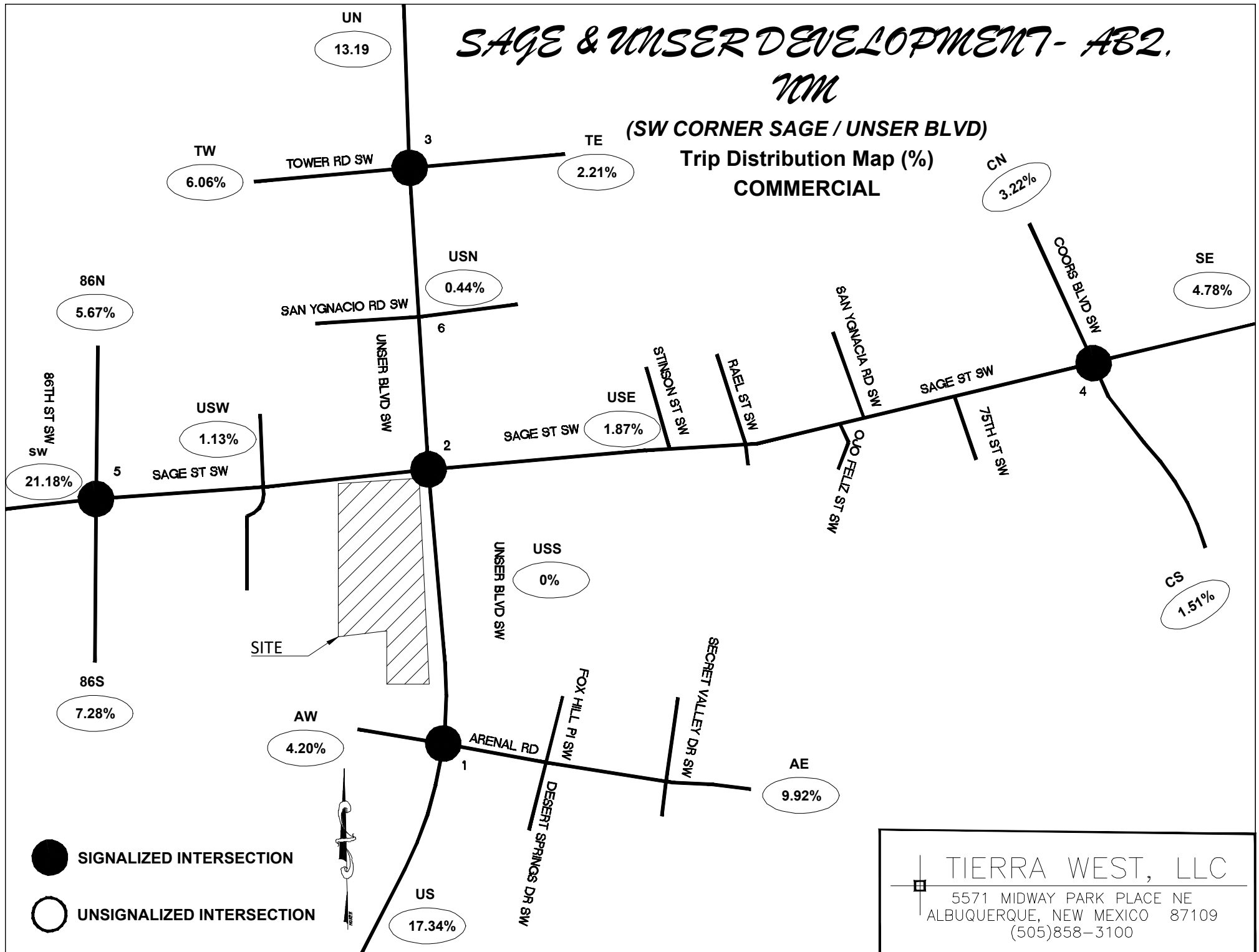
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(AW)			(AE)		
							Areneal West			Arenal East		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	2040	2023								
Boundary Specified on DASZ Map												
5601	45%	2074	2145	2,102	946	1.33%	0%	0.00%	0	0%	0.00%	0
5603	33%	834	813	826	273	0.38%	0%	0.00%	0	0%	0.00%	0
5611	5%	735	673	711	36	0.05%	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,458	2,335	3.27%	0%	0.00%	0	100%	3.27%	2,335
5632	5%	822	852	834	42	0.06%	0%	0.00%	0	50%	0.03%	21
5637	50%	857	954	895	448	0.63%	0%	0.00%	0	25%	0.16%	112
5641	100%	1610	1626	1,616	1,616	2.27%	0%	0.00%	0	40%	0.91%	646
5642	80%	1601	1577	1,592	1,274	1.79%	0%	0.00%	0	55%	0.98%	701
5643	100%	140	132	137	137	0.19%	0%	0.00%	0	0%	0.00%	0
5702	55%	28	105	58	32	0.04%	0%	0.00%	0	0%	0.00%	0
5703	100%	2470	2412	2,447	2,447	3.43%	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,851	1,851	2.60%	34%	0.88%	629	0%	0.00%	0
5712	100%	2769	2324	2,594	2,594	3.64%	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	942	942	1.32%	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,257	5,257	7.37%	45%	3.32%	2,366	0%	0.00%	0
5715	100%	4039	4232	4,115	4,115	5.77%	0%	0.00%	0	0%	0.00%	0
5716	100%	2780	2608	2,712	2,712	3.80%	0%	0.00%	0	0%	0.00%	0
5717	100%	6	1529	604	604	0.85%	0%	0.00%	0	0%	0.00%	0
5723	100%	4569	5779	5,044	5,044	7.07%	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,233	5,233	7.34%	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,561	2,561	3.59%	0%	0.00%	0	0%	0.00%	0
5731	100%	1330	1632	1,449	1,449	2.03%	0%	0.00%	0	0%	0.00%	0
5732	100%	389	1086	663	663	0.93%	0%	0.00%	0	0%	0.00%	0
5733	100%	100	94	98	98	0.14%	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	976	976	1.37%	0%	0.00%	0	30%	0.41%	293
5735	100%	1721	1612	1,678	1,678	2.35%	0%	0.00%	0	50%	1.18%	839
5743	60%	2583	3912	3,105	1,863	2.61%	0%	0.00%	0	0%	0.00%	0
5744	80%	3396	5971	4,408	3,526	4.94%	0%	0.00%	0	0%	0.00%	0
5745	5%	2777	3394	3,019	151	0.21%	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,293	5,293	7.42%	0%	0.00%	0	20%	1.48%	1,059
5752	100%	1088	1212	1,137	1,137	1.59%	0%	0.00%	0	80%	1.28%	910
5753	85%	1953	1728	1,865	1,585	2.22%	0%	0.00%	0	10%	0.22%	159
5754	75%	997	1373	1,145	859	1.20%	0%	0.00%	0	0%	0.00%	0
5801	95%	1452	3303	2,179	2,070	2.90%	0%	0.00%	0	0%	0.00%	0
5802	75%	592	758	657	493	0.69%	0%	0.00%	0	0%	0.00%	0
5805	10%	138	343	219	22	0.03%	0%	0.00%	0	0%	0.00%	0
5806	90%	847	2144	1,357	1,221	1.71%	0%	0.00%	0	0%	0.00%	0
5807	100%	1730	2227	1,925	1,925	2.70%	0%	0.00%	0	0%	0.00%	0
5811	10%	4435	4231	4,355	436	0.61%	0%	0.00%	0	0%	0.00%	0
5831	100%	668	671	669	669	0.94%	0%	0.00%	0	0%	0.00%	0
5832	100%	1221	1808	1,452	1,452	2.04%	0%	0.00%	0	0%	0.00%	0
5833	85%	3969	3511	3,789	3,221	4.52%	0%	0.00%	0	0%	0.00%	0
5841	20%	161	269	203	41	0.06%	0%	0.00%	0	0%	0.00%	0

SAGE & UNSER DEVELOPMENT- AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Distribution Map (%)
COMMERCIAL

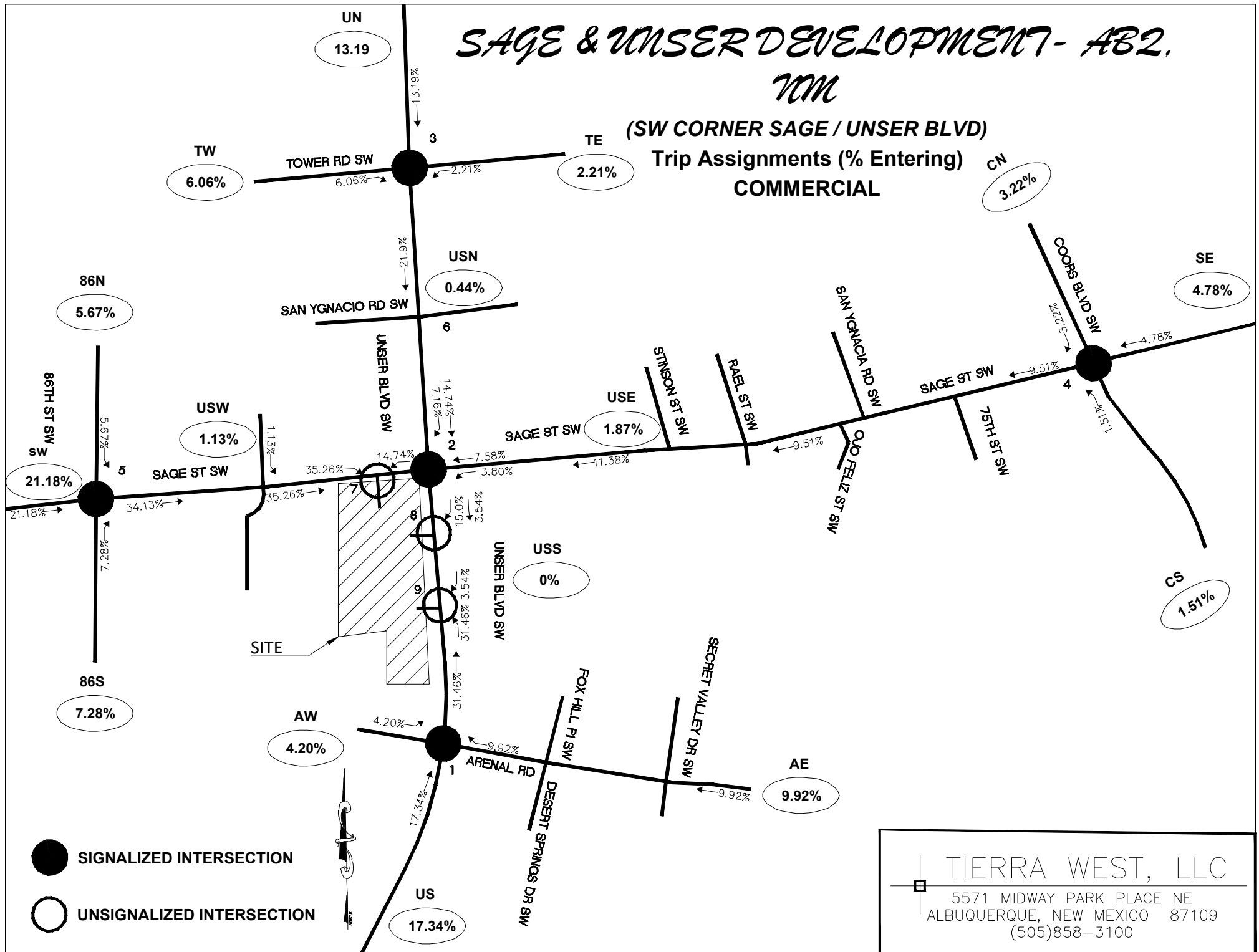


TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & UNSER DEVELOPMENT - AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Entering)
COMMERCIAL

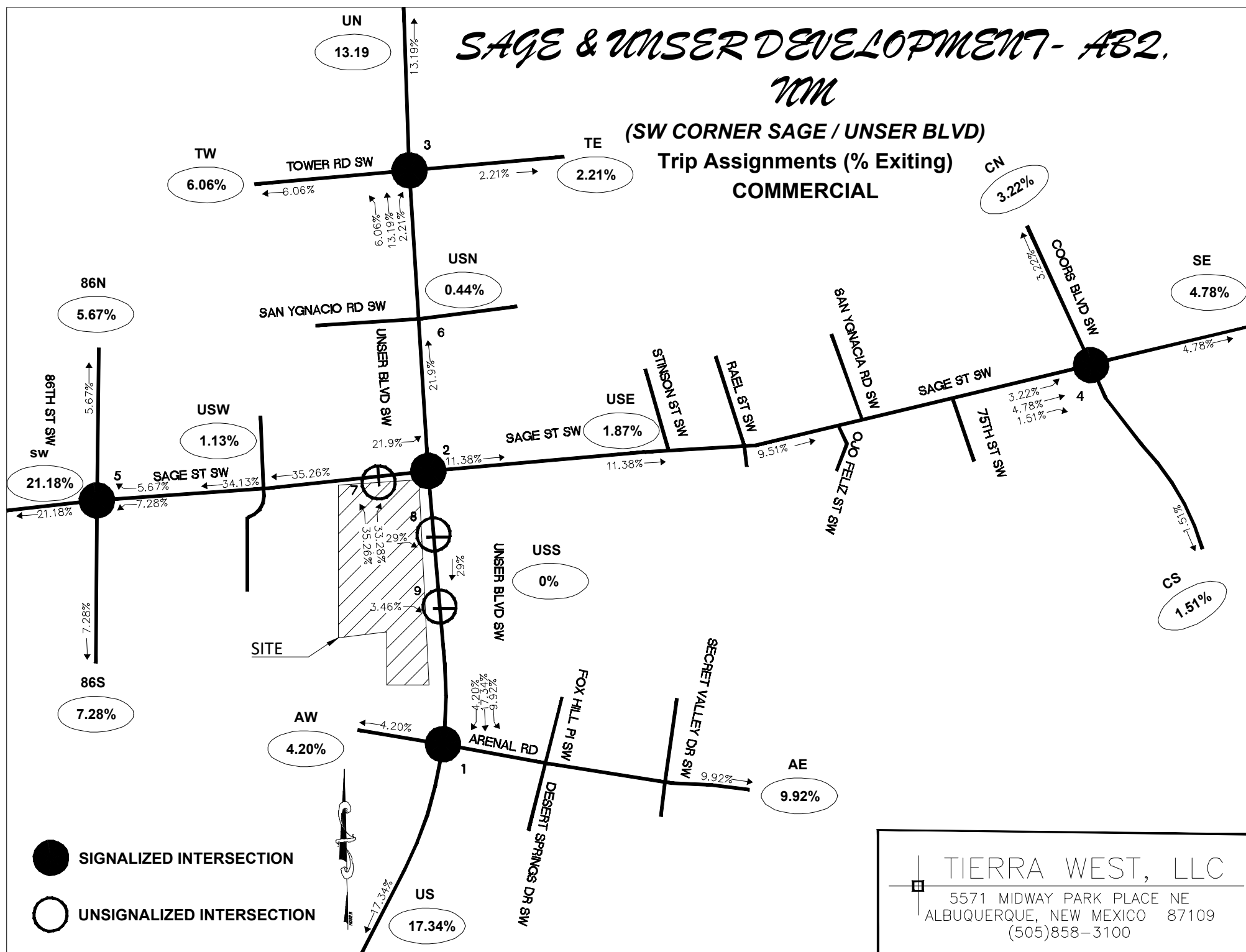


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SAGE & UNSER DEVELOPMENT - AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Exiting)
COMMERCIAL



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SAGE & UNSER DEVELOPMENT - AB2. NM

(SW CORNER SAGE / UNSER BLVD)

Pass-by Trips AM(PM)

COMMERCIAL

← 252(504)
→ 252(14%)
← 9%(15%)
→ 732(452)

← 25%N(-14%N) → ← 9%N(-15%N)
25%N(14%N) → ← 9%N(15%N)

UNSER BLVD SW

2

SAGE ST SW

SAGE ST SW

DRIVEWAY A

DRIVEWAY B

DRIVEWAY C

SITE

← 37%N(30%N) →
← 25%N(-35%N) →
25%N(35%N) →
← 37%N(-30%N) →
← 29%N(-30%N) →
← 1100(988)
← 872(1368)
← 37%N(30%N) →
← 29%N(41%) →

25%N(35%N) →

4%N(6%N) →

UNSER BLVD SW



SIGNALIZED INTERSECTION



UNSIGNALIZED INTERSECTION



TIERRA WEST, LLC

5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

Sage and Unser Development
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2025) - 100% Development

INTERSECTION: S u m m a r y

Arenal Rd / Unser Blvd

(1)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
152	204	56	144	132	244	56	676	208	212	632	36	
172	230	63	163	149	275	63	763	235	239	714	41	
181	230	63	163	149	297	63	801	235	261	753	50	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
60	72	56	168	100	344	32	564	144	280	856	116	
68	81	63	190	113	388	36	637	163	316	966	131	
77	81	63	190	113	409	36	674	163	336	1,002	140	

Sage Rd / Unser Blvd

(2)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
252	292	188	36	96	76	84	928	88	76	648	72	
286	331	213	41	109	86	95	1,053	100	86	735	82	
384	362	213	50	127	86	95	1,018	100	86	772	99	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
112	120	220	120	184	52	176	756	56	84	1,028	144	
127	136	250	136	209	59	200	858	64	95	1,167	163	
211	164	250	147	230	59	200	832	64	95	1,215	183	

Tower / Unser

(3)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
84	104	60	32	76	56	28	856	32	24	408	52	
95	118	68	36	86	63	32	969	36	27	462	59	
95	118	81	41	86	63	45	1,013	41	27	496	59	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	104	88	48	236	68	120	800	28	44	1,144	116	
63	118	100	54	267	77	136	906	32	50	1,295	131	
63	118	113	59	267	77	148	946	37	50	1,344	131	

Sage / Coors Blvd

(4)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
240	192	64	44	124	156	20	1,020	16	52	560	64	
304	210	68	94	164	234	22	1,137	17	54	585	71	
316	220	72	94	175	234	25	1,137	17	54	585	80	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	64	4	88	256	192	80	828	172	88	760	108	
80	73	5	131	302	255	85	892	179	91	792	115	
91	83	9	131	312	255	89	892	179	91	792	129	

Sage and Unser Development
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2025) - 100% Development

INTERSECTION: S u m m a r y

Sage / 86th Street

(5)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	512	12	36	200	56	4	108	76	40	28	48	
59	541	13	38	211	59	4	114	80	42	30	51	
59	588	13	54	257	71	4	114	96	55	30	51	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
52	284	40	48	388	52	16	80	24	28	104	88	
55	300	42	51	410	55	17	85	25	30	110	93	
55	344	42	66	453	67	17	85	40	42	110	93	

San Ygnacio / Unser Blvd

(6)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	30	0	0	10	0	1,425	10	0	903	10	
0	0	34	0	0	11	0	1,609	11	0	1,019	11	
0	0	34	0	0	11	0	1,672	11	0	1,073	11	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	30	0	0	10	0	1,044	10	0	1,425	30	
0	0	34	0	0	11	0	1,179	11	0	1,609	34	
0	0	34	0	0	11	0	1,237	11	0	1,677	34	

Driveway A / Sage St

(7)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	830	0	0	286	0	0	0	0	0	0	0	
0	830	102	44	286	0	85	0	152	0	0	0	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	513	0	0	572	0	0	0	0	0	0	0	
0	513	87	55	572	0	85	0	126	0	0	0	

Unser Blvd / Driveway B

(8)

3.0% Truck

Existing (2022)

2025 (NO BUILD - A.M.)

2025 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1,248	0	0	989	0	
0	0	64	0	0	0	0	999	0	0	1,016	75	

Existing (2022)

2025 (NO BUILD - P.M.)

2025 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1,122	0	0	1,553	0	
0	0	69	0	0	0	0	1,095	0	0	1,536	101	

Sage and Unser Development
Projected Turning Movements Worksheet
Arenal Rd / Unser Blvd

INTERSECTION : E-W Street: **Arenal Rd**
N-S Street: **Unser Blvd**
Year of Existing Counts: 2022
Horizon Year: **2025**

(1)

Growth Rates

	4.30%			4.30%			4.30%			4.30%		
	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	152	204	56	144	132	244	56	676	208	212	632	36
Background Traffic Growth	20	26	7	19	17	31	7	87	27	27	82	5
Subtotal (NO BUILD - A.M.)	172	230	63	163	149	275	63	763	235	239	714	41
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	0.00%	4.32%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	4.32%	0.00%
Percent Commercial Trips Generated(Entering)	4.20%	0.00%	0.00%	0.00%	0.00%	9.92%	0.00%	17.34%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.92%	17.34%	4.20%
Total Trips Generated	9	0	0	0	0	22	0	38	0	22	39	9
Subtotal AM Pk Hr. BUILD Volumes	181	230	63	163	149	297	63	801	235	261	753	50
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	181	230	63	163	149	297	63	801	235	261	753	50

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	60	72	56	168	100	344	32	564	144	280	856	116
Background Traffic Growth	8	9	7	22	13	44	4	73	19	36	110	15
Subtotal	68	81	63	190	113	388	36	637	163	316	966	131
Subtotal (NO BUILD - P.M.)	68	81	63	190	113	388	36	637	163	316	966	131
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	0.00%	4.32%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	4.32%	0.00%
Percent Commercial Trips Generated(Entering)	4.20%	0.00%	0.00%	0.00%	0.00%	9.92%	0.00%	17.34%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.92%	17.34%	4.20%
Total Trips Generated	9	0	0	0	0	21	0	37	0	20	36	9
Subtotal PM Pk Hr. BUILD Volumes	77	81	63	190	113	409	36	674	163	336	1,002	140
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	77	81	63	190	113	409	36	674	163	336	1,002	140

Number of Residential Trips Generated	Entering 7	Exiting 23	A.M.	100% Residential Development
Number of Commercial Trips Generated	33	20	P.M.	
	222	219	A.M.	100% Commercial Development
	209	204	P.M.	

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting

Net AM Passby Trips

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			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

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting

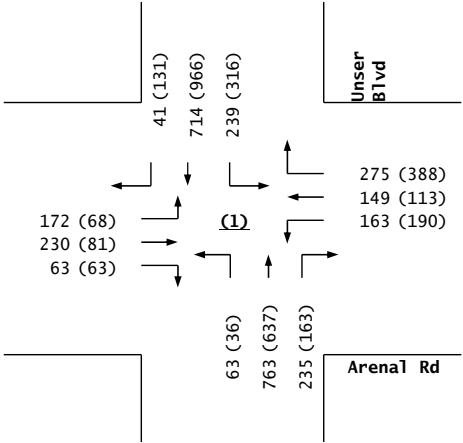
Net PM Passby Trips

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			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

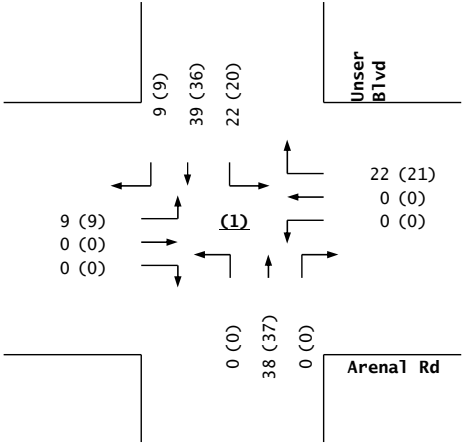
Pass-by Trips

Entering	95	94	AM
Exiting	89	88	PM

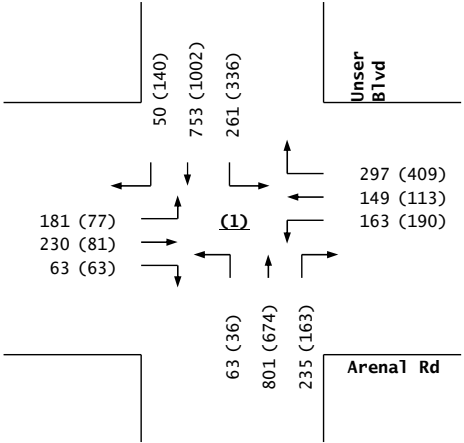
2025
NO BUILD



Trips



2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage Rd / Unser Blvd

INTERSECTION : E-W Street: **Sage Rd** (2)
N-S Street: **Unser Blvd**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.50%** **4.50%** **4.50%** **4.50%**

	Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	252	292	188	36	96	76	84	928	88	76	648	72
Background Traffic Growth	34	39	25	5	13	10	11	125	12	10	87	10
Subtotal (NO BUILD - A.M.)	286	331	213	41	109	86	95	1,053	100	86	735	82
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	9.98%	16.51%	0.00%	0.00%	0.00%	0.00%	0.00%	50.02%	16.51%
Percent Residential Trips Generated(Exiting)	66.53%	26.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	3.80%	7.58%	0.00%	0.00%	0.00%	0.00%	0.00%	14.74%	7.16%
Percent Commercial Trips Generated(Exiting)	21.90%	11.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	63	31	0	9	18	0	0	0	0	0	37	17
Subtotal AM Pk Hr. BUILD Volumes	349	362	213	50	127	86	95	1,053	100	86	772	99
Pass-by Trip Adjustments	35	0	0	0	0	0	0	-35	0	0	0	0
Total AM Peak Hour BUILD Volumes	384	362	213	50	127	86	95	1,018	100	86	772	99

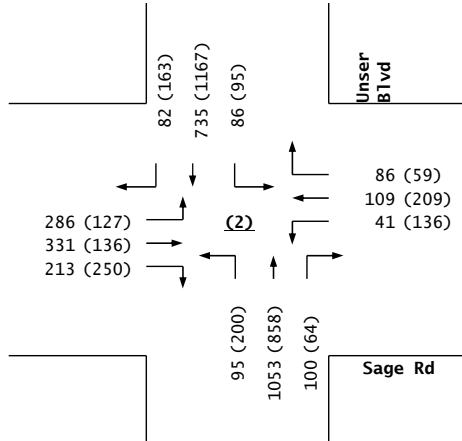
	Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	112	120	220	120	184	52	176	756	56	84	1,028	144
Background Traffic Growth	15	16	30	16	25	7	24	102	8	11	139	19
Subtotal (NO BUILD - P.M.)	127	136	250	136	209	59	200	858	64	95	1,167	163
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	9.98%	16.51%	0.00%	0.00%	0.00%	0.00%	0.00%	50.02%	16.51%
Percent Residential Trips Generated(Exiting)	66.53%	26.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	3.80%	7.58%	0.00%	0.00%	0.00%	0.00%	0.00%	14.74%	7.16%
Percent Commercial Trips Generated(Exiting)	21.90%	11.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	58	28	0	11	21	0	0	0	0	0	48	20
Subtotal PM Pk Hr. BUILD Volumes	185	164	250	147	230	59	200	858	64	95	1,215	183
Pass-by Trip Adjustments	26	0	0	0	0	0	0	-26	0	0	0	0
Total PM Peak Hour BUILD Volumes	211	164	250	147	230	59	200	832	64	95	1,215	183

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

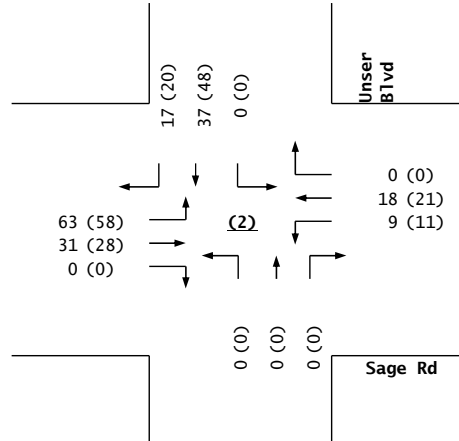
Pass-by Trip Calculations:

		Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM Pass-by Trips													
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		37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-37.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		35	0	0	0	0	0	0	-35	0	0	0	0
Net AM Passby Trips		35	0	0	0	0	0	0	-35	0	0	0	0
PM Pass-by Trips													
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		30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-30.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		26	0	0	0	0	0	0	-26	0	0	0	0
Net PM Passby Trips		26	0	0	0	0	0	0	-26	0	0	0	0
		Entering	Exiting										
Pass-by Trips		95	94	AM									
		89	88	PM									

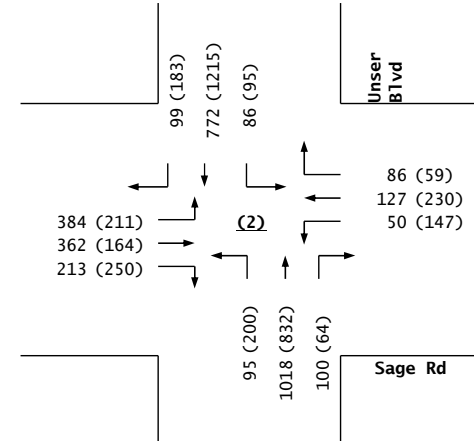
2025
NO BUILD



Trips



2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Tower / Unser

INTERSECTION : E-W Street: **Tower** (3)
N-S Street: **Unser**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.40%**

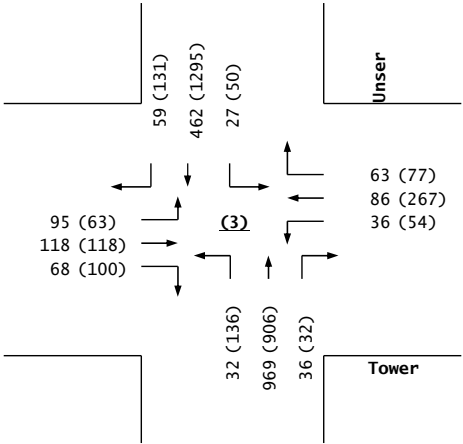
	4.40%			4.40%			4.40%			4.40%		
	Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)		
Existing Volumes	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Background Traffic Growth	84	104	60	32	76	56	28	856	32	24	408	52
Subtotal (NO BUILD - A.M.)	95	118	68	36	86	63	32	969	36	27	462	59
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.03%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	65.06%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	65.06%	0.44%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	6.06%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.19%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.06%	13.20%	2.21%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	13	5	0	0	13	44	5	0	34	0
Subtotal AM Pk Hr. BUILD Volumes	95	118	81	41	86	63	45	1,013	41	27	496	59
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	95	118	81	41	86	63	45	1,013	41	27	496	59

	4.40%			4.40%			4.40%			4.40%		
	Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)		
Existing Volumes	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Background Traffic Growth	56	104	88	48	236	68	120	800	28	44	1,144	116
Subtotal (NO BUILD - P.M.)	63	118	100	54	267	77	136	906	32	50	1,295	131
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.03%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	65.06%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	65.06%	0.44%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	6.06%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.19%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.06%	13.20%	2.21%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	13	5	0	0	12	40	5	0	49	0
Subtotal PM Pk Hr. BUILD Volumes	63	118	113	59	267	77	148	946	37	50	1,344	131
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	63	118	113	59	267	77	148	946	37	50	1,344	131

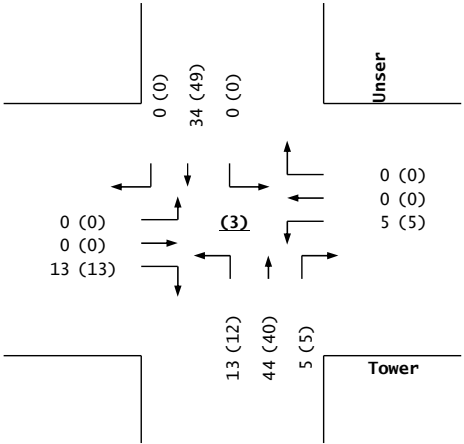
	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:												
AM Pass-by Trips												
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												
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
Pass-by Trips												
Entering	95	94	AM									
Exiting	89	88	PM									

2025
NO BUILD

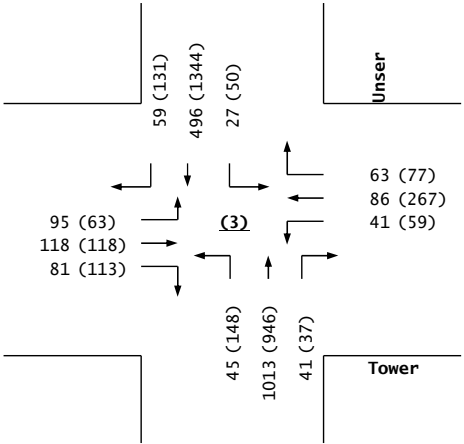


Trips



Tower / Unser

2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage / Coors Blvd

INTERSECTION : E-W Street: **Sage** (4)
N-S Street: **Coors Blvd**
Year of Existing Counts: 2022
Horizon Year: **2025**

	1.30%			1.30%			1.30%			1.30%		
	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	240	192	64	44	124	156	20	1,020	16	52	560	64
Background Traffic Growth	9	7	2	2	5	6	1	40	1	2	22	2
Subtotal	249	199	66	46	129	162	21	1,060	17	54	582	66
MAS Charter School	52	0	0	48	32	72	0	76	0	0	0	4
Sage Park Subdivision	3	11	2	0	3	0	1	1	0	0	3	1
Subtotal (NO BUILD - A.M.)	304	210	68	94	164	234	22	1,137	17	54	585	71
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	3.50%	0.00%	0.00%	0.00%	0.00%	21.67%
Percent Residential Trips Generated(Exiting)	21.67%	1.32%	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	4.78%	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	3.22%
Percent Commercial Trips Generated(Exiting)	3.22%	4.78%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	12	10	4	0	11	0	3	0	0	0	0	9
Subtotal AM Pk Hr. BUILD Volumes	316	220	72	94	175	234	25	1,137	17	54	585	80
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	316	220	72	94	175	234	25	1,137	17	54	585	80

	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	56	64	4	88	256	192	80	828	172	88	760	108
Background Traffic Growth	2	2	0	3	10	7	3	32	7	3	30	4
Subtotal	58	66	4	91	266	199	83	860	179	91	790	112
MAS Charter School	20	0	0	40	24	56	0	28	0	0	0	0
Sage Park Subdivision	2	7	1	0	12	0	2	4	0	0	2	3
Subtotal (NO BUILD - P.M.)	80	73	5	131	302	255	85	892	179	91	792	115
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	3.50%	0.00%	0.00%	0.00%	0.00%	21.67%
Percent Residential Trips Generated(Exiting)	21.67%	1.32%	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	4.78%	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	3.22%
Percent Commercial Trips Generated(Exiting)	3.22%	4.78%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	10	4	0	10	0	4	0	0	0	0	14
Subtotal PM Pk Hr. BUILD Volumes	91	83	9	131	312	255	89	892	179	91	792	129
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	91	83	9	131	312	255	89	892	179	91	792	129

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

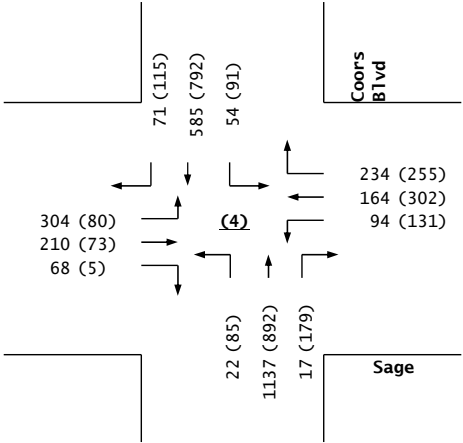
	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	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

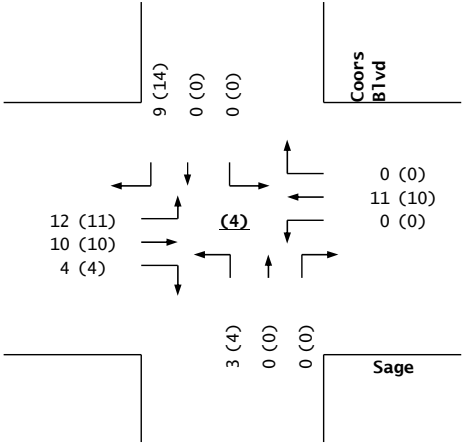
	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	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	95	94 AM
	89	88 PM

2025
NO BUILD

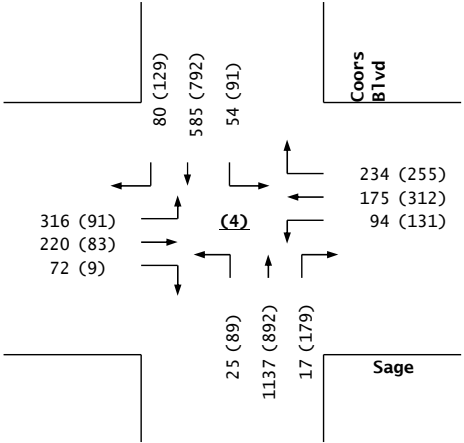


Trips



Sage / Coors Blvd

2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage / 86th Street

INTERSECTION : E-W Street: **Sage** (5)
N-S Street: **86th Street**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates

	1.90%			1.90%			1.90%			1.90%		
	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	56	512	12	36	200	56	4	108	76	40	28	48
Background Traffic Growth	3	29	1	2	11	3	0	6	4	2	2	3
Subtotal (NO BUILD - A.M.)	59	541	13	38	211	59	4	114	80	42	30	51
Percent Residential Trips Generated(Entering)	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.44%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.44%	0.90%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	21.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.28%	5.67%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	7.28%	21.18%	5.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	47	0	16	46	12	0	0	16	13	0	0
Subtotal AM Pk Hr. BUILD Volumes	59	588	13	54	257	71	4	114	96	55	30	51
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	59	588	13	54	257	71	4	114	96	55	30	51

	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	52	284	40	48	388	52	16	80	24	28	104	88
Background Traffic Growth	3	16	2	3	22	3	1	5	1	2	6	5
Subtotal (NO BUILD - P.M.)	55	300	42	51	410	55	17	85	25	30	110	93
Percent Residential Trips Generated(Entering)	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.44%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.44%	0.90%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	21.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.28%	5.67%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	7.28%	21.18%	5.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	44	0	15	43	12	0	0	15	12	0	0
Subtotal PM Pk Hr. BUILD Volumes	55	344	42	66	453	67	17	85	40	42	110	93
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	55	344	42	66	453	67	17	85	40	42	110	93

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net AM Passby Trips

	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
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

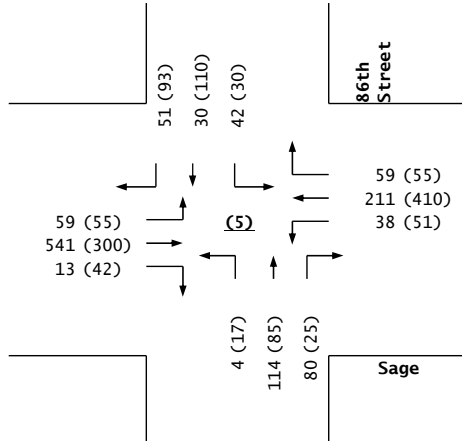
PM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net PM Passby Trips

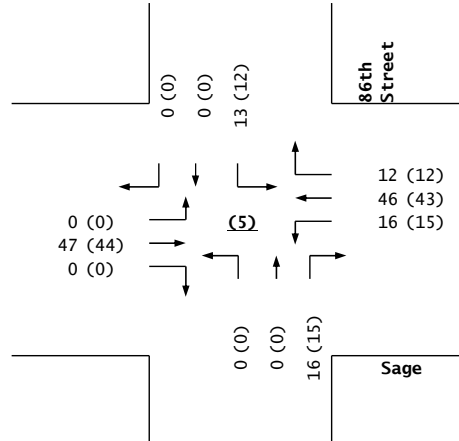
	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	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

Pass-by Trips
95 94 AM
89 88 PM

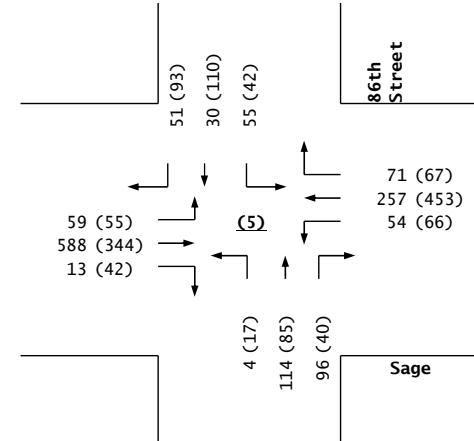
2025
NO BUILD



Trips



2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
San Ygnacio / Unser Blvd

INTERSECTION : E-W Street: **San Ygnacio** (6)
N-S Street: **Unser Blvd**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.30%** **4.30%** **4.30%** **4.30%**

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	30	0	0	10	0	1,425	10	0	903	10
Background Traffic Growth	0	0	4	0	0	1	0	184	1	0	116	1
Subtotal (NO BUILD - A.M.)	0	0	34	0	0	11	0	1,609	11	0	1,019	11
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	63	0	0	54	0
Subtotal AM Pk Hr. BUILD Volumes	0	0	34	0	0	11	0	1,672	11	0	1,073	11
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	0	34	0	0	11	0	1,672	11	0	1,073	11

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	30	0	0	10	0	1,044	10	0	1,425	30
Background Traffic Growth	0	0	4	0	0	1	0	135	1	0	184	4
Subtotal (NO BUILD - P.M.)	0	0	34	0	0	11	0	1,179	11	0	1,609	34
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	58	0	0	68	0
Subtotal PM Pk Hr. BUILD Volumes	0	0	34	0	0	11	0	1,237	11	0	1,677	34
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	0	34	0	0	11	0	1,237	11	0	1,677	34

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net AM Passby Trips

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
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

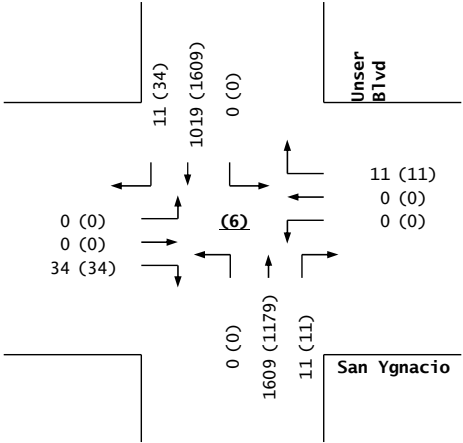
PM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net PM Passby Trips

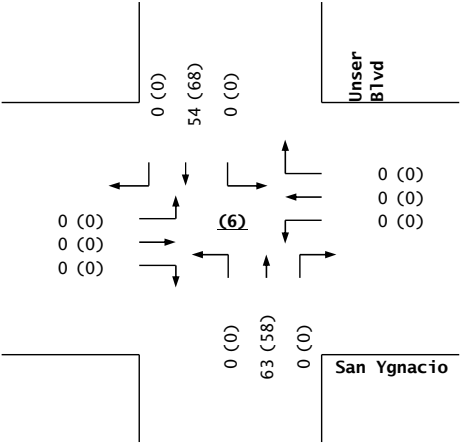
	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent 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

Pass-by Trips
Entering 95 94 AM
89 88 PM

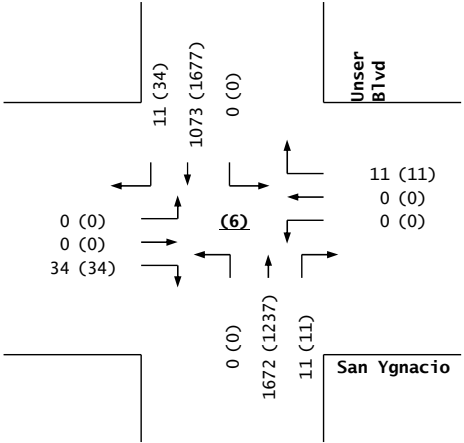
2025
NO BUILD



Trips



2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Driveway A / Sage St

INTERSECTION : E-W Street: **Driveway A** (7)
 N-S Street: **Sage St**
 Year of Existing Counts: 2022
 Horizon Year: **2025**
 Growth Rates: **4.50%** **4.50%** **4.50%** **4.50%**

	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	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	830	0	0	286	0	0	0	0	0	0	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.78%	33.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.78%	0.00%	93.02%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	35.26%	14.74%	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%	35.26%	0.00%	33.28%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	78	35	0	0	77	0	94	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	0	830	78	35	286	0	77	0	94	0	0	0
Pass-by Trip Adjustments	0	0	24	9	0	0	8	0	58	0	0	0
Total AM Peak Hour BUILD Volumes	0	830	102	44	286	0	85	0	152	0	0	0

	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	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	513	0	0	572	0	0	0	0	0	0	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.78%	33.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.78%	0.00%	93.02%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	35.26%	14.74%	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%	35.26%	0.00%	33.28%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	75	42	0	0	72	0	87	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	0	513	75	42	572	0	72	0	87	0	0	0
Pass-by Trip Adjustments	0	0	12	13	0	0	13	0	39	0	0	0
Total PM Peak Hour BUILD Volumes	0	513	87	55	572	0	85	0	126	0	0	0

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
Net AM Passby Trips

	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	25.00%	9.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	24	9	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	0.00%	62.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	8	0	58	0	0	0
Net AM Passby Trips	0	0	24	9	0	0	8	0	58	0	0	0

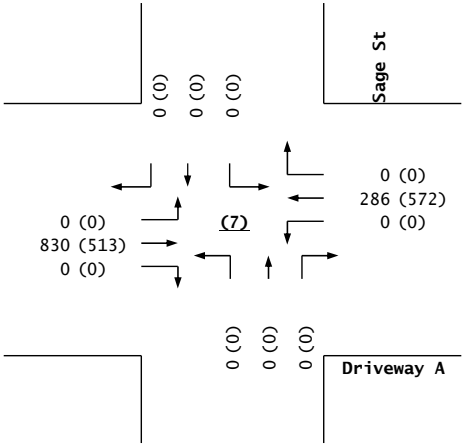
PM Pass-by Trips

Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
Net PM Passby Trips

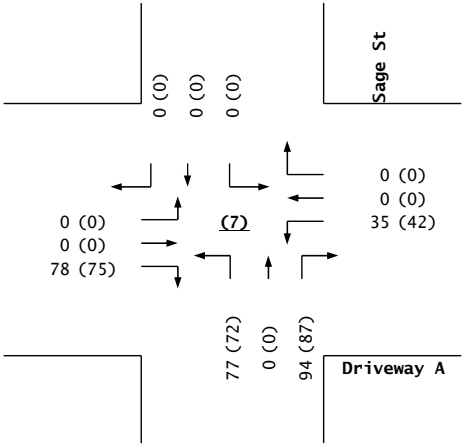
	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	14.00%	15.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	12	13	0	0	13	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	44.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	0	0	39	0	0	0
Net PM Passby Trips	0	0	12	13	0	0	13	0	39	0	0	0

Pass-by Trips
 Entering 95 94 AM
 89 88 PM

2025
NO BUILD

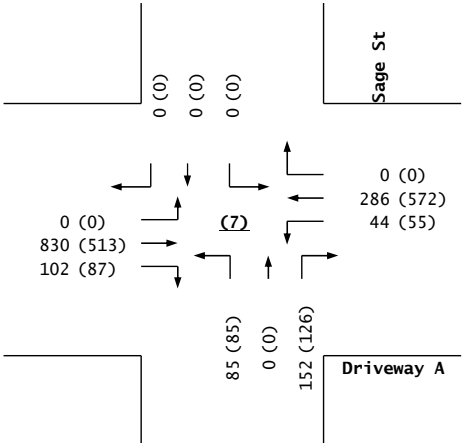


Trips



Driveway A / Sage St

2025
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Unser Blvd / Driveway B

INTERSECTION : E-W Street: **Unser Blvd** (8)
N-S Street: **Driveway B**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.50%** **4.50%** **4.50%** **4.50%**

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
	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	1,248	0	0	989	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	50.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.54%	15.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	45	0	0	0	0	0	0	0	9	37
Subtotal AM Pk Hr. BUILD Volumes	0	0	45	0	0	0	0	1,018	0	0	1,035	37
Pass-by Trip Adjustments	0	0	19	0	0	0	0	-19	0	0	-19	38
Total AM Peak Hour BUILD Volumes	0	0	64	0	0	0	0	999	0	0	1,016	75

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
	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	1,122	0	0	1,553	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	50.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.54%	15.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	42	0	0	0	0	0	0	0	10	48
Subtotal PM Pk Hr. BUILD Volumes	0	0	42	0	0	0	0	1,122	0	0	1,563	48
Pass-by Trip Adjustments	0	0	27	0	0	0	0	-27	0	0	-27	53
Total PM Peak Hour BUILD Volumes	0	0	69	0	0	0	0	1,095	0	0	1,536	101

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net AM Passby Trips

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-20.00%	0.00%	0.00%	-20.00%	20.00%
Volume Entering	0	0	0	0	0	0	0	-19	0	0	-19	19
Percent Exiting	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%
Volume Exiting	0	0	19	0	0	0	0	0	0	0	0	19
Net AM Passby Trips	0	0	19	0	0	0	0	-19	0	0	-19	38

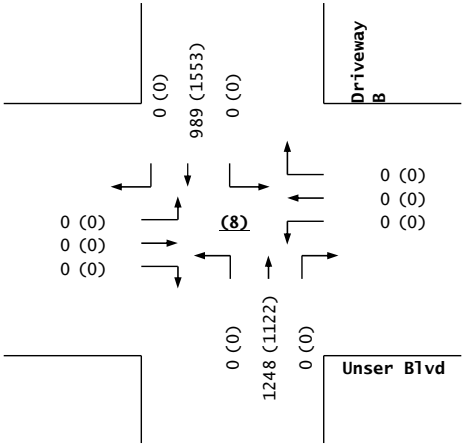
PM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net PM Passby Trips

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	-30.00%	0.00%	0.00%	-30.00%	30.00%
Volume Entering	0	0	27	0	0	0	0	-27	0	0	-27	27
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.00%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	26
Net PM Passby Trips	0	0	27	0	0	0	0	-27	0	0	-27	53

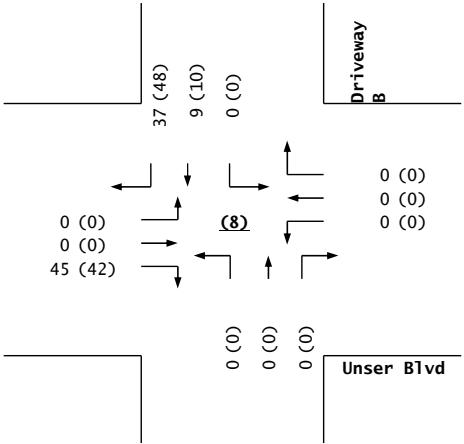
Pass-by Trips
Entering 95
Exiting 89
89 AM
88 PM

2025
NO BUILD

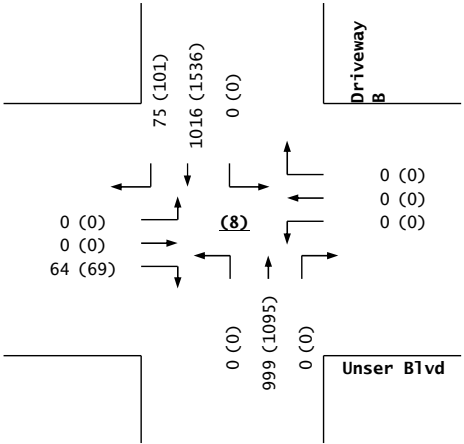


Trips

2025
BUILD



Unser Blvd / Driveway B



Sage and Unser Development
Projected Turning Movements Worksheet
Unser Blvd / Driveway C

INTERSECTION : E-W Street: **Unser Blvd** (9)
N-S Street: **Driveway C**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.50%** **4.50%** **4.50%** **4.50%**

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
	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	1,248	0	0	989	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.20%	0.00%	0.00%	0.00%	0.00%	10.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.46%	0.00%	0.00%	0.00%	0.00%	3.54%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	11.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%
Total Trips Generated	0	0	26	0	0	0	70	0	0	0	44	9
Subtotal AM Pk Hr. BUILD Volumes	0	0	26	0	0	0	70	1,248	0	0	1,033	9
Pass-by Trip Adjustments	0	0	8	0	0	0	35	-35	0	0	-28	9
Total AM Peak Hour BUILD Volumes	0	0	34	0	0	0	105	1,213	0	0	1,005	18

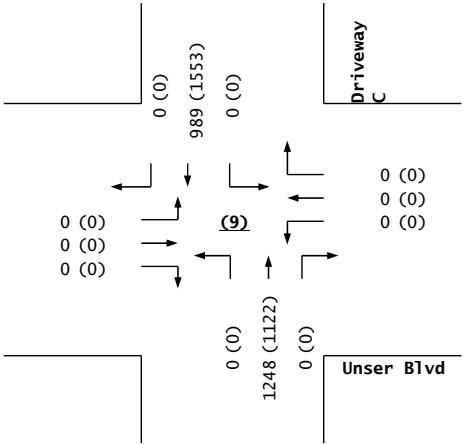
	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	0	0	0	0	1,122	0	0	1,553	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.20%	0.00%	0.00%	0.00%	0.00%	10.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.46%	0.00%	0.00%	0.00%	0.00%	3.54%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	11.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%
Total Trips Generated	0	0	23	0	0	0	68	0	0	0	41	10
Subtotal PM Pk Hr. BUILD Volumes	0	0	23	0	0	0	68	1,122	0	0	1,594	10
Pass-by Trip Adjustments	0	0	10	0	0	0	27	-27	0	0	-36	10
Total PM Peak Hour BUILD Volumes	0	0	33	0	0	0	95	1,095	0	0	1,558	20

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M.
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M.
	209	204	P.M.
			100% Commercial Development

Pass-by Trip Calculations:

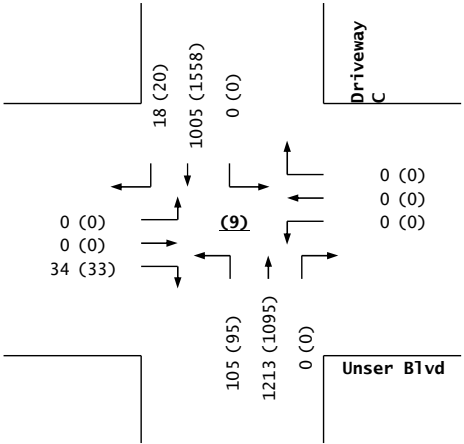
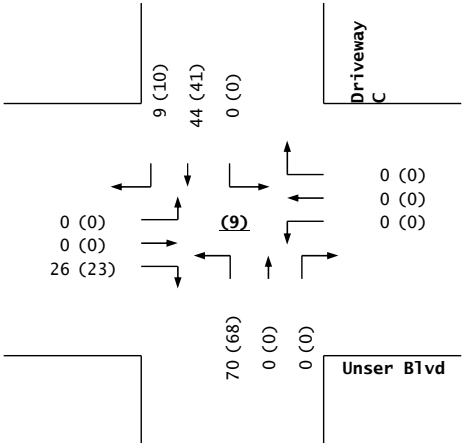
AM Pass-by Trips		Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
Percent Entering		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.00%	-37.00%	0.00%	0.00%	-29.00%	9.00%
Volume Entering		0	0	0	0	0	0	35	-35	0	0	-28	9
Percent Exiting		0.00%	0.00%	9.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		0	0	8	0	0	0	0	0	0	0	0	0
Net AM Passby Trips		0	0	8	0	0	0	35	-35	0	0	-28	9
PM Pass-by Trips		Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
Percent Entering		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.00%	-30.00%	0.00%	0.00%	-41.00%	11.00%
Volume Entering		0	0	0	0	0	0	27	-27	0	0	-36	10
Percent Exiting		0.00%	0.00%	11.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		0	0	10	0	0	0	0	0	0	0	0	0
Net PM Passby Trips		0	0	10	0	0	0	27	-27	0	0	-36	10
Pass-by Trips		Entering		Exiting									
		95		94		AM							
		89		88		PM							

2025
NO BUILD



Trips

2025
BUILD



Sage and Unser Development
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2035) - 100% Development

INTERSECTION: S u m m a r y

Arenal Rd / Unser Blvd

(1)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
152	204	56	144	132	244	56	676	208	212	632	36	
237	318	87	224	206	380	87	1,054	324	331	985	56	
246	318	87	224	206	402	87	1,092	324	353	1,024	65	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
60	72	56	168	100	344	32	564	144	280	856	116	
94	112	87	262	156	536	50	879	224	437	1,335	181	
103	112	87	262	156	557	50	916	224	457	1,371	190	

Sage Rd / Unser Blvd

(2)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
252	292	188	36	96	76	84	928	88	76	648	72	
399	463	298	57	152	120	133	1,471	139	120	1,027	114	
497	494	298	66	170	120	133	1,436	139	120	1,064	131	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
112	120	220	120	184	52	176	756	56	84	1,028	144	
178	190	349	190	292	82	279	1,198	89	133	1,629	228	
262	218	349	201	313	82	279	1,172	89	133	1,677	248	

Tower / Unser

(3)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
84	104	60	32	76	56	28	856	32	24	408	52	
132	163	94	50	119	88	44	1,346	50	38	641	82	
132	163	107	55	119	88	57	1,390	55	38	675	82	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	104	88	48	236	68	120	800	28	44	1,144	116	
88	163	138	75	371	107	189	1,258	44	69	1,798	182	
88	163	151	80	371	107	201	1,298	49	69	1,847	182	

Sage / Coors Blvd

(4)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
240	192	64	44	124	156	20	1,020	16	52	560	64	
336	235	77	99	180	254	24	1,269	19	61	658	80	
348	245	81	99	191	254	27	1,269	19	61	658	89	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	64	4	88	256	192	80	828	172	88	760	108	
87	82	6	143	335	280	96	1,000	201	103	890	129	
98	92	10	143	345	280	100	1,000	201	103	890	143	

Sage and Unser Development
 Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2035) - 100% Development

INTERSECTION: Summary

Sage / 86th Street

(5)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
56	512	12	36	200	56	4	108	76	40	28	48	
70	638	15	45	249	70	5	135	95	50	35	60	
70	685	15	61	295	82	5	135	111	63	35	60	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
52	284	40	48	388	52	16	80	24	28	104	88	
65	354	50	60	484	65	20	100	30	35	130	110	
65	398	50	75	527	77	20	100	45	47	130	110	

San Ygnacio / Unser Blvd

(6)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	30	0	0	10	0	1,990	10	0	1,261	10	
0	0	47	0	0	16	0	3,102	16	0	1,966	16	
0	0	47	0	0	16	0	3,165	16	0	2,020	16	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	30	0	0	10	0	1,458	10	0	1,990	30	
0	0	47	0	0	16	0	2,273	16	0	3,102	47	
0	0	47	0	0	16	0	2,331	16	0	3,170	47	

Driveway A / Sage St

(7)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	1,160	0	0	399	0	0	0	0	0	0	0	
0	1,160	102	44	399	0	85	0	152	0	0	0	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	717	0	0	799	0	0	0	0	0	0	0	
0	717	87	55	799	0	85	0	126	0	0	0	

Unser Blvd / Driveway B

(8)

3.0% Truck

Existing (2022)

2035 (NO BUILD - A.M.)

2035 (BUILD - A.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1,743	0	0	1,382	0	
0	0	64	0	0	0	0	1,417	0	0	1,409	75	

Existing (2022)

2035 (NO BUILD - P.M.)

2035 (BUILD - P.M.)

1.00			1.00			1.00			1.00			PHF
Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1,566	0	0	2,168	0	
0	0	69	0	0	0	0	1,539	0	0	2,151	101	

Sage and Unser Development
Projected Turning Movements Worksheet
Arenal Rd / Unser Blvd

INTERSECTION : E-W Street: **Arenal Rd**
N-S Street: **Unser Blvd**
Year of Existing Counts: 2022
Horizon Year: **2035**

(1)

Growth Rates

	4.30%			4.30%			4.30%			4.30%		
	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	152	204	56	144	132	244	56	676	208	212	632	36
Background Traffic Growth	85	114	31	80	74	136	31	378	116	119	353	20
Subtotal (NO BUILD - A.M.)	237	318	87	224	206	380	87	1,054	324	331	985	56
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	0.00%	4.32%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	4.32%	0.00%
Percent Commercial Trips Generated(Entering)	4.20%	0.00%	0.00%	0.00%	0.00%	9.92%	0.00%	17.34%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.92%	17.34%	4.20%
Total Trips Generated	9	0	0	0	0	22	0	38	0	22	39	9
Subtotal AM Pk Hr. BUILD Volumes	246	318	87	224	206	402	87	1,092	324	353	1,024	65
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	246	318	87	224	206	402	87	1,092	324	353	1,024	65

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	60	72	56	168	100	344	32	564	144	280	856	116
Background Traffic Growth	34	40	31	94	56	192	18	315	80	157	479	65
Subtotal	94	112	87	262	156	536	50	879	224	437	1,335	181
Subtotal (NO BUILD - P.M.)	94	112	87	262	156	536	50	879	224	437	1,335	181
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	0.00%	4.32%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	4.32%	0.00%
Percent Commercial Trips Generated(Entering)	4.20%	0.00%	0.00%	0.00%	0.00%	9.92%	0.00%	17.34%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.92%	17.34%	4.20%
Total Trips Generated	9	0	0	0	0	21	0	37	0	20	36	9
Subtotal PM Pk Hr. BUILD Volumes	103	112	87	262	156	557	50	916	224	457	1,371	190
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	103	112	87	262	156	557	50	916	224	457	1,371	190

Number of Residential Trips Generated	Entering 7	Exiting 23	A.M.	100% Residential Development
Number of Commercial Trips Generated	33	20	P.M.	
	222	219	A.M.	100% Commercial Development
	209	204	P.M.	

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting

Net AM Passby Trips

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			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

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting

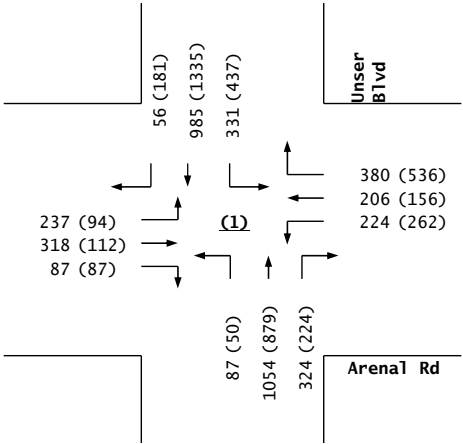
Net PM Passby Trips

	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			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

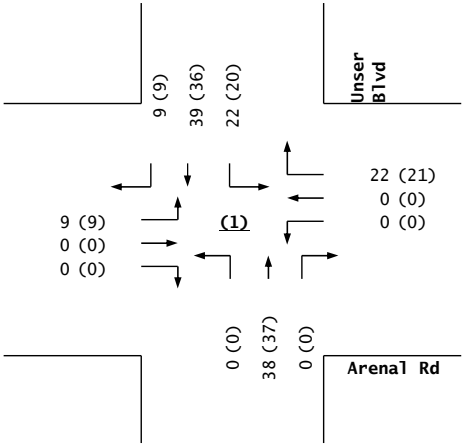
Pass-by Trips

Entering	95	94	AM
Exiting	89	88	PM

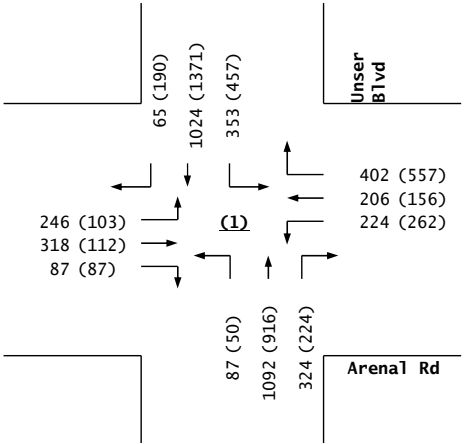
2035
NO BUILD



Trips



2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage Rd / Unser Blvd

INTERSECTION : E-W Street: **Sage Rd** (2)
 N-S Street: **Unser Blvd**
 Year of Existing Counts: 2022
 Horizon Year: **2035**
 Growth Rates

	4.50%			4.50%			4.50%			4.50%		
	Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	252	292	188	36	96	76	84	928	88	76	648	72
Background Traffic Growth	147	171	110	21	56	44	49	543	51	44	379	42
Subtotal (NO BUILD - A.M.)	399	463	298	57	152	120	133	1,471	139	120	1,027	114
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	9.98%	16.51%	0.00%	0.00%	0.00%	0.00%	0.00%	50.02%	16.51%
Percent Residential Trips Generated(Exiting)	66.53%	26.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	3.80%	7.58%	0.00%	0.00%	0.00%	0.00%	0.00%	14.74%	7.16%
Percent Commercial Trips Generated(Exiting)	21.90%	11.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	63	31	0	9	18	0	0	0	0	0	37	17
Subtotal AM Pk Hr. BUILD Volumes	462	494	298	66	170	120	133	1,471	139	120	1,064	131
Pass-by Trip Adjustments	35	0	0	0	0	0	0	-35	0	0	0	0
Total AM Peak Hour BUILD Volumes	497	494	298	66	170	120	133	1,436	139	120	1,064	131

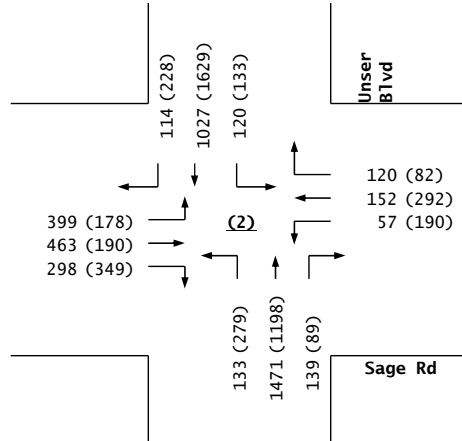
	Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	112	120	220	120	184	52	176	756	56	84	1,028	144
Background Traffic Growth	66	70	129	70	108	30	103	442	33	49	601	84
Subtotal (NO BUILD - P.M.)	178	190	349	190	292	82	279	1,198	89	133	1,629	228
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	9.98%	16.51%	0.00%	0.00%	0.00%	0.00%	0.00%	50.02%	16.51%
Percent Residential Trips Generated(Exiting)	66.53%	26.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	3.80%	7.58%	0.00%	0.00%	0.00%	0.00%	0.00%	14.74%	7.16%
Percent Commercial Trips Generated(Exiting)	21.90%	11.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	58	28	0	11	21	0	0	0	0	0	48	20
Subtotal PM Pk Hr. BUILD Volumes	236	218	349	201	313	82	279	1,198	89	133	1,677	248
Pass-by Trip Adjustments	26	0	0	0	0	0	0	-26	0	0	0	0
Total PM Peak Hour BUILD Volumes	262	218	349	201	313	82	279	1,172	89	133	1,677	248

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

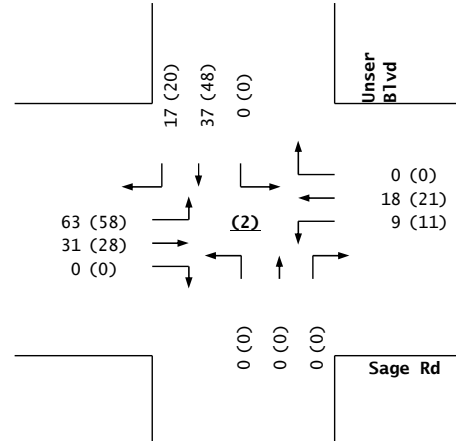
Pass-by Trip Calculations:

AM Pass-by Trips		Eastbound (Sage Rd)			Westbound (Sage Rd)			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		37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-37.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		35	0	0	0	0	0	0	-35	0	0	0	0
Net AM Passby Trips		35	0	0	0	0	0	0	-35	0	0	0	0
PM Pass-by Trips		Eastbound (Sage Rd)			Westbound (Sage Rd)			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		30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-30.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting		26	0	0	0	0	0	0	-26	0	0	0	0
Net PM Passby Trips		26	0	0	0	0	0	0	-26	0	0	0	0
Pass-by Trips		Entering	Exiting										
		95	94	AM									
		89	88	PM									

2035
NO BUILD

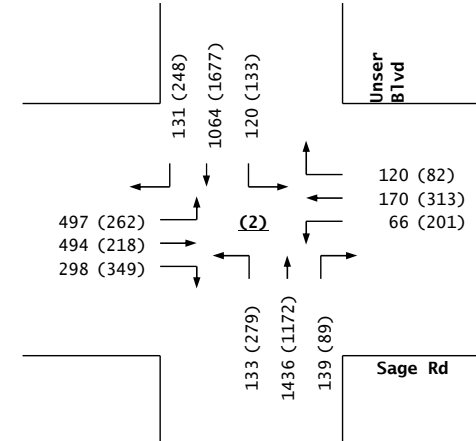


Trips



Sage Rd / Unser Blvd

2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Tower / Unser

INTERSECTION : E-W Street: **Tower** (3)
N-S Street: **Unser**
Year of Existing Counts: 2022
Horizon Year: **2035**
Growth Rates

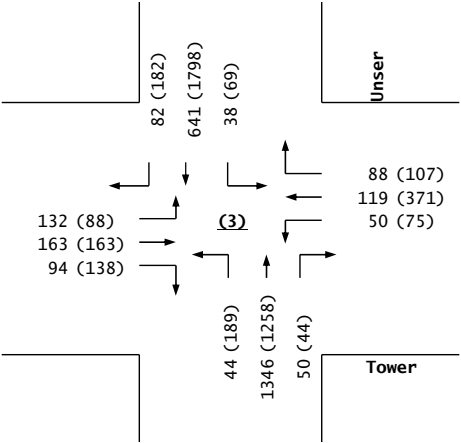
	4.40%			4.40%			4.40%			4.40%		
	Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	84	104	60	32	76	56	28	856	32	24	408	52
Background Traffic Growth	48	59	34	18	43	32	16	490	18	14	233	30
Subtotal (NO BUILD - A.M.)	132	163	94	50	119	88	44	1,346	50	38	641	82
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.03%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	65.06%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	65.06%	0.44%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	6.06%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.19%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.06%	13.20%	2.21%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	13	5	0	0	13	44	5	0	34	0
Subtotal AM Pk Hr. BUILD Volumes	132	163	107	55	119	88	57	1,390	55	38	675	82
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	132	163	107	55	119	88	57	1,390	55	38	675	82

	Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	56	104	88	48	236	68	120	800	28	44	1,144	116
Background Traffic Growth	32	59	50	27	135	39	69	458	16	25	654	66
Subtotal (NO BUILD - P.M.)	88	163	138	75	371	107	189	1,258	44	69	1,798	182
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.03%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	65.06%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.03%	65.06%	0.44%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	6.06%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.19%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.06%	13.20%	2.21%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	13	5	0	0	12	40	5	0	49	0
Subtotal PM Pk Hr. BUILD Volumes	88	163	151	80	371	107	201	1,298	49	69	1,847	182
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	88	163	151	80	371	107	201	1,298	49	69	1,847	182

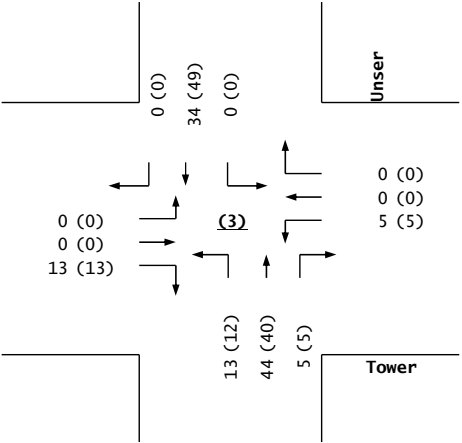
	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:												
AM Pass-by Trips												
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												
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
Pass-by Trips												
	Entering	Exiting										
	95	94	AM									
	89	88	PM									

2035
NO BUILD

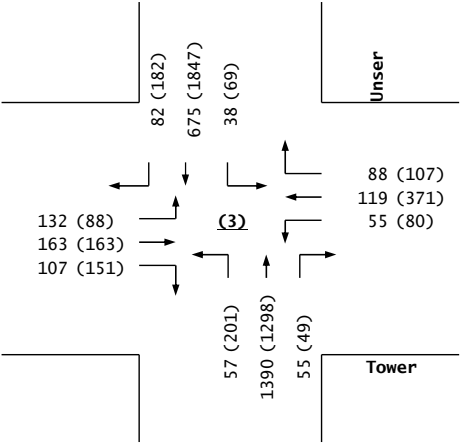


Trips



Tower / Unser

2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage / Coors Blvd

INTERSECTION : E-W Street: **Sage** (4)
 N-S Street: **Coors Blvd**
 Year of Existing Counts: 2022
 Horizon Year: 2035
 Growth Rates:

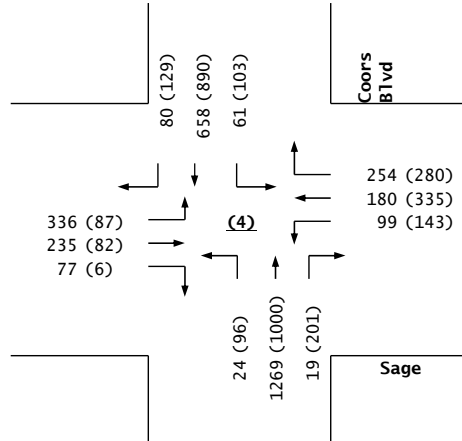
	1.30%			1.30%			1.30%			1.30%		
	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	240	192	64	44	124	156	20	1,020	16	52	560	64
Background Traffic Growth	41	32	11	7	21	26	3	172	3	9	95	11
Subtotal	281	224	75	51	145	182	23	1,192	19	61	655	75
MAS Charter School	52	0	0	48	32	72	0	76	0	0	0	4
Sage Park Development	3	11	2	0	3	0	1	1	0	0	3	1
Subtotal (NO BUILD - A.M.)	336	235	77	99	180	254	24	1,269	19	61	658	80
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	3.50%	0.00%	0.00%	0.00%	0.00%	21.67%
Percent Residential Trips Generated(Exiting)	21.67%	1.32%	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	4.78%	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	3.22%
Percent Commercial Trips Generated(Exiting)	3.22%	4.78%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	12	10	4	0	11	0	3	0	0	0	0	9
Subtotal AM Pk Hr. BUILD Volumes	348	245	81	99	191	254	27	1,269	19	61	658	89
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	348	245	81	99	191	254	27	1,269	19	61	658	89

	1.30%			1.30%			1.30%			1.30%		
	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	56	64	4	88	256	192	80	828	172	88	760	108
Background Traffic Growth	9	11	1	15	43	32	14	140	29	15	128	18
Subtotal	65	75	5	103	299	224	94	968	201	103	888	126
MAS Charter School	20	0	0	40	24	56	0	28	0	0	0	0
Sage Park Development	2	7	1	0	12	0	2	4	0	0	2	3
Subtotal (NO BUILD - P.M.)	87	82	6	143	335	280	96	1,000	201	103	890	129
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	3.50%	0.00%	0.00%	0.00%	0.00%	21.67%
Percent Residential Trips Generated(Exiting)	21.67%	1.32%	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	4.78%	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	3.22%
Percent Commercial Trips Generated(Exiting)	3.22%	4.78%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	11	10	4	0	10	0	4	0	0	0	0	14
Subtotal PM Pk Hr. BUILD Volumes	98	92	10	143	345	280	100	1,000	201	103	890	143
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	98	92	10	143	345	280	100	1,000	201	103	890	143

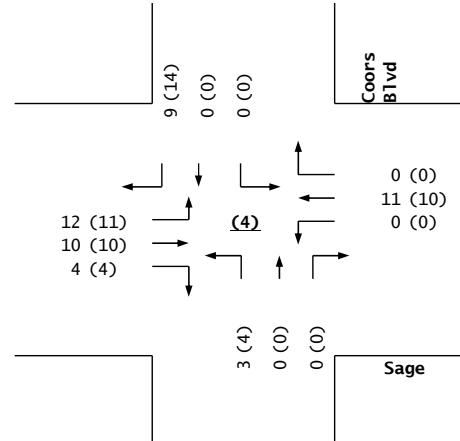
	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:												
AM Pass-by Trips				Eastbound (Sage)			Westbound (Sage)			Northbound (Coors 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 (Sage)			Westbound (Sage)			Northbound (Coors 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
Pass-by Trips				Entering	Exiting							
				95	94	AM						
				89	88	PM						

2035
NO BUILD

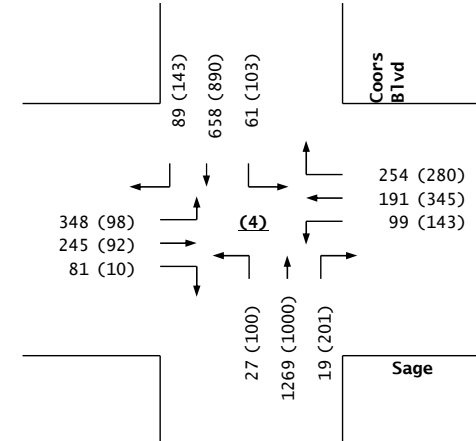


Trips



Sage / Coors Blvd

2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
Sage / 86th Street

INTERSECTION : E-W Street: **Sage** (5)
 N-S Street: **86th Street**
 Year of Existing Counts: 2022
 Horizon Year: **2035**
 Growth Rates: **1.90%** **1.90%** **1.90%** **1.90%**

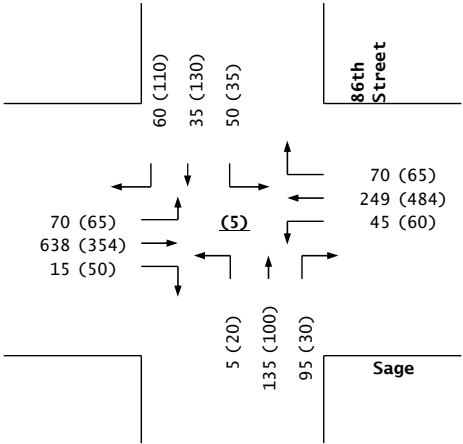
	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	56	512	12	36	200	56	4	108	76	40	28	48
Background Traffic Growth	14	126	3	9	49	14	1	27	19	10	7	12
Subtotal (NO BUILD - A.M.)	70	638	15	45	249	70	5	135	95	50	35	60
Percent Residential Trips Generated(Entering)	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.44%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.44%	0.90%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	21.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.28%	5.67%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	7.28%	21.18%	5.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	47	0	16	46	12	0	0	16	13	0	0
Subtotal AM Pk Hr. BUILD Volumes	70	685	15	61	295	82	5	135	111	63	35	60
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	70	685	15	61	295	82	5	135	111	63	35	60

	Eastbound (Sage)			Westbound (Sage)			Northbound (86th Street)			Southbound (86th Street)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	52	284	40	48	388	52	16	80	24	28	104	88
Background Traffic Growth	13	70	10	12	96	13	4	20	6	7	26	22
Subtotal (NO BUILD - P.M.)	65	354	50	60	484	65	20	100	30	35	130	110
Percent Residential Trips Generated(Entering)	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.44%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.44%	0.90%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	21.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.28%	5.67%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	7.28%	21.18%	5.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	44	0	15	43	12	0	0	15	12	0	0
Subtotal PM Pk Hr. BUILD Volumes	65	398	50	75	527	77	20	100	45	47	130	110
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	65	398	50	75	527	77	20	100	45	47	130	110

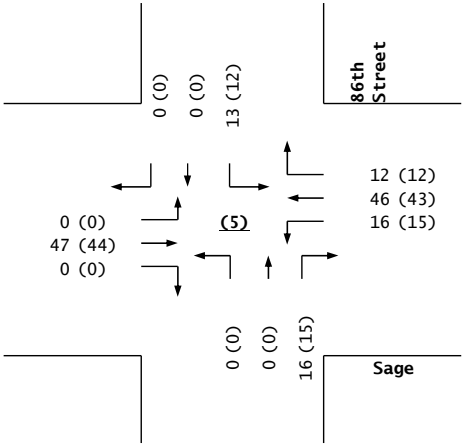
	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:												
AM Pass-by Trips												
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												
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
Pass-by Trips												
	Entering	Exiting										
	95	94	AM									
	89	88	PM									

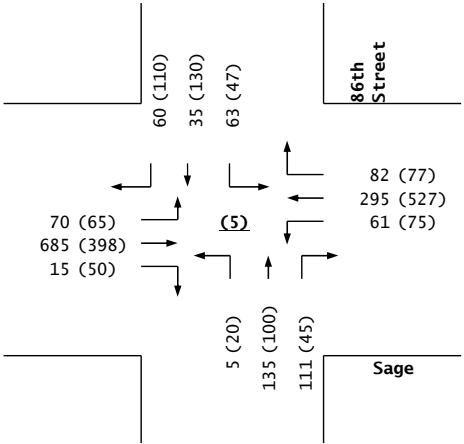
2035
NO BUILD



Trips



2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet
San Ygnacio / Unser Blvd

INTERSECTION : E-W Street: **San Ygnacio** (6)
N-S Street: **Unser Blvd**
Year of Existing Counts: 2022
Horizon Year: **2035**
Growth Rates: **4.30%** **4.30%** **4.30%** **4.30%**

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	30	0	0	10	0	1,990	10	0	1,261	10
Background Traffic Growth	0	0	17	0	0	6	0	1,112	6	0	705	6
Subtotal (NO BUILD - A.M.)	0	0	47	0	0	16	0	3,102	16	0	1,966	16
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	63	0	0	54	0
Subtotal AM Pk Hr. BUILD Volumes	0	0	47	0	0	16	0	3,165	16	0	2,020	16
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	0	47	0	0	16	0	3,165	16	0	2,020	16

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	30	0	0	10	0	1,458	10	0	1,990	30
Background Traffic Growth	0	0	17	0	0	6	0	815	6	0	1,112	17
Subtotal (NO BUILD - P.M.)	0	0	47	0	0	16	0	2,273	16	0	3,102	47
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.53%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.90%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	58	0	0	68	0
Subtotal PM Pk Hr. BUILD Volumes	0	0	47	0	0	16	0	2,331	16	0	3,170	47
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	0	47	0	0	16	0	2,331	16	0	3,170	47

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M. 100% Residential Development
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M. 100% Commercial Development
	209	204	P.M.

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net AM Passby Trips

	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
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

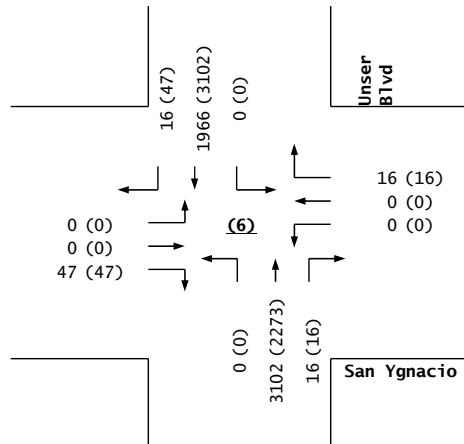
PM Pass-by Trips

Percent Entering
Volume Entering
Percent Exiting
Volume Exiting
Net PM Passby Trips

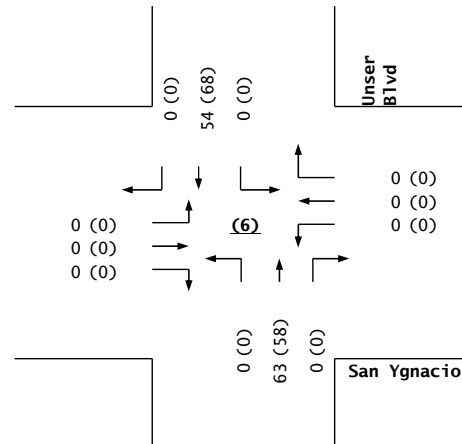
	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent 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

Pass-by Trips
Entering 95 AM
89 PM

2035
NO BUILD

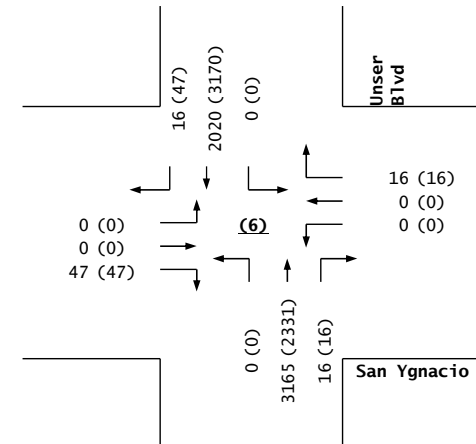


Trips



San Ygnacio / Unser Blvd

2035
BUILD



Sage and Unser Development
Projected Turning Movements Worksheet

Driveway A / Sage St

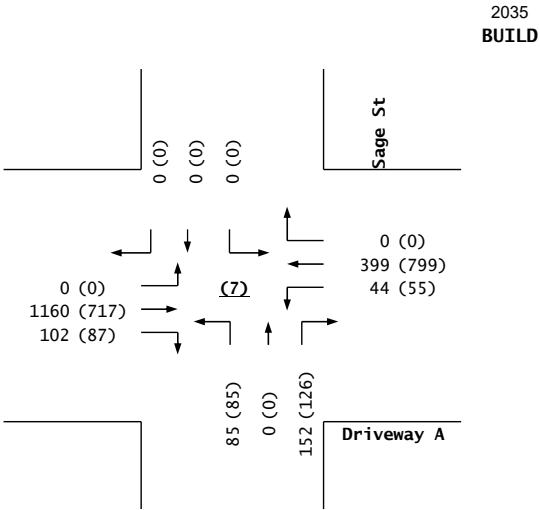
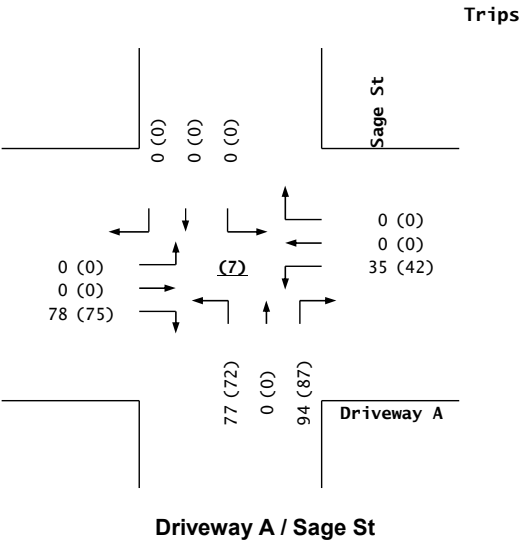
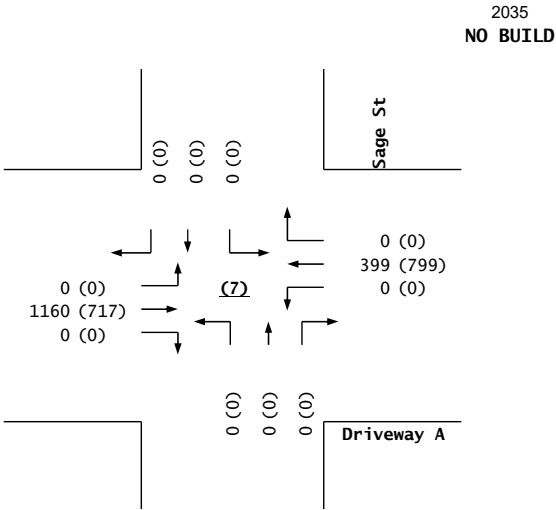
INTERSECTION : E-W Street: **Driveway A** (7)
N-S Street: **Sage St**
Year of Existing Counts: 2022
Horizon Year: 2035
Growth Rates

	4.50%			4.50%			4.50%			4.50%		
	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	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	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	1,160	0	0	399	0	0	0	0	0	0	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.78%	33.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.78%	0.00%	93.02%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	35.26%	14.74%	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%	35.26%	0.00%	33.28%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	78	35	0	0	77	0	94	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	0	1,160	78	35	399	0	77	0	94	0	0	0
Pass-by Trip Adjustments	0	0	24	9	0	0	8	0	58	0	0	0
Total AM Peak Hour BUILD Volumes	0	1,160	102	44	399	0	85	0	152	0	0	0

	4.50%			4.50%			4.50%			4.50%		
	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
	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	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	717	0	0	799	0	0	0	0	0	0	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	1.78%	33.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.78%	0.00%	93.02%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	35.26%	14.74%	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%	35.26%	0.00%	33.28%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	75	42	0	0	72	0	87	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	0	717	75	42	799	0	72	0	87	0	0	0
Pass-by Trip Adjustments	0	0	12	13	0	0	13	0	39	0	0	0
Total PM Peak Hour BUILD Volumes	0	717	87	55	799	0	85	0	126	0	0	0

Number of Residential Trips Generated: Entering 7, Exiting 23 A.M. 100% Residential Development
33 20 P.M.
Number of Commercial Trips Generated: Entering 222, Exiting 219 A.M. 100% Commercial Development
209 204 P.M.

Pass-by Trip Calculations:												
AM Pass-by Trips												
Percent Entering	0.00%	0.00%	25.00%	9.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	24	9	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	0.00%	62.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	8	0	58	0	0	0
Net AM Passby Trips	0	0	24	9	0	0	8	0	58	0	0	0
PM Pass-by Trips												
Percent Entering	0.00%	0.00%	14.00%	15.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	12	13	0	0	13	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	44.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	0	0	39	0	0	0
Net PM Passby Trips	0	0	12	13	0	0	13	0	39	0	0	0
Pass-by Trips												
Entering	95	94	AM									
Exiting	89	88	PM									



Sage and Unser Development
Projected Turning Movements Worksheet
Unser Blvd / Driveway B

Case "Y"

INTERSECTION : E-W Street: **Unser Blvd**
N-S Street: **Driveway B**

(8)

Year of Existing Counts
Horizon Year

2022
2025

Growth Rates

4.50%

4.50%

4.50%

4.50%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Residential Trips Generated(Entering)

Percent Residential Trips Generated(Exiting)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1,248	0	0	989	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	50.00%
0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.54%	15.00%
0.00%	0.00%	29.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	65	0	0	0	0	0	0	0	9	37
0	0	65	0	0	0	0	1,248	0	0	998	37
0	0	24	0	0	0	0	-35	0	0	-24	48
0	0	89	0	0	0	0	1,213	0	0	974	85

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Residential Trips Generated(Entering)

Percent Residential Trips Generated(Exiting)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1,122	0	0	1,553	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	50.00%
0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.54%	15.00%
0.00%	0.00%	29.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	60	0	0	0	0	0	0	0	10	48
0	0	60	0	0	0	0	1,122	0	0	1,563	48
0	0	31	0	0	0	0	-27	0	0	-31	62
0	0	91	0	0	0	0	1,095	0	0	1,532	110

Number of Residential Trips Generated	Entering 7	Exiting 23	A.M.	100% Residential Development
	33	20	P.M.	
Number of Commercial Trips Generated	222	219	A.M.	100% Commercial Development
	209	204	P.M.	

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-37.00%	0.00%	0.00%	-25.00%	25.00%
0	0	0	0	0	0	0	-35	0	0	-24	24
0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%
0	0	24	0	0	0	0	0	0	0	0	24
0	0	24	0	0	0	0	-35	0	0	-24	48

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

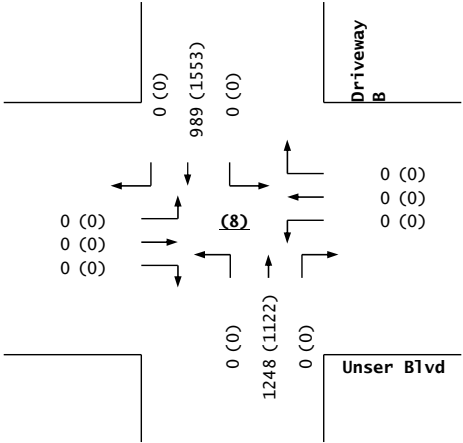
Net PM Passby Trips

Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-30.00%	0.00%	0.00%	-35.00%	35.00%
0	0	0	0	0	0	0	-27	0	0	-31	31
0.00%	0.00%	35.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.00%
0	0	31	0	0	0	0	0	0	0	0	31
0	0	31	0	0	0	0	-27	0	0	-31	62

Pass-by Trips

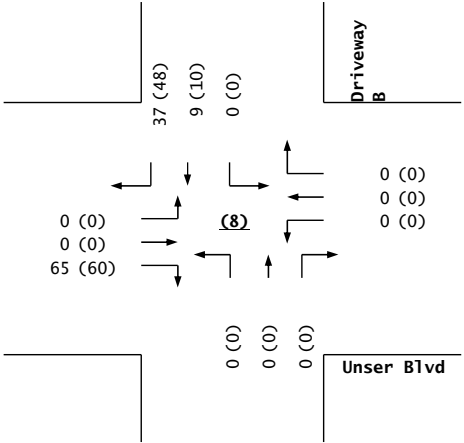
Entering	Exiting
95	94 AM
89	88 PM

2025
NO BUILD

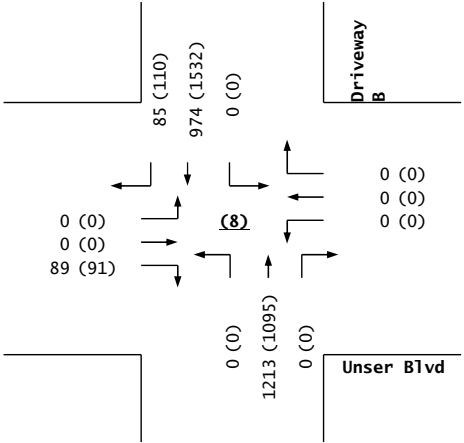


Trips

2025
BUILD



Unser Blvd / Driveway B



Sage and Unser Development
Projected Turning Movements Worksheet
Unser Blvd / Driveway C

Case "Y"

INTERSECTION : E-W Street: **Unser Blvd** (9)
N-S Street: **Driveway C**
Year of Existing Counts: 2022
Horizon Year: **2025**
Growth Rates: **4.50%**

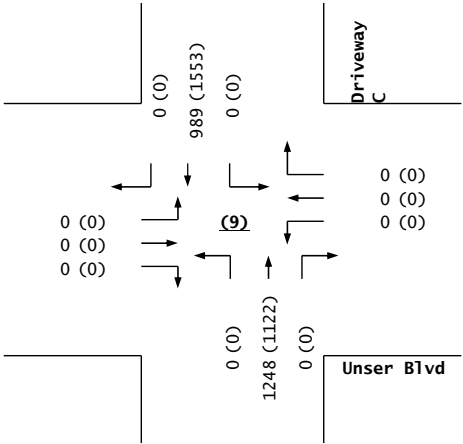
	4.50%			4.50%			4.50%			4.50%		
	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	0	0	0	0	0	0	1,248	0	0	989	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.20%	0.00%	0.00%	0.00%	0.00%	10.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.46%	0.00%	0.00%	0.00%	0.00%	3.54%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	3.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.00%	0.00%
Total Trips Generated	0	0	9	0	0	0	70	0	0	0	64	9
Subtotal AM Pk Hr. BUILD Volumes	0	0	9	0	0	0	70	1,248	0	0	1,053	9
Pass-by Trip Adjustments	0	0	4	0	0	0	35	-35	0	0	-28	4
Total AM Peak Hour BUILD Volumes	0	0	13	0	0	0	105	1,213	0	0	1,025	13

	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
	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	1,122	0	0	1,553	0
Percent Residential Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.20%	0.00%	0.00%	0.00%	0.00%	10.00%
Percent Residential Trips Generated(Exiting)	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.46%	0.00%	0.00%	0.00%	0.00%	3.54%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	3.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.00%	0.00%
Total Trips Generated	0	0	7	0	0	0	68	0	0	0	59	10
Subtotal PM Pk Hr. BUILD Volumes	0	0	7	0	0	0	68	1,122	0	0	1,612	10
Pass-by Trip Adjustments	0	0	5	0	0	0	27	-27	0	0	-36	5
Total PM Peak Hour BUILD Volumes	0	0	12	0	0	0	95	1,095	0	0	1,576	15

	Entering	Exiting	
Number of Residential Trips Generated	7	23	A.M.
	33	20	P.M.
Number of Commercial Trips Generated	222	219	A.M.
	209	204	P.M.
			100% Commercial Development

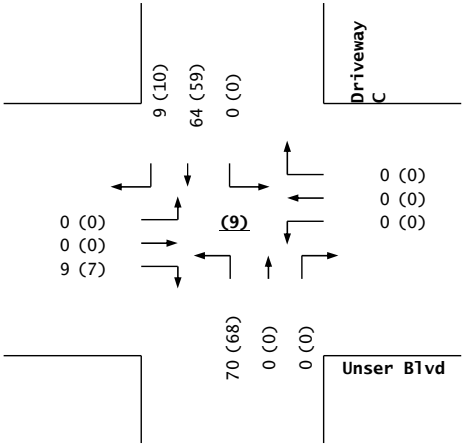
Pass-by Trip Calculations:												
AM Pass-by Trips												
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.00%	-37.00%	0.00%	0.00%	-29.00%	4.00%
Volume Entering	0	0	0	0	0	0	35	-35	0	0	-28	4
Percent Exiting	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	4	0	0	0	0	0	0	0	0	0
Net AM Passby Trips	0	0	4	0	0	0	35	-35	0	0	-28	4
PM Pass-by Trips												
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.00%	-30.00%	0.00%	0.00%	-41.00%	6.00%
Volume Entering	0	0	0	0	0	0	27	-27	0	0	-36	5
Percent Exiting	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	5	0	0	0	0	0	0	0	0	0
Net PM Passby Trips	0	0	5	0	0	0	27	-27	0	0	-36	5
Pass-by Trips												
	Entering	Exiting										
	95	94	AM									
	89	88	PM									

2025
NO BUILD

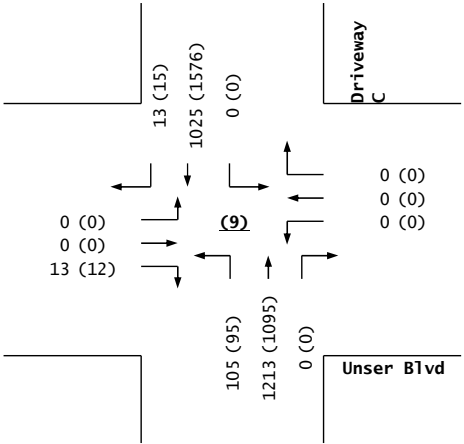


Trips

2025
BUILD



Unser Blvd / Driveway C



Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	172	230	63	163	149	275	63	763	235	239	714	41
Future Volume (vph)	172	230	63	163	149	275	63	763	235	239	714	41
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	25.0	25.0	25.0	11.0	26.0	26.0	26.0	26.0	26.0	9.5	24.0	
Total Split (s)	42.0	42.0	42.0	13.0	55.0	55.0	41.0	41.0	41.0	24.0	65.0	
Total Split (%)	35.0%	35.0%	35.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	20.0%	54.2%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	4.0	4.0	4.0	4.0	4.0	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	8.0	8.0	8.0	8.0	8.0	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	22.5	22.5	22.5	39.0	34.5	34.5	52.6	52.6	52.6	74.0	71.5	120.0
Actuated g/C Ratio	0.19	0.19	0.19	0.32	0.29	0.29	0.44	0.44	0.44	0.62	0.60	1.00
v/c Ratio	0.74	0.35	0.16	0.43	0.28	0.42	0.20	0.49	0.28	0.53	0.34	0.03
Control Delay	64.1	42.3	1.9	32.3	32.9	5.2	28.0	27.8	4.7	8.2	2.1	0.0
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	64.1	42.3	1.9	32.3	32.9	5.2	28.0	27.8	4.7	8.2	2.1	0.0
LOS	E	D	A	C	C	A	C	C	A	A	A	A
Approach Delay		44.9			19.8			22.7			3.5	
Approach LOS		D			B			C			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117.6 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.3

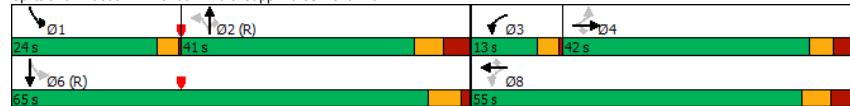
Intersection LOS: B

Intersection Capacity Utilization 74.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	172	230	63	163	149	275	63	763	235	239	714	41
Future Volume (veh/h)	172	230	63	163	149	275	63	763	235	239	714	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	230	63	163	149	0	63	763	0	239	714	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	589		325	513		409	1683		452	2106	
Arrive On Green	0.17	0.17	0.00	0.08	0.27	0.00	0.47	0.47	0.00	0.18	1.00	0.00
Sat Flow, veh/h	1239	3554	1585	1781	1870	1585	736	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	172	230	0	163	149	0	63	763	0	239	714	0
Grp Sat Flow(s),veh/h/ln	1239	1777	1585	1781	1870	1585	736	1777	1585	1781	1777	1585
Q Serve(g_s), s	16.1	6.9	0.0	8.9	7.5	0.0	5.9	17.3	0.0	8.3	0.0	0.0
Cycle Q Clear(g_c), s	16.1	6.9	0.0	8.9	7.5	0.0	5.9	17.3	0.0	8.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	589		325	513		409	1683		452	2106	
V/C Ratio(X)	0.65	0.39		0.50	0.29		0.15	0.45		0.53	0.34	
Avail Cap(c_a), veh/h	421	1036		325	733		409	1683		596	2106	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	48.5	44.7	0.0	36.4	34.4	0.0	18.2	21.2	0.0	13.1	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	1.2	0.3	0.0	0.8	0.9	0.0	0.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	5.5	0.0	7.1	6.2	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	45.1	0.0	37.6	34.7	0.0	19.0	22.1	0.0	14.0	0.4	0.0
LnGrp LOS	D	D		D	C		B	C		B	A	
Approach Vol, veh/h		402			312			826			953	
Approach Delay, s/veh		47.7			36.2			21.8			3.8	
Approach LOS		D			D			C			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	14.3	64.8	13.0	27.9		79.1		40.9				
Change Period (Y+Rc), s	3.5	8.0	3.5	* 8		* 8		8.0				
Max Green Setting (Gmax), s	20.5	33.0	9.5	* 35		* 59		47.0				
Max Q Clear Time (g_c+I1), s	10.3	19.3	10.9	18.1		2.0		9.5				
Green Ext Time (p_c), s	0.5	4.6	0.0	1.7		5.4		0.8				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	181	230	63	163	149	297	63	801	235	261	753	50
Future Volume (vph)	181	230	63	163	149	297	63	801	235	261	753	50
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	25.0	25.0	25.0	11.0	26.0	26.0	26.0	26.0	26.0	9.5	24.0	
Total Split (s)	42.0	42.0	42.0	13.0	55.0	55.0	41.0	41.0	41.0	24.0	65.0	
Total Split (%)	35.0%	35.0%	35.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	20.0%	54.2%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	4.0	4.0	4.0	4.0	4.0	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	8.0	8.0	8.0	8.0	8.0	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	23.4	23.4	23.4	39.8	None	35.3	50.5	50.5	50.5	73.2	70.7	120.0
Actuated g/C Ratio	0.20	0.20	0.20	0.33	0.29	0.29	0.42	0.42	0.42	0.61	0.59	1.00
v/c Ratio	0.75	0.33	0.16	0.42	0.27	0.44	0.22	0.54	0.29	0.60	0.36	0.03
Control Delay	64.0	41.5	1.9	31.5	32.1	5.1	30.4	30.2	5.0	13.1	4.0	0.0
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	64.0	41.5	1.9	31.5	32.1	5.1	30.4	30.2	5.0	13.1	4.0	0.0
LOS	E	D	A	C	C	A	C	C	A	B	A	A
Approach Delay		44.8			18.8			24.9			6.1	
Approach LOS		D			B			C			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117.6 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 77.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	181	230	63	163	149	297	63	801	235	261	753	50
Future Volume (veh/h)	181	230	63	163	149	297	63	801	235	261	753	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	181	230	63	163	149	0	63	801	0	261	753	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	614		334	526		385	1624		440	2081	
Arrive On Green	0.17	0.17	0.00	0.08	0.28	0.00	0.46	0.46	0.00	0.20	1.00	0.00
Sat Flow, veh/h	1239	3554	1585	1781	1870	1585	710	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	181	230	0	163	149	0	63	801	0	261	753	0
Grp Sat Flow(s),veh/h/ln	1239	1777	1585	1781	1870	1585	710	1777	1585	1781	1777	1585
Q Serve(g_s), s	17.0	6.9	0.0	8.8	7.5	0.0	6.3	19.0	0.0	9.4	0.0	0.0
Cycle Q Clear(g_c), s	17.0	6.9	0.0	8.8	7.5	0.0	6.3	19.0	0.0	9.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	614		334	526		385	1624		440	2081	
V/C Ratio(X)	0.66	0.37		0.49	0.28		0.16	0.49		0.59	0.36	
Avail Cap(c_a), veh/h	421	1036		334	733		385	1624		567	2081	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.1	43.9	0.0	35.7	33.7	0.0	19.4	22.8	0.0	14.0	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	1.1	0.3	0.0	0.9	1.1	0.0	1.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	5.4	0.0	7.0	6.1	0.0	2.0	12.5	0.0	5.5	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	44.3	0.0	36.8	34.0	0.0	20.3	23.9	0.0	15.3	0.5	0.0
LnGrp LOS	D	D		D	C		C	C		B	A	
Approach Vol, veh/h		411			312			864			1014	
Approach Delay, s/veh		47.2			35.5			23.7			4.3	
Approach LOS		D			D			C			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	15.4	62.8	13.0	28.7		78.3		41.7				
Change Period (Y+Rc), s	3.5	8.0	3.5	* 8		* 8		8.0				
Max Green Setting (Gmax), s	20.5	33.0	9.5	* 35		* 59		47.0				
Max Q Clear Time (g_c+I1), s	11.4	21.0	10.8	19.0		2.0		9.5				
Green Ext Time (p_c), s	0.5	4.5	0.0	1.7		5.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	68	81	63	190	113	388	36	637	163	316	966	131
Future Volume (vph)	68	81	63	190	113	388	36	637	163	316	966	131
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	44.2	44.2	44.2	15.6	59.8	59.8	44.2	44.2	44.2	26.0	70.2	
Total Split (s)	47.0	47.0	47.0	16.0	63.0	63.0	41.0	41.0	41.0	26.0	67.0	
Total Split (%)	36.2%	36.2%	36.2%	12.3%	48.5%	48.5%	31.5%	31.5%	31.5%	20.0%	51.5%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	2.0	2.0	1.5	1.5	1.5	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	6.0	6.0	5.5	5.5	5.5	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	12.6	12.6	12.6	31.9	29.4	29.4	69.7	69.7	69.7	91.1	88.6	130.0
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.23	0.23	0.54	0.54	0.54	0.70	0.68	1.00
v/c Ratio	0.55	0.24	0.28	0.59	0.27	0.59	0.12	0.34	0.18	0.54	0.40	0.08
Control Delay	71.6	54.5	8.3	48.6	42.1	7.6	20.0	19.1	3.5	23.0	20.7	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	71.6	54.5	8.3	48.6	42.1	7.6	20.0	19.1	3.5	23.0	20.7	0.1
LOS	E	D	A	D	D	A	C	B	A	C	C	A
Approach Delay		46.3			24.5			16.1			19.3	
Approach LOS		D			C			B			B	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 21.4

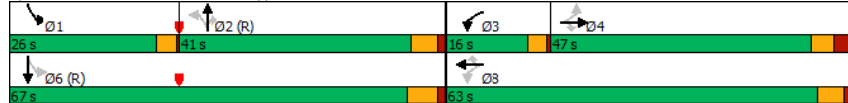
Intersection LOS: C

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	68	81	63	190	113	388	36	637	163	316	966	131
Future Volume (veh/h)	68	81	63	190	113	388	36	637	163	316	966	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	81	0	190	113	0	36	637	0	316	966	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	257		294	366		394	2066		614	2504	
Arrive On Green	0.07	0.07	0.00	0.10	0.20	0.00	0.58	0.58	0.00	0.19	1.00	0.00
Sat Flow, veh/h	1280	3554	1585	1781	1870	1585	582	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	68	81	0	190	113	0	36	637	0	316	966	0
Grp Sat Flow(s),veh/h/ln	1280	1777	1585	1781	1870	1585	582	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.8	2.8	0.0	12.5	6.7	0.0	3.6	11.9	0.0	9.8	0.0	0.0
Cycle Q Clear(g_c), s	6.8	2.8	0.0	12.5	6.7	0.0	3.6	11.9	0.0	9.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	257		294	366		394	2066		614	2504	
V/C Ratio(X)	0.46	0.31		0.65	0.31		0.09	0.31		0.51	0.39	
Avail Cap(c_a), veh/h	449	1093		294	820		394	2066		751	2504	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	59.1	57.2	0.0	48.6	44.8	0.0	12.1	13.9	0.0	7.9	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.7	0.0	4.9	0.5	0.0	0.5	0.4	0.0	0.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	2.3	0.0	9.9	5.6	0.0	0.9	8.2	0.0	4.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	57.9	0.0	53.5	45.3	0.0	12.6	14.3	0.0	8.4	0.4	0.0
LnGrp LOS	E	E		D	D		B	B		A	A	
Approach Vol, veh/h		149			303			673			1282	
Approach Delay, s/veh		59.5			50.4			14.2			2.3	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	16.0	81.6	16.0	16.4		97.6		32.4				
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0		6.0		* 7				
Max Green Setting (Gmax), s	22.5	* 36	12.5	40.0		61.0		* 57				
Max Q Clear Time (g_c+I1), s	11.8	13.9	14.5	8.8		2.0		8.7				
Green Ext Time (p_c), s	0.7	4.5	0.0	0.6		8.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	77	81	63	190	113	409	36	674	163	336	1002	140
Future Volume (vph)	77	81	63	190	113	409	36	674	163	336	1002	140
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	44.2	44.2	44.2	15.6	59.8	59.8	44.2	44.2	44.2	26.0	70.2	
Total Split (s)	47.0	47.0	47.0	16.0	63.0	63.0	41.0	41.0	41.0	26.0	67.0	
Total Split (%)	36.2%	36.2%	36.2%	12.3%	48.5%	48.5%	31.5%	31.5%	31.5%	20.0%	51.5%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	2.0	2.0	1.5	1.5	1.5	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	6.0	6.0	5.5	5.5	5.5	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	13.4	13.4	13.4	32.7	30.2	30.2	65.9	65.9	65.9	90.3	87.8	130.0
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.23	0.23	0.51	0.51	0.51	0.69	0.68	1.00
v/c Ratio	0.59	0.22	0.26	0.57	0.26	0.60	0.13	0.38	0.18	0.58	0.42	0.09
Control Delay	72.6	53.4	7.9	47.3	41.2	7.5	23.2	22.1	4.0	24.6	21.2	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	72.6	53.4	7.9	47.3	41.2	7.5	23.2	22.1	4.0	24.6	21.2	0.1
LOS	E	D	A	D	D	A	C	C	A	C	C	A
Approach Delay		47.1			23.5			18.8			20.0	
Approach LOS		D			C			B			B	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

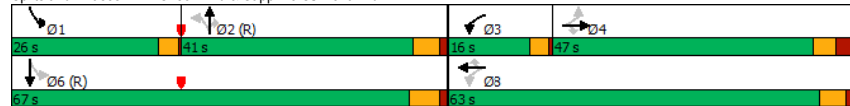
Maximum v/c Ratio: 0.60

Intersection Signal Delay: 22.2 Intersection LOS: C

Intersection Capacity Utilization 72.8% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	77	81	63	190	113	409	36	674	163	336	1002	140
Future Volume (veh/h)	77	81	63	190	113	409	36	674	163	336	1002	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	81	0	190	113	0	36	674	0	336	1002	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	282		303	379		373	2010		597	2478	
Arrive On Green	0.08	0.08	0.00	0.10	0.20	0.00	0.57	0.57	0.00	0.21	1.00	0.00
Sat Flow, veh/h	1280	3554	1585	1781	1870	1585	562	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	77	81	0	190	113	0	36	674	0	336	1002	0
Grp Sat Flow(s),veh/h/ln	1280	1777	1585	1781	1870	1585	562	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.7	2.8	0.0	12.5	6.7	0.0	3.9	13.2	0.0	10.9	0.0	0.0
Cycle Q Clear(g_c), s	7.7	2.8	0.0	12.5	6.7	0.0	3.9	13.2	0.0	10.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	282		303	379		373	2010		597	2478	
V/C Ratio(X)	0.49	0.29		0.63	0.30		0.10	0.34		0.56	0.40	
Avail Cap(c_a), veh/h	449	1093		303	820		373	2010		718	2478	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	56.4	0.0	47.7	44.0	0.0	13.1	15.1	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.6	0.0	4.0	0.4	0.0	0.5	0.5	0.0	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	2.3	0.0	9.8	5.6	0.0	1.0	9.0	0.0	5.4	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	56.9	0.0	51.8	44.4	0.0	13.6	15.6	0.0	9.3	0.5	0.0
LnGrp LOS	E	E		D	D		B	B		A	A	
Approach Vol, veh/h		158			303			710			1338	
Approach Delay, s/veh		58.9			49.0			15.5			2.7	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	17.1	79.5	16.0	17.3		96.7		33.3				
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0		6.0		* 7				
Max Green Setting (Gmax), s	22.5	* 36	12.5	40.0		61.0		* 57				
Max Q Clear Time (g_c+I1), s	12.9	15.2	14.5	9.7		2.0		8.7				
Green Ext Time (p_c), s	0.7	4.7	0.0	0.7		8.6		0.6				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	286	331	213	41	109	95	1053	100	86	735	82
Future Volume (vph)	286	331	213	41	109	95	1053	100	86	735	82
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	17.0	44.0		14.0	41.0	14.0	48.0		14.0	48.0	
Total Split (%)	14.2%	36.7%		11.7%	34.2%	11.7%	40.0%		11.7%	40.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	40.4	28.8	120.0	30.7	20.9	70.0	60.9	120.0	68.9	58.8	120.0
Actuated g/C Ratio	0.34	0.24	1.00	0.26	0.17	0.58	0.51	1.00	0.57	0.49	1.00
v/c Ratio	0.79	0.74	0.13	0.17	0.59	0.24	0.59	0.06	0.30	0.42	0.05
Control Delay	45.3	49.8	0.2	26.3	43.9	14.5	31.3	0.1	14.5	20.8	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
Total Delay	45.3	49.8	0.2	26.3	43.9	14.5	31.3	0.1	14.5	20.8	0.1
LOS	D	D	A	C	D	B	C	A	B	C	A
Approach Delay		35.5			40.8		27.6			18.3	
Approach LOS		D			D		C			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 28.0

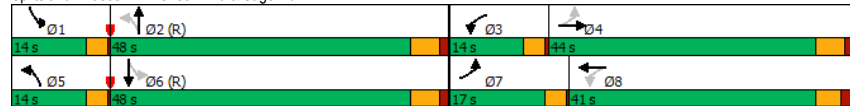
Intersection LOS: C

Intersection Capacity Utilization 77.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰		↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	286	331	213	41	109	86	95	1053	100	86	735	82
Future Volume (veh/h)	286	331	213	41	109	86	95	1053	100	86	735	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	286	331	0	41	109	0	95	1053	0	86	735	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	384		141	225		542	2053		337	2045	
Arrive On Green	0.04	0.07	0.00	0.03	0.12	0.00	0.04	0.58	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	286	331	0	41	109	0	95	1053	0	86	735	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.5	21.0	0.0	2.4	6.5	0.0	2.6	21.3	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	13.5	21.0	0.0	2.4	6.5	0.0	2.6	21.3	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	345	384		141	225		542	2053		337	2045	
V/C Ratio(X)	0.83	0.86		0.29	0.48		0.18	0.51		0.26	0.36	
Avail Cap(c_a), veh/h	345	592		247	546		631	2053		430	2045	
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.69	0.69	0.00	0.85	0.85	0.00	0.85	0.85	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.7	54.3	0.0	45.1	49.3	0.0	9.5	15.2	0.0	11.3	0.0	0.0
Incr Delay (d2), s/veh	11.2	5.7	0.0	1.0	1.4	0.0	0.1	0.8	0.0	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	15.7	0.0	2.0	5.6	0.0	1.8	12.6	0.0	1.6	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	60.0	0.0	46.1	50.7	0.0	9.6	16.0	0.0	11.7	0.5	0.0
LnGrp LOS	E	E		D	D		A	B		B	A	
Approach Vol, veh/h	617			150			1148			821		
Approach Delay, s/veh	58.5			49.4			15.5			1.7		
Approach LOS	E			D			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	74.8	6.8	30.6	8.0	74.6	17.0	20.4				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.5	42.5	10.5	38.0	10.5	42.5	13.5	35.0				
Max Q Clear Time (g_c+I1), s	4.4	23.3	4.4	23.0	4.6	2.0	15.5	8.5				
Green Ext Time (p_c), s	0.1	7.1	0.0	1.6	0.1	5.5	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay 22.9

HCM 6th LOS C

Notes

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

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩	↩	↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	384	362	213	50	127	95	1018	100	86	772	99
Future Volume (vph)	384	362	213	50	127	95	1018	100	86	772	99
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	17.0	44.0		14.0	41.0	14.0	48.0		14.0	48.0	
Total Split (%)	14.2%	36.7%		11.7%	34.2%	11.7%	40.0%		11.7%	40.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	42.3	30.4	120.0	33.0	22.8	68.2	58.9	120.0	66.9	56.7	120.0
Actuated g/C Ratio	0.35	0.25	1.00	0.28	0.19	0.57	0.49	1.00	0.56	0.47	1.00
v/c Ratio	1.04	0.77	0.13	0.21	0.60	0.25	0.59	0.06	0.30	0.46	0.06
Control Delay	89.0	49.6	0.2	25.4	43.9	14.8	30.5	0.1	15.4	22.5	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
Total Delay	89.0	49.6	0.2	25.4	43.9	14.8	30.5	0.1	15.4	22.5	0.1
LOS	F	D	A	C	D	B	C	A	B	C	A
Approach Delay	54.4			40.4			26.8			19.5	
Approach LOS	D			D			C			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 33.6

Intersection LOS: C

Intersection Capacity Utilization 82.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	362	213	50	127	86	95	1018	100	86	772	99
Future Volume (veh/h)	384	362	213	50	127	86	95	1018	100	86	772	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	384	362	0	50	127	0	95	1018	0	86	772	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	416		150	267		514	1970		308	1961	
Arrive On Green	0.04	0.07	0.00	0.03	0.14	0.00	0.03	0.37	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	384	362	0	50	127	0	95	1018	0	86	772	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.5	23.0	0.0	2.9	7.5	0.0	2.8	26.7	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	13.5	23.0	0.0	2.9	7.5	0.0	2.8	26.7	0.0	2.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	416		150	267		514	1970		308	1961	
V/C Ratio(X)	1.06	0.87		0.33	0.48		0.18	0.52		0.28	0.39	
Avail Cap(c_a), veh/h	362	592		247	546		601	1970		399	1961	
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.2	53.9	0.0	42.7	47.3	0.0	10.8	25.2	0.0	13.6	0.0	0.0
Incr Delay (d2), s/veh	64.3	9.8	0.0	0.1	0.1	0.0	0.2	1.0	0.0	0.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.4	18.5	0.0	1.8	4.4	0.0	1.9	17.7	0.0	1.7	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.5	63.6	0.0	42.8	47.4	0.0	10.9	26.2	0.0	14.1	0.6	0.0
LnGrp LOS	F	E		D	D		B	C		B	A	
Approach Vol, veh/h	746			177			1113			858		
Approach Delay, s/veh	88.3			46.1			24.9			1.9		
Approach LOS	F			D			C			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	72.0	7.5	32.7	8.1	71.7	17.0	23.1				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.5	42.5	10.5	38.0	10.5	42.5	13.5	35.0				
Max Q Clear Time (g_c+I1), s	4.5	28.7	4.9	25.0	4.8	2.0	15.5	9.5				
Green Ext Time (p_c), s	0.1	5.7	0.0	1.7	0.1	5.8	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay 35.7

HCM 6th LOS D

Notes

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

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩↩	↩	↩	↩↩	↩
Traffic Volume (vph)	384	362	213	50	127	95	1018	100	86	772	99
Future Volume (vph)	384	362	213	50	127	95	1018	100	86	772	99
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	32.0	46.4	12.3	9.6	24.0	12.3	53.4		10.6	51.7	
Total Split (%)	26.7%	38.7%	10.3%	8.0%	20.0%	10.3%	44.5%		8.8%	43.1%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	45.3	35.1	49.7	20.8	12.4	65.2	55.9	120.0	63.9	53.7	120.0
Actuated g/C Ratio	0.38	0.29	0.41	0.17	0.10	0.54	0.47	1.00	0.53	0.45	1.00
v/c Ratio	0.73	0.35	0.29	0.24	0.51	0.27	0.62	0.06	0.32	0.49	0.06
Control Delay	38.7	33.4	15.7	28.7	34.5	16.9	34.1	0.1	15.7	23.7	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
Total Delay	38.7	33.4	15.7	28.7	34.5	16.9	34.1	0.1	15.7	23.7	0.1
LOS	D	C	B	C	C	B	C	A	B	C	A
Approach Delay		31.6			33.4		30.0			20.5	
Approach LOS		C			C		C			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 28.0

Intersection LOS: C

Intersection Capacity Utilization 80.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025AB_MIT.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩		↩	↩↩	↩	↩	↩↩	↩
Traffic Volume (veh/h)	384	362	213	50	127	86	95	1018	100	86	772	99
Future Volume (veh/h)	384	362	213	50	127	86	95	1018	100	86	772	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No		No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	384	362	213	50	127	0	95	1018	0	86	772	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	510	966	496	204	355		410	1784		260	1774	
Arrive On Green	0.07	0.09	0.09	0.03	0.10	0.00	0.01	0.17	0.00	0.05	0.66	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	384	362	213	50	127	0	95	1018	0	86	772	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	22.1	11.5	14.5	3.0	4.0	0.0	3.1	31.7	0.0	2.8	12.3	0.0
Cycle Q Clear(g_c), s	22.1	11.5	14.5	3.0	4.0	0.0	3.1	31.7	0.0	2.8	12.3	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	510	966	496	204	355		410	1784		260	1774	
V/C Ratio(X)	0.75	0.37	0.43	0.24	0.36		0.23	0.57		0.33	0.44	
Avail Cap(c_a), veh/h	567	1196	599	234	533		467	1784		297	1774	
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.4	45.0	41.7	46.3	50.4	0.0	14.5	38.1	0.0	18.1	12.2	0.0
Incr Delay (d2), s/veh	5.1	0.2	0.6	0.1	0.1	0.0	0.3	1.3	0.0	0.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.7	9.4	10.3	1.9	2.4	0.0	2.3	21.8	0.0	2.0	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	45.3	42.2	46.4	50.5	0.0	14.8	39.5	0.0	18.8	12.9	0.0
LnGrp LOS	D	D	D	D	D		B	D		B	B	
Approach Vol, veh/h		959			177			1113			858	
Approach Delay, s/veh		45.1			49.3			37.4			13.5	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	65.8	7.6	38.6	8.4	65.4	28.2	18.0				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	7.1	47.9	6.1	40.4	8.8	46.2	28.5	18.0				
Max Q Clear Time (g_c+I1), s	4.8	33.7	5.0	16.5	5.1	14.3	24.1	6.0				
Green Ext Time (p_c), s	0.0	5.8	0.0	3.0	0.1	5.6	0.5	0.5				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

Notes

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

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025AB_MIT.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	127	136	250	136	209	200	858	64	95	1167	163
Future Volume (vph)	127	136	250	136	209	200	858	64	95	1167	163
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	15.5	45.5		15.5	45.5	15.5	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	C-Max		None	C-Max		
Act Effct Green (s)	37.5	23.9	130.0	37.9	24.1	81.8	67.9	130.0	71.2	60.8	130.0
Actuated g/C Ratio	0.29	0.18	1.00	0.29	0.19	0.63	0.52	1.00	0.55	0.47	1.00
v/c Ratio	0.49	0.40	0.16	0.36	0.78	0.62	0.46	0.04	0.26	0.71	0.10
Control Delay	40.5	52.4	0.3	34.1	63.9	40.0	15.7	0.0	13.4	32.4	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
Total Delay	40.5	52.4	0.3	34.1	63.9	40.0	15.7	0.0	13.4	32.4	0.1
LOS	D	D	A	C	E	D	B	A	B	C	A
Approach Delay		24.0			53.8		19.1			27.5	
Approach LOS		C			D		B			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58.5 (45%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 27.3

Intersection LOS: C

Intersection Capacity Utilization 81.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
14.3 s	14.6 s	15.6 s	45.5 s
Ø5	Ø6 (R)	Ø7	Ø8
15.6 s	15.3 s	15.5 s	45.5 s

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	127	136	250	136	209	59	200	858	64	95	1167	163
Future Volume (veh/h)	127	136	250	136	209	59	200	858	64	95	1167	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	136	0	136	209	0	200	858	0	95	1167	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	241		271	248		351	2176		497	2083	
Arrive On Green	0.03	0.04	0.00	0.08	0.13	0.00	0.12	1.00	0.00	0.04	0.59	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	127	136	0	136	209	0	200	858	0	95	1167	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	8.0	9.3	0.0	8.5	14.2	0.0	5.9	0.0	0.0	2.8	26.3	0.0
Cycle Q Clear(g_c), s	8.0	9.3	0.0	8.5	14.2	0.0	5.9	0.0	0.0	2.8	26.3	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	241		271	248		351	2176		497	2083	
V/C Ratio(X)	0.58	0.57		0.50	0.84		0.57	0.39		0.19	0.56	
Avail Cap(c_a), veh/h	248	568		293	568		406	2176		581	2083	
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.78	0.78	0.00	0.90	0.90	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.6	58.7	0.0	44.4	55.0	0.0	12.5	0.0	0.0	9.8	16.6	0.0
Incr Delay (d2), s/veh	2.3	1.8	0.0	1.1	6.0	0.0	1.3	0.5	0.0	0.2	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	8.1	0.0	6.7	10.9	0.0	3.5	0.3	0.0	1.9	15.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	60.5	0.0	45.5	61.0	0.0	13.8	0.5	0.0	10.0	17.7	0.0
LnGrp LOS	D	E		D	E		B	A		A	B	
Approach Vol, veh/h	263			345			1058			1262		
Approach Delay, s/veh	55.4			54.9			3.0			17.1		
Approach LOS	E			D			A			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	85.1	14.0	22.7	11.6	81.7	13.4	23.3				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5				
Max Q Clear Time (g_c+I1), s	4.8	2.0	10.5	11.3	7.9	28.3	10.0	16.2				
Green Ext Time (p_c), s	0.1	6.8	0.0	0.7	0.2	8.0	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay 19.9

HCM 6th LOS B

Notes

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

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↗	↘	↩	↗	↩	↗	↘	↩	↗	↘
Traffic Volume (vph)	211	164	250	147	230	200	832	64	95	1215	183
Future Volume (vph)	211	164	250	147	230	200	832	64	95	1215	183
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	15.5	45.5		15.5	45.5	15.5	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	C-Max		None	C-Max		
Act Effct Green (s)	40.7	26.2	130.0	39.6	25.6	79.4	65.3	130.0	69.1	58.6	130.0
Actuated g/C Ratio	0.31	0.20	1.00	0.30	0.20	0.61	0.50	1.00	0.53	0.45	1.00
v/c Ratio	0.78	0.44	0.16	0.39	0.80	0.68	0.47	0.04	0.26	0.76	0.12
Control Delay	56.7	51.2	0.2	33.2	63.5	49.0	16.6	0.0	14.1	35.4	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
Total Delay	56.7	51.2	0.2	33.2	63.5	49.0	16.6	0.0	14.1	35.4	0.1
LOS	E	D	A	C	E	D	B	A	B	D	A
Approach Delay	32.7			53.3			21.5		29.7		
Approach LOS	C			D			C		C		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 30.6

Intersection LOS: C

Intersection Capacity Utilization 88.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
14.3 s	14.6 s	15.6 s	45.5 s
Ø5	Ø6 (R)	Ø7	Ø8
15.6 s	15.3 s	15.5 s	45.5 s

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↗	↘	↩	↗	↘	↩	↗	↘	↩	↗	↘
Traffic Volume (veh/h)	211	164	250	147	230	59	200	832	64	95	1215	183
Future Volume (veh/h)	211	164	250	147	230	59	200	832	64	95	1215	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	211	164	0	147	230	0	200	832	0	95	1215	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	285		287	270		321	2072		489	1973	
Arrive On Green	0.03	0.05	0.00	0.08	0.14	0.00	0.13	1.00	0.00	0.04	0.56	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	211	164	0	147	230	0	200	832	0	95	1215	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	11.1	0.0	9.0	15.6	0.0	6.4	0.0	0.0	3.0	30.0	0.0
Cycle Q Clear(g_c), s	12.0	11.1	0.0	9.0	15.6	0.0	6.4	0.0	0.0	3.0	30.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	285		287	270		321	2072		489	1973	
V/C Ratio(X)	0.85	0.58		0.51	0.85		0.62	0.40		0.19	0.62	
Avail Cap(c_a), veh/h	248	568		302	568		370	2072		570	1973	
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.69	0.69	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.2	57.6	0.0	42.6	54.2	0.0	15.2	0.0	0.0	11.4	19.5	0.0
Incr Delay (d2), s/veh	23.4	1.8	0.0	1.0	5.3	0.0	2.5	0.6	0.0	0.2	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.7	9.7	0.0	6.8	11.5	0.0	4.1	0.3	0.0	2.1	17.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	59.5	0.0	43.5	59.5	0.0	17.8	0.6	0.0	11.6	21.0	0.0
LnGrp LOS	E	E		D	E		B	A		B	C	
Approach Vol, veh/h	375			377			1032			1310		
Approach Delay, s/veh	66.3			53.3			3.9			20.3		
Approach LOS	E			D			A			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	81.3	14.5	25.8	12.0	77.7	15.5	24.8				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5				
Max Q Clear Time (g_c+1t), s	5.0	2.0	11.0	13.1	8.4	32.0	14.0	17.6				
Green Ext Time (p_c), s	0.1	6.5	0.0	0.8	0.2	7.5	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay

24.4

HCM 6th LOS

C

Notes

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

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	211	164	250	147	230	200	832	64	95	1215	183
Future Volume (vph)	211	164	250	147	230	200	832	64	95	1215	183
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	20.0	30.2	23.0	13.8	24.0	23.0	76.2		9.8	63.0	
Total Split (%)	15.4%	23.2%	17.7%	10.6%	18.5%	17.7%	58.6%		7.5%	48.5%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	36.9	20.8	40.2	27.9	15.3	85.6	73.6	130.0	76.2	67.2	130.0
Actuated g/C Ratio	0.28	0.16	0.31	0.21	0.12	0.66	0.57	1.00	0.59	0.52	1.00
v/c Ratio	0.68	0.29	0.46	0.49	0.69	0.64	0.42	0.04	0.24	0.66	0.12
Control Delay	53.4	52.7	37.3	42.3	59.8	36.4	11.6	0.0	10.8	26.8	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
Total Delay	53.4	52.7	37.3	42.3	59.8	36.4	11.6	0.0	10.8	26.8	0.1
LOS	D	D	D	D	E	D	B	A	B	C	A
Approach Delay		46.8			53.9		15.4			22.5	
Approach LOS		D			D		B			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58.5 (45%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 28.3

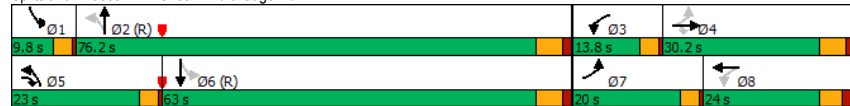
Intersection LOS: C

Intersection Capacity Utilization 82.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PB_MIT.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	211	164	250	147	230	59	200	832	64	95	1215	183
Future Volume (veh/h)	211	164	250	147	230	59	200	832	64	95	1215	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	211	164	250	147	230	0	200	832	0	95	1215	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	584	364	317	455		316	2048		417	1950	
Arrive On Green	0.12	0.16	0.16	0.08	0.13	0.00	0.07	0.58	0.00	0.04	0.55	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	211	164	250	147	230	0	200	832	0	95	1215	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.9	5.3	18.8	9.3	7.8	0.0	6.1	16.8	0.0	3.0	30.5	0.0
Cycle Q Clear(g_c), s	12.9	5.3	18.8	9.3	7.8	0.0	6.1	16.8	0.0	3.0	30.5	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	584	364	317	455		316	2048		417	1950	
V/C Ratio(X)	0.62	0.28	0.69	0.46	0.51		0.63	0.41		0.23	0.62	
Avail Cap(c_a), veh/h	359	662	398	317	492		467	2048		437	1950	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.21	0.21	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.9	47.6	45.8	44.5	52.8	0.0	17.2	15.2	0.0	12.5	20.1	0.0
Incr Delay (d2), s/veh	3.0	0.3	4.4	0.2	0.2	0.0	2.1	0.6	0.0	0.3	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	4.2	12.3	5.6	4.9	0.0	4.4	10.9	0.0	2.1	18.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	47.8	50.2	44.7	53.0	0.0	19.3	15.8	0.0	12.8	21.6	0.0
LnGrp LOS	D	D	D	D	D		B	B		B	C	
Approach Vol, veh/h		625			377			1032			1310	
Approach Delay, s/veh		47.5			49.8			16.5			21.0	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	80.4	13.8	27.4	12.0	76.8	18.5	22.7				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	6.3	70.7	10.3	24.2	19.5	57.5	16.5	18.0				
Max Q Clear Time (g_c+I1), s	5.0	18.8	11.3	20.8	8.1	32.5	14.9	9.8				
Green Ext Time (p_c), s	0.0	6.5	0.0	0.6	0.4	9.5	0.1	0.8				

Intersection Summary

HCM 6th Ctrl Delay 27.8

HCM 6th LOS C

Notes

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

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

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PB_MIT.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↰	↱	↱
Traffic Volume (vph)	95	118	68	36	86	63	32	969	27	462	59
Future Volume (vph)	95	118	68	36	86	63	32	969	27	462	59
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0	23.0	10.0	23.0	10.0	24.5	24.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	14.0	62.0	14.0	62.0	62.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	11.7%	51.7%	11.7%	51.7%	51.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0	5.0	4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max	C-Max
Act Effct Green (s)	15.1	15.1	15.1	16.6	16.6	16.6	91.3	87.0	91.1	85.4	85.4
Actuated g/C Ratio	0.13	0.13	0.13	0.14	0.14	0.14	0.76	0.72	0.76	0.71	0.71
v/c Ratio	0.58	0.27	0.26	0.21	0.18	0.22	0.04	0.39	0.06	0.18	0.05
Control Delay	63.3	48.0	11.6	47.3	45.4	9.7	5.3	8.4	3.9	6.9	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
Total Delay	63.3	48.0	11.6	47.3	45.4	9.7	5.3	8.4	3.9	6.9	1.4
LOS	E	D	B	D	D	A	A	A	A	A	A
Approach Delay		44.3			33.6			8.4		6.2	
Approach LOS		D			C			A		A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 15.0

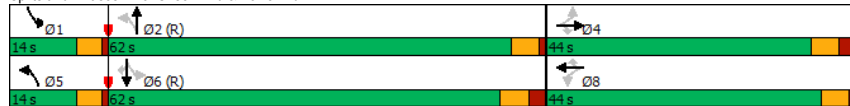
Intersection LOS: B

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd



2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	95	118	68	36	86	63	32	969	36	27	462	59
Future Volume (veh/h)	95	118	68	36	86	63	32	969	36	27	462	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	118	0	36	86	0	32	969	0	27	462	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	416		170	416		721	2567		504	2561	
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.03	1.00	0.00	0.01	0.72	0.00
Sat Flow, veh/h	1311	3554	1585	1274	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	95	118	0	36	86	0	32	969	0	27	462	0
Grp Sat Flow(s), veh/h/ln	1311	1777	1585	1274	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	8.5	3.6	0.0	3.2	2.6	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Cycle Q Clear(g_c), s	11.1	3.6	0.0	6.8	2.6	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	416		170	416		721	2567		504	2561	
V/C Ratio(X)	0.51	0.28		0.21	0.21		0.04	0.38		0.05	0.18	
Avail Cap(c_a), veh/h	441	1111		435	1155		833	2567		619	2561	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.0	48.4	0.0	51.5	47.9	0.0	4.3	0.0	0.0	4.3	5.4	0.0
Incr Delay (d2), s/veh	2.2	0.4	0.0	0.6	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	2.9	0.0	1.9	2.1	0.0	0.3	0.3	0.0	0.3	3.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	48.8	0.0	52.1	48.2	0.0	4.3	0.4	0.0	4.3	5.5	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		213			122			1001			489	
Approach Delay, s/veh		51.6			49.3			0.5			5.5	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	93.2		20.5	6.5	93.0		20.5				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.5	* 57		37.5	9.5	55.5		* 39				
Max Q Clear Time (g_c+I1), s	2.5	2.0		13.1	2.6	7.0		8.8				
Green Ext Time (p_c), s	0.0	8.1		0.9	0.0	3.2		0.6				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↰	↱	↱
Traffic Volume (vph)	95	118	81	41	86	63	45	1013	27	496	59
Future Volume (vph)	95	118	81	41	86	63	45	1013	27	496	59
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0	23.0	10.0	23.0	10.0	24.5	24.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	14.0	62.0	14.0	62.0	62.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	11.7%	51.7%	11.7%	51.7%	51.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0	5.0	4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max	C-Max
Act Effct Green (s)	15.1	15.1	15.1	16.6	16.6	16.6	91.5	87.0	90.0	83.2	83.2
Actuated g/C Ratio	0.13	0.13	0.13	0.14	0.14	0.14	0.76	0.72	0.75	0.69	0.69
v/c Ratio	0.58	0.27	0.30	0.24	0.18	0.22	0.06	0.41	0.07	0.20	0.05
Control Delay	63.3	48.0	12.4	48.1	45.4	9.7	5.2	8.8	4.0	7.6	1.5
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	63.3	48.0	12.4	48.1	45.4	9.7	5.2	8.8	4.0	7.6	1.5
LOS	E	D	B	D	D	A	A	A	A	A	A
Approach Delay		43.1			34.1			8.6		6.8	
Approach LOS		D			C			A		A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 15.1

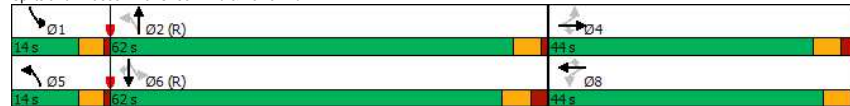
Intersection LOS: B

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd



2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↰	↱	↱	↱
Traffic Volume (veh/h)	95	118	81	41	86	63	45	1013	41	27	496	59
Future Volume (veh/h)	95	118	81	41	86	63	45	1013	41	27	496	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	118	0	41	86	0	45	1013	0	27	496	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	416		170	416		700	2567		486	2550	
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.04	1.00	0.00	0.01	0.72	0.00
Sat Flow, veh/h	1311	3554	1585	1274	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	95	118	0	41	86	0	45	1013	0	27	496	0
Grp Sat Flow(s),veh/h/ln	1311	1777	1585	1274	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	8.5	3.6	0.0	3.6	2.6	0.0	0.8	0.0	0.0	0.5	5.5	0.0
Cycle Q Clear(g_c), s	11.1	3.6	0.0	7.3	2.6	0.0	0.8	0.0	0.0	0.5	5.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	416		170	416		700	2567		486	2550	
V/C Ratio(X)	0.51	0.28		0.24	0.21		0.06	0.39		0.06	0.19	
Avail Cap(c_a), veh/h	441	1111		435	1155		807	2567		600	2550	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.0	48.4	0.0	51.7	47.9	0.0	4.3	0.0	0.0	4.4	5.6	0.0
Incr Delay (d2), s/veh	2.2	0.4	0.0	0.7	0.2	0.0	0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	2.9	0.0	2.1	2.1	0.0	0.5	0.3	0.0	0.3	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	48.8	0.0	52.4	48.2	0.0	4.3	0.5	0.0	4.4	5.7	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		213			127			1058			523	
Approach Delay, s/veh		51.6			49.6			0.6			5.7	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	93.2		20.5	6.8	92.6		20.5				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.5	* 57		37.5	9.5	55.5		* 39				
Max Q Clear Time (g_c+I1), s	2.5	2.0		13.1	2.8	7.5		9.3				
Green Ext Time (p_c), s	0.0	8.7		0.9	0.0	3.4		0.6				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↰	↱	↱
Traffic Volume (vph)	63	118	100	54	267	77	136	906	50	1295	131
Future Volume (vph)	63	118	100	54	267	77	136	906	50	1295	131
Turn Type	Perm	NA	Perm	Perm	NA	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8			2		6		6
Detector Phase	4	4	4	8	8		5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0		10.0	23.0	10.0	24.5	24.5
Total Split (s)	36.0	36.0	36.0	43.2	43.2		14.4	62.4	14.4	62.4	62.4
Total Split (%)	30.0%	30.0%	30.0%	36.0%	36.0%		12.0%	52.0%	12.0%	52.0%	52.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0		1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0		4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.2	14.2	14.2	15.7	15.7	0.0	92.9	85.5	88.3	80.1	80.1
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.00	0.77	0.71	0.74	0.67	0.67
v/c Ratio	0.67	0.28	0.36	0.33	0.58	0.58	0.41	0.37	0.11	0.55	0.12
Control Delay	82.6	49.2	12.6	52.0	53.8	18.6	7.0	7.9	4.0	12.2	2.5
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	82.6	49.2	12.6	52.0	53.8	18.6	7.0	7.9	4.0	12.2	2.5
LOS	F	D	B	D	D	B	A	A	A	B	A
Approach Delay		43.7			46.7			7.8		11.1	
Approach LOS		D			D			A		B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 17.2

Intersection LOS: B

Intersection Capacity Utilization 82.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd

Ø1	Ø2 (R)	Ø4
14.4 s	62.4 s	36 s
Ø5	Ø6 (R)	Ø8
14.4 s	62.4 s	43.2 s

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	63	118	100	54	267	77	136	906	32	50	1295	131
Future Volume (veh/h)	63	118	100	54	267	77	136	906	32	50	1295	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	118	0	54	267	0	136	906	0	50	1295	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	522		210	522		336	2439		454	2366	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.04	0.69	0.00	0.02	0.67	0.00
Sat Flow, veh/h	1112	3554	1585	1274	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	63	118	0	54	267	0	136	906	0	50	1295	0
Grp Sat Flow(s),veh/h/ln	1112	1777	1585	1274	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	6.6	3.5	0.0	4.7	8.3	0.0	2.9	12.9	0.0	1.1	23.0	0.0
Cycle Q Clear(g_c), s	15.0	3.5	0.0	8.2	8.3	0.0	2.9	12.9	0.0	1.1	23.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	522		210	522		336	2439		454	2366	
V/C Ratio(X)	0.43	0.23		0.26	0.51		0.40	0.37		0.11	0.55	
Avail Cap(c_a), veh/h	256	874		428	1131		409	2439		563	2366	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.1	45.2	0.0	48.8	47.2	0.0	8.8	7.9	0.0	6.5	10.5	0.0
Incr Delay (d2), s/veh	2.0	0.2	0.0	0.6	0.8	0.0	0.8	0.4	0.0	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	2.8	0.0	2.7	6.7	0.0	1.8	7.9	0.0	0.7	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	45.4	0.0	49.4	48.0	0.0	9.6	8.4	0.0	6.7	11.5	0.0
LnGrp LOS	E	D		D	D		A	A		A	B	
Approach Vol, veh/h	181			321			1042			1345		
Approach Delay, s/veh	49.1			48.2			8.5			11.3		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	88.8		24.1	9.5	86.4		24.1				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.9	* 57		29.5	9.9	55.9		* 38				
Max Q Clear Time (g_c+I1), s	3.1	14.9		17.0	4.9	25.0		10.3				
Green Ext Time (p_c), s	0.0	7.2		0.7	0.1	11.2		1.9				

Intersection Summary

HCM 6th Ctrl Delay

16.8

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	63	118	113	59	267	77	148	946	50	1344	131
Future Volume (vph)	63	118	113	59	267	77	148	946	50	1344	131
Turn Type	Perm	NA	Perm	Perm	NA	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8			2		6		6
Detector Phase	4	4	4	8	8		5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0		10.0	23.0	10.0	24.5	24.5
Total Split (s)	36.0	36.0	36.0	43.2	43.2		14.4	62.4	14.4	62.4	62.4
Total Split (%)	30.0%	30.0%	30.0%	36.0%	36.0%		12.0%	52.0%	12.0%	52.0%	52.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0		1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0		4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.2	14.2	14.2	15.7	15.7	0.0	93.6	85.5	87.1	78.9	78.9
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13	0.00	0.78	0.71	0.73	0.66	0.66
v/c Ratio	0.67	0.28	0.39	0.36	0.58	0.58	0.45	0.39	0.12	0.58	0.12
Control Delay	82.6	49.2	12.5	52.9	53.8	18.6	7.7	8.1	4.2	13.5	2.9
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	82.6	49.2	12.5	52.9	53.8	18.6	7.7	8.1	4.2	13.5	2.9
LOS	F	D	B	D	D	B	A	A	A	B	A
Approach Delay		42.2			46.9			8.0		12.2	
Approach LOS		D			D			A		B	
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 74.4 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 70											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.67											
Intersection Signal Delay: 17.6						Intersection LOS: B					
Intersection Capacity Utilization 84.1%						ICU Level of Service E					
Analysis Period (min) 15											

Splits and Phases: 3: Unser Blvd & Tower Rd

Ø1	Ø2 (R)	Ø4
14.4 s	62.4 s	36 s
Ø5	Ø6 (R)	Ø8
14.4 s	62.4 s	43.2 s

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	63	118	113	59	267	77	148	946	37	50	1344	131
Future Volume (veh/h)	63	118	113	59	267	77	148	946	37	50	1344	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	118	0	59	267	0	148	946	0	50	1344	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	522		210	522		325	2438		437	2358	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.04	0.69	0.00	0.02	0.66	0.00
Sat Flow, veh/h	1112	3554	1585	1274	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	63	118	0	59	267	0	148	946	0	50	1344	0
Grp Sat Flow(s),veh/h/ln	1112	1777	1585	1274	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	6.6	3.5	0.0	5.1	8.3	0.0	3.2	13.7	0.0	1.1	24.6	0.0
Cycle Q Clear(g_c), s	15.0	3.5	0.0	8.7	8.3	0.0	3.2	13.7	0.0	1.1	24.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	522		210	522		325	2438		437	2358	
V/C Ratio(X)	0.43	0.23		0.28	0.51		0.46	0.39		0.11	0.57	
Avail Cap(c_a), veh/h	256	874		428	1131		393	2438		546	2358	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.1	45.2	0.0	49.0	47.2	0.0	9.6	8.1	0.0	6.7	10.9	0.0
Incr Delay (d2), s/veh	2.0	0.2	0.0	0.7	0.8	0.0	1.0	0.5	0.0	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	2.8	0.0	3.0	6.7	0.0	2.0	8.3	0.0	0.7	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	45.4	0.0	49.7	48.0	0.0	10.6	8.5	0.0	6.8	11.9	0.0
LnGrp LOS	E	D		D	D		B	A		A	B	
Approach Vol, veh/h	181			326			1094			1394		
Approach Delay, s/veh	49.1			48.3			8.8			11.8		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	88.8		24.1	9.8	86.1		24.1				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.9	* 57		29.5	9.9	55.9		* 38				
Max Q Clear Time (g_c+I1), s	3.1	15.7		17.0	5.2	26.6		10.7				
Green Ext Time (p_c), s	0.0	7.7		0.7	0.1	11.5		1.9				

Intersection Summary											
HCM 6th Ctrl Delay				16.9							
HCM 6th LOS				B							

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	249	199	66	46	129	162	21	1060	17	54	582	75
Future Volume (vph)	249	199	66	46	129	162	21	1060	17	54	582	75
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	21.9	25.9	25.9
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	29.9%	35.4%	35.4%	29.9%	35.4%	35.4%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.5	18.5		18.5	18.5		18.5	20.6	20.6	30.6	27.9	27.9
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.45	0.32	0.32	0.48	0.44	0.44
v/c Ratio	1.13	0.12		0.74	0.28		0.04	0.93	0.03	0.11	0.38	0.10
Control Delay	115.6	1.0		47.0	5.8		7.3	40.5	0.1	8.0	14.2	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.6	1.0		47.0	5.8		7.3	40.5	0.1	8.0	14.2	0.2
LOS	F	A		D	A		D	A	A	B	A	A
Approach Delay	100.9			27.2			39.2			12.2		
Approach LOS	F			C			D			B		

Intersection Summary

Cycle Length: 73.2

Actuated Cycle Length: 63.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 42.4

Intersection LOS: D

Intersection Capacity Utilization 95.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø4
21.9 s	25.9 s	25.4 s
Ø5	Ø6	Ø8
21.9 s	25.9 s	25.4 s

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	249	199	66	46	129	162	21	1060	17	54	582	75
Future Volume (veh/h)	249	199	66	46	129	162	21	1060	17	54	582	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	199	66	46	129	162	21	1060	17	54	582	75
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	0	428	68	147	428	428	1066	475	363	1314	586
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.07	0.30	0.30	0.14	0.37	0.37
Sat Flow, veh/h	0	0	1585	0	545	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	448	0	66	175	0	162	21	1060	17	54	582	75
Grp Sat Flow(s),veh/h/ln	0	0	1585	545	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.1	0.0	0.0	5.5	0.5	19.8	0.5	1.1	8.2	2.1
Cycle Q Clear(g_c), s	18.0	0.0	2.1	18.0	0.0	5.5	0.5	19.8	0.5	1.1	8.2	2.1
Prop In Lane	0.56		1.00	0.26		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	0	428	215	0	428	428	1066	475	363	1314	586
V/C Ratio(X)	5.33	0.00	0.15	0.81	0.00	0.38	0.05	0.99	0.04	0.15	0.44	0.13
Avail Cap(c_a), veh/h	84	0	428	215	0	428	727	1066	475	537	1314	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	18.5	20.8	0.0	19.8	13.4	23.3	16.5	13.5	15.8	13.9
Incr Delay (d2), s/veh	1976.2	0.0	0.2	20.6	0.0	0.6	0.0	26.3	0.1	0.2	1.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	79.5	0.0	1.3	5.8	0.0	3.5	0.3	16.4	0.3	0.7	5.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2009.6	0.0	18.7	41.4	0.0	20.3	13.4	49.6	16.7	13.7	16.9	14.4
LnGrp LOS	F	A	B	D	A	C	B	D	B	B	B	B
Approach Vol, veh/h	514			337			1098				711	
Approach Delay, s/veh	1753.9			31.3			48.4				16.4	
Approach LOS	F			C			D				B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	25.9		25.4	10.7	30.5		25.4				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	16.0	20.0		18.0	16.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	3.1	21.8		20.0	2.5	10.2		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 367.2

HCM 6th LOS F

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	316	220	72	94	175	234	25	1137	17	54	585	80
Future Volume (vph)	316	220	72	94	175	234	25	1137	17	54	585	80
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	21.9	25.9	25.9
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	29.9%	35.4%	35.4%	29.9%	35.4%	35.4%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.5	18.5		18.5	18.5		18.5	20.6	20.6	30.6	27.9	27.9
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.45	0.32	0.32	0.48	0.44	0.44
v/c Ratio	1.60	0.13		2.89	0.37		0.04	1.00	0.03	0.11	0.38	0.10
Control Delay	304.6	1.5		899.3	5.5		7.4	53.5	0.1	8.0	14.2	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	304.6	1.5		899.3	5.5		7.4	53.5	0.1	8.0	14.2	0.6
LOS	F	A		F	A		A	D	A	A	B	A
Approach Delay	268.7			483.5				51.7			12.2	
Approach LOS	F			F				D			B	

Intersection Summary

Cycle Length: 73.2

Actuated Cycle Length: 63.8

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.89

Intersection Signal Delay: 158.3

Intersection LOS: F

Intersection Capacity Utilization 105.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø4
21.9 s	25.9 s	25.4 s
Ø5	Ø6	Ø8
21.9 s	25.9 s	25.4 s

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	316	220	72	94	175	234	25	1137	17	54	585	80
Future Volume (veh/h)	316	220	72	94	175	234	25	1137	17	54	585	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	316	220	72	94	175	234	25	1137	17	54	585	80
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	0	428	73	80	428	436	1066	475	361	1275	569
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.08	0.30	0.30	0.14	0.36	0.36
Sat Flow, veh/h	0	0	1585	0	296	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	536	0	72	269	0	234	25	1137	17	54	585	80
Grp Sat Flow(s),veh/h/ln	0	0	1585	296	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	8.4	0.6	20.0	0.5	1.2	8.4	2.3
Cycle Q Clear(g_c), s	18.0	0.0	2.3	18.0	0.0	8.4	0.6	20.0	0.5	1.2	8.4	2.3
Prop In Lane	0.59		1.00	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	0	428	153	0	428	436	1066	475	361	1275	569
V/C Ratio(X)	6.25	0.00	0.17	1.76	0.00	0.55	0.06	1.07	0.04	0.15	0.46	0.14
Avail Cap(c_a), veh/h	86	0	428	153	0	428	715	1066	475	535	1275	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	18.6	24.7	0.0	20.8	13.0	23.3	16.5	13.7	16.4	14.4
Incr Delay (d2), s/veh	2385.4	0.0	0.2	368.5	0.0	1.5	0.1	47.2	0.1	0.2	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	96.2	0.0	1.5	31.1	0.0	5.4	0.4	21.1	0.3	0.7	5.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2418.8	0.0	18.8	393.2	0.0	22.3	13.1	70.6	16.7	13.9	17.6	15.0
LnGrp LOS	F	A	B	F	A	C	B	F	B	B	B	B
Approach Vol, veh/h	608			503			1179				719	
Approach Delay, s/veh	2134.6			220.7			68.6				17.0	
Approach LOS	F			F			E				B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	25.9		25.4	11.5	29.8		25.4				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	16.0	20.0		18.0	16.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	3.2	22.0		20.0	2.6	10.4		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 499.1

HCM 6th LOS F

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	58	66	4	91	266	199	83	860	179	91	790	112
Future Volume (vph)	58	66	4	91	266	199	83	860	179	91	790	112
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	17.4	17.4	17.4	17.4	17.4	17.4	20.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	22.2	22.2		22.2	22.2		41.3	30.2	30.2	41.3	30.2	30.2
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.51	0.37	0.37	0.51	0.37	0.37
v/c Ratio	0.52	0.01		0.81	0.37		0.17	0.66	0.26	0.20	0.60	0.17
Control Delay	35.2	0.0		44.0	8.9		10.4	27.3	4.8	10.7	26.2	4.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	0.0		44.0	8.9		10.4	27.3	4.8	10.7	26.2	4.5
LOS	D	A		D	A		B	C	A	B	C	A
Approach Delay	34.1			31.5			22.5			22.3		
Approach LOS	C			C			C			C		

Intersection Summary

Cycle Length: 90.9

Actuated Cycle Length: 81.7

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 24.7

Intersection LOS: C

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø3	Ø4
20.9 s	35 s		35 s
Ø5	Ø6	Ø7	Ø8
20.9 s	35 s		35 s

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (veh/h)	58	66	4	91	266	199	83	860	179	91	790	112
Future Volume (veh/h)	58	66	4	91	266	199	83	860	179	91	790	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	66	4	91	266	199	83	860	179	91	790	112
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	48	490	51	77	490	427	1158	516	408	1171	522
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.33	0.33	0.15	0.33	0.33
Sat Flow, veh/h	0	154	1585	0	249	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	124	0	4	357	0	199	83	860	179	91	790	112
Grp Sat Flow(s),veh/h/ln	154	0	1585	249	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.2	0.0	0.0	8.9	2.3	19.2	7.7	2.5	17.1	4.6
Cycle Q Clear(g_c), s	27.6	0.0	0.2	27.6	0.0	8.9	2.3	19.2	7.7	2.5	17.1	4.6
Prop In Lane	0.47		1.00	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	0	490	128	0	490	427	1158	516	408	1171	522
V/C Ratio(X)	1.16	0.00	0.01	2.80	0.00	0.41	0.19	0.74	0.35	0.22	0.67	0.21
Avail Cap(c_a), veh/h	107	0	490	128	0	490	465	1158	516	440	1171	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	21.4	29.1	0.0	24.4	14.9	26.8	22.9	15.4	25.8	21.6
Incr Delay (d2), s/veh	136.9	0.0	0.0	831.1	0.0	0.5	0.2	4.3	1.8	0.3	3.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.3	0.0	0.1	55.9	0.0	5.9	1.5	12.8	5.3	1.7	11.5	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	169.7	0.0	21.4	860.2	0.0	24.9	15.1	31.1	24.7	15.7	28.9	22.5
LnGrp LOS	F	A	C	F	A	C	B	C	C	B	C	C
Approach Vol, veh/h	128			556			1122				993	
Approach Delay, s/veh	165.1			561.3			28.9				27.0	
Approach LOS	F			F			C				C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.3	35.0		35.0	19.0	35.3		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.5	21.2		29.6	4.3	19.1		29.6				
Green Ext Time (p_c), s	0.1	3.6		0.0	0.1	3.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay 140.2

HCM 6th LOS F

Notes

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

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	91	83	9	131	312	255	89	892	179	91	792	129
Future Volume (vph)	91	83	9	131	312	255	89	892	179	91	792	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	17.4	17.4	17.4	17.4	17.4	17.4	20.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	27.1	27.1		27.1	27.1		40.9	29.6	29.6	40.9	29.6	29.6
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.48	0.34	0.34	0.48	0.34	0.34
v/c Ratio	0.87	0.02		0.90	0.42		0.21	0.73	0.27	0.23	0.65	0.21
Control Delay	71.3	0.0		54.1	11.9		11.2	30.7	4.9	11.5	28.5	5.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	0.0		54.1	11.9		11.2	30.7	4.9	11.5	28.5	5.3
LOS	E	A		D	B		B	C	A	B	C	A
Approach Delay	67.8			38.7			25.2			24.0		
Approach LOS	E			D			C			C		

Intersection Summary

Cycle Length: 90.9

Actuated Cycle Length: 86

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 30.4

Intersection LOS: C

Intersection Capacity Utilization 92.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø3	Ø4
20.9 s	35 s		35 s
Ø5	Ø6	Ø7	Ø8
20.9 s	35 s		35 s

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	91	83	9	131	312	255	89	892	179	91	792	129
Future Volume (veh/h)	91	83	9	131	312	255	89	892	179	91	792	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	83	9	131	312	255	89	892	179	91	792	129
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	38	490	52	32	490	428	1158	516	401	1161	518
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.33	0.33	0.15	0.33	0.33
Sat Flow, veh/h	0	124	1585	0	104	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	174	0	9	443	0	255	89	892	179	91	792	129
Grp Sat Flow(s),veh/h/ln	124	0	1585	104	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	11.8	2.5	20.2	7.7	2.5	17.3	5.3
Cycle Q Clear(g_c), s	27.6	0.0	0.4	27.6	0.0	11.8	2.5	20.2	7.7	2.5	17.3	5.3
Prop In Lane	0.52		1.00	0.30		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	0	490	84	0	490	428	1158	516	401	1161	518
V/C Ratio(X)	1.75	0.00	0.02	5.25	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Avail Cap(c_a), veh/h	100	0	490	84	0	490	461	1158	516	432	1161	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	21.5	34.4	0.0	25.4	14.9	27.1	22.9	15.7	26.1	22.0
Incr Delay (d2), s/veh	374.4	0.0	0.0	1936.5	0.0	1.0	0.2	5.0	1.8	0.3	3.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.5	0.0	0.2	80.2	0.0	7.8	1.6	13.5	5.3	1.7	11.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	408.8	0.0	21.5	1970.9	0.0	26.4	15.1	32.1	24.7	16.0	29.3	23.2
LnGrp LOS	F	A	C	F	A	C	B	C	C	B	C	C
Approach Vol, veh/h	183			698			1160				1012	
Approach Delay, s/veh	389.8			1260.5			29.7				27.3	
Approach LOS	F			F			C				C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.3	35.0		35.0	19.3	35.1		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.5	22.2		29.6	4.5	19.3		29.6				
Green Ext Time (p_c), s	0.1	3.4		0.0	0.1	3.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay 331.9

HCM 6th LOS F

Notes

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

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	59	541	38	211	4	114	42	30
Future Volume (vph)	59	541	38	211	4	114	42	30
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	23.0	9.5	22.5	23.5	23.5	23.5	23.5
Total Split (s)	19.0	54.0	14.0	49.0	52.0	52.0	52.0	52.0
Total Split (%)	15.8%	45.0%	11.7%	40.8%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	32.1	26.4	30.1	22.9	76.0	76.0	76.0	76.0
Actuated g/C Ratio	0.27	0.22	0.25	0.19	0.63	0.63	0.63	0.63
v/c Ratio	0.21	0.71	0.19	0.40	0.00	0.17	0.06	0.07
Control Delay	30.4	48.2	30.1	37.8	11.8	9.5	11.5	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	48.2	30.1	37.8	11.8	9.5	11.5	5.5
LOS	C	D	C	D	B	A	B	A
Approach Delay		46.5		36.9		9.6		7.5
Approach LOS		D		D		A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 106.8 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 34.3

Intersection LOS: C

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↰ Ø3	↱ Ø4
52 s	14 s	54 s
↱ Ø6 (R)	↱ Ø7	↰ Ø8
52 s	19 s	49 s

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	59	541	13	38	211	59	4	114	80	42	30	51
Future Volume (veh/h)	59	541	13	38	211	59	4	114	80	42	30	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	541	13	38	211	59	4	114	80	42	30	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	677	16	143	455	124	918	683	479	804	415	706
Arrive On Green	0.04	0.19	0.19	0.05	0.33	0.33	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1781	3547	85	1781	2759	753	1317	1023	718	1189	622	1058
Grp Volume(v), veh/h	59	271	283	38	134	136	4	0	194	42	0	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1735	1317	0	1741	1189	0	1680
Q Serve(g_s), s	3.3	17.5	17.5	2.1	7.1	7.5	0.1	0.0	5.0	1.6	0.0	2.0
Cycle Q Clear(g_c), s	3.3	17.5	17.5	2.1	7.1	7.5	2.1	0.0	5.0	6.6	0.0	2.0
Prop In Lane	1.00		0.05	1.00		0.43	1.00		0.41	1.00		0.63
Lane Grp Cap(c), veh/h	242	339	354	143	293	286	918	0	1163	804	0	1122
V/C Ratio(X)	0.24	0.80	0.80	0.27	0.46	0.48	0.00	0.00	0.17	0.05	0.00	0.07
Avail Cap(c_a), veh/h	382	726	757	254	659	643	918	0	1163	804	0	1122
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	46.4	46.4	40.1	36.0	36.1	7.3	0.0	7.5	8.7	0.0	7.0
Incr Delay (d2), s/veh	0.5	4.3	4.2	0.9	1.0	1.1	0.0	0.0	0.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	12.7	13.1	1.7	5.2	5.3	0.1	0.0	3.4	0.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	50.7	50.6	41.0	37.0	37.2	7.3	0.0	7.8	8.8	0.0	7.1
LnGrp LOS	D	D	D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h	613			308			198				123	
Approach Delay, s/veh	49.6			37.6			7.8				7.7	
Approach LOS	D			D			A				A	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	85.6	6.5	27.9		85.6	9.6	24.8					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	46.5	10.5	49.0		46.5	14.0	* 45					
Max Q Clear Time (g_c+I1), s	7.0	4.1	19.5		8.6	5.3	9.5					
Green Ext Time (p_c), s	1.3	0.0	3.4		0.6	0.1	1.6					

Intersection Summary

HCM 6th Ctrl Delay 35.8

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2025ANX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↰↱	↰	↰↱	↰	↰	↰	↰
Traffic Volume (vph)	59	588	54	257	4	114	55	30
Future Volume (vph)	59	588	54	257	4	114	55	30
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	23.0	9.5	22.5	23.5	23.5	23.5	23.5
Total Split (s)	19.0	54.0	14.0	49.0	52.0	52.0	52.0	52.0
Total Split (%)	15.8%	45.0%	11.7%	40.8%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	34.1	27.1	34.2	26.3	72.7	72.7	72.7	72.7
Actuated g/C Ratio	0.28	0.23	0.28	0.22	0.61	0.61	0.61	0.61
v/c Ratio	0.21	0.75	0.26	0.42	0.01	0.20	0.08	0.08
Control Delay	28.1	49.2	28.4	35.4	13.0	10.6	13.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	49.2	28.4	35.4	13.0	10.6	13.0	6.1
LOS	C	D	C	D	B	B	B	A
Approach Delay		47.3		34.4		10.7		8.9
Approach LOS		D		C		B		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 106.8 (89%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 34.4

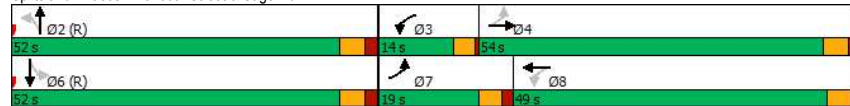
Intersection LOS: C

Intersection Capacity Utilization 55.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd



2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰		↰	↰	↰
Traffic Volume (veh/h)	59	588	13	54	257	71	4	114	96	55	30	51
Future Volume (veh/h)	59	588	13	54	257	71	4	114	96	55	30	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	588	13	54	257	71	4	114	96	55	30	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	730	16	160	524	142	884	604	509	757	401	681
Arrive On Green	0.04	0.21	0.21	0.07	0.38	0.38	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1781	3555	79	1781	2764	748	1317	938	790	1172	622	1058
Grp Volume(v), veh/h	59	294	307	54	163	165	4	210	55	0	81	
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1736	1317	0	1728	1172	0	1680
Q Serve(g_s), s	3.2	18.9	18.9	2.9	8.4	8.7	0.1	0.0	5.9	2.4	0.0	2.2
Cycle Q Clear(g_c), s	3.2	18.9	18.9	2.9	8.4	8.7	2.3	0.0	5.9	8.3	0.0	2.2
Prop In Lane	1.00		0.04	1.00		0.43	1.00		0.46	1.00		0.63
Lane Grp Cap(c), veh/h	250	365	381	160	337	329	884	0	1112	757	0	1081
V/C Ratio(X)	0.24	0.81	0.81	0.34	0.48	0.50	0.00	0.00	0.19	0.07	0.00	0.07
Avail Cap(c_a), veh/h	391	726	758	255	659	644	884	0	1112	757	0	1081
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	45.4	45.4	37.2	32.8	32.9	8.4	0.0	8.7	10.4	0.0	8.0
Incr Delay (d2), s/veh	0.5	4.2	4.1	1.2	1.1	1.2	0.0	0.0	0.4	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	13.5	14.0	2.3	6.0	6.0	0.1	0.0	4.1	1.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	49.6	49.5	38.4	33.9	34.1	8.4	0.0	9.0	10.5	0.0	8.1
LnGrp LOS	D	D	D	D	C	C	A	A	A	B	A	A
Approach Vol, veh/h		660			382			214			136	
Approach Delay, s/veh		48.5			34.6			9.0			9.1	
Approach LOS		D			C			A			A	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	82.7	7.6	29.6		82.7	9.5	27.7					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	46.5	10.5	49.0		46.5	14.0	* 45					
Max Q Clear Time (g_c+I1), s	7.9	4.9	20.9		10.3	5.2	10.7					
Green Ext Time (p_c), s	1.4	0.0	3.7		0.7	0.1	2.0					

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025ABX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	55	300	51	410	17	85	30	110
Future Volume (vph)	55	300	51	410	17	85	30	110
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	60.8	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	46.8%	9.2%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	31.8	24.4	30.5	23.0	85.7	85.7	85.7	85.7
Actuated g/C Ratio	0.24	0.19	0.23	0.18	0.66	0.66	0.66	0.66
v/c Ratio	0.30	0.51	0.21	0.75	0.02	0.09	0.04	0.18
Control Delay	37.3	47.2	32.7	53.2	10.5	9.0	10.5	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	47.2	32.7	53.2	10.5	9.0	10.5	8.7
LOS	D	D	C	D	B	A	B	A
Approach Delay		45.8		51.1		9.2		8.9
Approach LOS		D		D		A		A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 37.6

Intersection LOS: D

Intersection Capacity Utilization 43.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↰ Ø3	↰ Ø4
57.2 s	12 s	60.8 s
↰ Ø6 (R)	↰ Ø7	↰ Ø8
57.2 s	15.6 s	57.2 s

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	55	300	42	51	410	55	17	85	25	30	110	93
Future Volume (veh/h)	55	300	42	51	410	55	17	85	25	30	110	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	300	42	51	410	55	17	85	25	30	110	93
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	542	75	202	500	67	816	953	280	910	643	543
Arrive On Green	0.04	0.17	0.17	0.07	0.32	0.32	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1781	3135	434	1781	3151	420	1179	1388	408	1283	936	792
Grp Volume(v), veh/h	55	169	173	51	230	235	17	0	110	30	0	203
Grp Sat Flow(s), veh/h/ln	1781	1777	1792	1781	1777	1795	1179	0	1797	1283	0	1728
Q Serve(g_s), s	3.3	11.3	11.5	3.1	15.5	15.7	0.7	0.0	2.7	1.0	0.0	5.4
Cycle Q Clear(g_c), s	3.3	11.3	11.5	3.1	15.5	15.7	6.1	0.0	2.7	3.7	0.0	5.4
Prop In Lane	1.00		0.24	1.00		0.23	1.00		0.23	1.00		0.46
Lane Grp Cap(c), veh/h	154	307	310	202	282	285	816	0	1234	910	0	1186
V/C Ratio(X)	0.36	0.55	0.56	0.25	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Avail Cap(c_a), veh/h	235	763	769	259	720	728	816	0	1234	910	0	1186
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	49.1	49.2	42.6	42.6	42.7	8.3	0.0	6.8	7.4	0.0	7.2
Incr Delay (d2), s/veh	1.4	1.5	1.6	0.5	4.7	4.9	0.0	0.0	0.1	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	8.8	9.0	2.4	9.7	9.9	0.3	0.0	1.9	0.5	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	50.7	50.8	43.1	47.3	47.6	8.4	0.0	6.9	7.5	0.0	7.6
LnGrp LOS	D	D	D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h	397			516			127			233		
Approach Delay, s/veh	50.1			47.1			7.1			7.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	94.7	7.8	27.5		94.7	9.6	25.6					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	51.7	8.5	55.8		51.7	10.6	* 53					
Max Q Clear Time (g_c+I1), s	8.1	5.1	13.5		7.4	5.3	17.7					
Green Ext Time (p_c), s	0.7	0.0	2.1		1.4	0.0	2.9					

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2025PNX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	55	344	66	453	17	85	42	110
Future Volume (vph)	55	344	66	453	17	85	42	110
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	60.8	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	46.8%	9.2%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	33.9	26.6	33.0	25.3	83.4	83.4	83.4	83.4
Actuated g/C Ratio	0.26	0.20	0.25	0.19	0.64	0.64	0.64	0.64
v/c Ratio	0.30	0.53	0.26	0.76	0.02	0.11	0.05	0.18
Control Delay	35.5	46.4	33.5	52.7	11.6	9.4	11.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	46.4	33.5	52.7	11.6	9.4	11.6	9.5
LOS	D	D	C	D	B	A	B	A
Approach Delay		45.1		50.5		9.7		9.9
Approach LOS		D		D		A		A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 37.7

Intersection LOS: D

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↰ Ø3	↰ Ø4
57.2 s	12 s	60.8 s
↰ Ø6 (R)	↰ Ø7	↰ Ø8
57.2 s	15.6 s	57.2 s

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
11/22/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	55	344	42	66	453	67	17	85	40	42	110	93
Future Volume (veh/h)	55	344	42	66	453	67	17	85	40	42	110	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	344	42	66	453	67	17	85	40	42	110	93
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	576	70	210	544	80	794	806	379	872	628	531
Arrive On Green	0.04	0.18	0.18	0.08	0.35	0.35	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1781	3191	387	1781	3108	457	1179	1203	566	1266	936	792
Grp Volume(v), veh/h	55	190	196	66	258	262	17	0	125	42	0	203
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1788	1179	0	1768	1266	0	1728
Q Serve(g_s), s	3.3	12.8	13.0	3.9	17.3	17.5	0.7	0.0	3.3	1.6	0.0	5.7
Cycle Q Clear(g_c), s	3.3	12.8	13.0	3.9	17.3	17.5	6.4	0.0	3.3	4.8	0.0	5.7
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.32	1.00		0.46
Lane Grp Cap(c), veh/h	154	321	325	210	311	313	794	0	1186	872	0	1158
V/C Ratio(X)	0.36	0.59	0.60	0.31	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.18
Avail Cap(c_a), veh/h	236	763	773	252	720	725	794	0	1186	872	0	1158
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	48.9	49.0	40.2	40.4	40.5	9.2	0.0	7.6	8.5	0.0	8.0
Incr Delay (d2), s/veh	1.4	1.8	1.8	0.9	5.6	5.9	0.0	0.0	0.2	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	9.8	10.0	3.1	11.0	11.2	0.3	0.0	2.3	0.8	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	50.6	50.8	41.1	46.1	46.4	9.3	0.0	7.8	8.6	0.0	8.3
LnGrp LOS	D	D	D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		441			586			142			245	
Approach Delay, s/veh		49.9			45.7			8.0			8.4	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	92.6	8.9	28.5		92.6	9.6	27.8					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	51.7	8.5	55.8		51.7	10.6	* 53					
Max Q Clear Time (g_c+I1), s	8.4	5.9	15.0		7.7	5.3	19.5					
Green Ext Time (p_c), s	0.8	0.0	2.4		1.5	0.0	3.3					

Intersection Summary

HCM 6th Ctrl Delay 36.7

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2025 PM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2025PBX.syn

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	34	0	0	11	0	1672	11	0	1073	11
Future Vol, veh/h	0	0	34	0	0	11	0	1672	11	0	1073	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	0	0	11	0	1672	11	0	1073	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	542	-	-	842	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	485	0	0	308	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	485	-	-	308	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13		17.1		0		0					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBT		NBR EBLn1WBLn1		SBT SBR							
Capacity (veh/h)	-		485 308		-							
HCM Lane V/C Ratio	-		0.07 0.036		-							
HCM Control Delay (s)	-		13 17.1		-							
HCM Lane LOS	-		B C		-							
HCM 95th %tile Q(veh)	-		0.2 0.1		-							

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	34	0	0	11	0	1237	11	0	1677	34
Future Vol, veh/h	0	0	34	0	0	11	0	1237	11	0	1677	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	0	0	11	0	1237	11	0	1677	34
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	856	-	-	624	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	301	0	0	428	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	301	-	-	428	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18.5		13.6		0		0					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBT		NBR EBLn1WBLn1		SBT		SBR					
Capacity (veh/h)	-		301 428		-		-					
HCM Lane V/C Ratio	-		0.113 0.026		-		-					
HCM Control Delay (s)	-		18.5 13.6		-		-					
HCM Lane LOS	-		C B		-		-					
HCM 95th %tile Q(veh)	-		0.4 0.1		-		-					

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	830	102	44	286	85	152
Future Vol, veh/h	830	102	44	286	85	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	830	102	44	286	85	152

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	932
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	730
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	730
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	21.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	446	-	-	730	-
HCM Lane V/C Ratio	0.531	-	-	0.06	-
HCM Control Delay (s)	21.9	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	3	-	-	0.2	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	513	87	55	572	85	126
Future Vol, veh/h	513	87	55	572	85	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	513	87	55	572	85	126
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	600	0	909	257
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	396	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	973	-	274	742
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	973	-	258	742
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	612	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		15.8	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBL	WBT
Capacity (veh/h)	541		-	-	973	-
HCM Lane V/C Ratio	0.39		-	-	0.057	-
HCM Control Delay (s)	15.8		-	-	8.9	-
HCM Lane LOS	C		-	-	A	-
HCM 95th %tile Q(veh)	1.8		-	-	0.2	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	89	0	1213	974	85
Future Vol, veh/h	0	89	0	1213	974	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	89	0	1213	974	85
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	487	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	526	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	526	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	13.2	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	526	-	-		
HCM Lane V/C Ratio	-	0.169	-	-		
HCM Control Delay (s)	-	13.2	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.6	-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗	↗	↗
Traffic Vol, veh/h	0	91	0	1095	1532	110
Future Vol, veh/h	0	91	0	1095	1532	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	91	0	1095	1532	110
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	766	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	345	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	345	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	19.1	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	345	-	-		
HCM Lane V/C Ratio	-	0.264	-	-		
HCM Control Delay (s)	-	19.1	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %tile Q(veh)	-	1	-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↗↘	↗↘	↗
Traffic Vol, veh/h	0	13	105	1213	1025	13
Future Vol, veh/h	0	13	105	1213	1025	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	105	1213	1025	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	513	1038	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	506	665	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	506	665	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.3	0.9		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	665	-	506	-	-	
HCM Lane V/C Ratio	0.158	-	0.026	-	-	
HCM Control Delay (s)	11.4	-	12.3	-	-	
HCM Lane LOS	B	-	B	-	-	
HCM 95th %tile Q(veh)	0.6	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↗↘	↗↘	↗
Traffic Vol, veh/h	0	12	95	1095	1576	15
Future Vol, veh/h	0	12	95	1095	1576	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	95	1095	1576	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	788	1591	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	334	408	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	334	408	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.2	1.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	408	-	334	-	-	
HCM Lane V/C Ratio	0.233	-	0.036	-	-	
HCM Control Delay (s)	16.5	-	16.2	-	-	
HCM Lane LOS	C	-	C	-	-	
HCM 95th %tile Q(veh)	0.9	-	0.1	-	-	

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	237	318	87	224	206	380	87	1054	324	331	985	56
Future Volume (vph)	237	318	87	224	206	380	87	1054	324	331	985	56
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	25.0	25.0	25.0	11.0	26.0	26.0	26.0	26.0	26.0	9.5	24.0	
Total Split (s)	42.0	42.0	42.0	13.0	55.0	55.0	41.0	41.0	41.0	24.0	65.0	
Total Split (%)	35.0%	35.0%	35.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	20.0%	54.2%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	4.0	4.0	4.0	4.0	4.0	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	8.0	8.0	8.0	8.0	8.0	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	28.8	28.8	28.8	45.3	40.8	40.8	39.5	39.5	39.5	67.7	65.2	120.0
Actuated g/C Ratio	0.24	0.24	0.24	0.38	0.34	0.34	0.33	0.33	0.33	0.56	0.54	1.00
v/c Ratio	0.84	0.37	0.19	0.57	0.33	0.48	0.49	0.91	0.44	0.91	0.51	0.04
Control Delay	68.1	38.3	4.3	32.0	29.7	4.6	47.3	51.9	5.7	64.4	3.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	38.3	4.3	32.0	29.7	4.6	47.3	51.9	5.7	64.4	3.3	0.0
LOS	E	D	A	C	C	A	D	D	A	E	A	A
Approach Delay		44.7			18.6			41.4			17.9	
Approach LOS		D			B			D			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117.6 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 93.9%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Future Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	318	87	224	206	0	87	1054	0	331	985	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	811		363	629		267	1285		358	1884	
Arrive On Green	0.23	0.23	0.00	0.08	0.34	0.00	0.36	0.36	0.00	0.28	1.00	0.00
Sat Flow, veh/h	1176	3554	1585	1781	1870	1585	571	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	237	318	0	224	206	0	87	1054	0	331	985	0
Grp Sat Flow(s),veh/h/ln	1176	1777	1585	1781	1870	1585	571	1777	1585	1781	1777	1585
Q Serve(g_s), s	23.4	9.1	0.0	9.5	9.9	0.0	13.8	32.3	0.0	14.3	0.0	0.0
Cycle Q Clear(g_c), s	23.4	9.1	0.0	9.5	9.9	0.0	13.8	32.3	0.0	14.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	811		363	629		267	1285		358	1884	
V/C Ratio(X)	0.72	0.39		0.62	0.33		0.33	0.82		0.92	0.52	
Avail Cap(c_a), veh/h	403	1036		363	733		267	1285		414	1884	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	44.8	39.3	0.0	33.9	29.7	0.0	28.9	34.8	0.0	21.0	0.0	0.0
Incr Delay (d2), s/veh	4.9	0.3	0.0	3.2	0.3	0.0	3.2	6.0	0.0	21.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	7.1	0.0	2.6	7.8	0.0	3.7	20.8	0.0	10.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	39.6	0.0	37.1	30.0	0.0	32.1	40.7	0.0	42.1	0.8	0.0
LnGrp LOS	D	D		D	C		C	D		D	A	
Approach Vol, veh/h		555			430			1141			1316	
Approach Delay, s/veh		43.9			33.7			40.1			11.2	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	20.2	51.4	13.0	35.4		71.6		48.4				
Change Period (Y+Rc), s	3.5	8.0	3.5	* 8		* 8		8.0				
Max Green Setting (Gmax), s	20.5	33.0	9.5	* 35		* 59		47.0				
Max Q Clear Time (g_c+I1), s	16.3	34.3	11.5	25.4		2.0		11.9				
Green Ext Time (p_c), s	0.4	0.0	0.0	2.0		8.3		1.1				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	237	318	87	224	206	380	87	1054	324	331	985	56
Future Volume (vph)	237	318	87	224	206	380	87	1054	324	331	985	56
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	25.0	25.0	25.0	11.0	26.0	26.0	26.0	26.0	26.0	9.5	24.0	
Total Split (s)	42.0	42.0	42.0	13.0	55.0	55.0	41.0	41.0	41.0	24.0	65.0	
Total Split (%)	35.0%	35.0%	35.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	20.0%	54.2%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	4.0	4.0	4.0	4.0	4.0	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	8.0	8.0	8.0	8.0	8.0	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	28.8	28.8	28.8	45.3	40.8	40.8	39.5	39.5	39.5	67.7	65.2	120.0
Actuated g/C Ratio	0.24	0.24	0.24	0.38	0.34	0.34	0.33	0.33	0.33	0.56	0.54	1.00
v/c Ratio	0.84	0.37	0.19	0.57	0.33	0.48	0.49	0.91	0.44	0.91	0.51	0.04
Control Delay	68.1	38.3	4.3	32.0	29.7	4.6	47.3	51.9	5.7	64.4	3.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	38.3	4.3	32.0	29.7	4.6	47.3	51.9	5.7	64.4	3.3	0.0
LOS	E	D	A	C	C	A	D	D	A	E	A	A
Approach Delay		44.7			18.6			41.4			17.9	
Approach LOS		D			B			D			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117.6 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 93.9%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Future Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	318	87	224	206	0	87	1054	0	331	985	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	811		363	629		267	1285		358	1884	
Arrive On Green	0.23	0.23	0.00	0.08	0.34	0.00	0.36	0.36	0.00	0.28	1.00	0.00
Sat Flow, veh/h	1176	3554	1585	1781	1870	1585	571	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	237	318	0	224	206	0	87	1054	0	331	985	0
Grp Sat Flow(s),veh/h/ln	1176	1777	1585	1781	1870	1585	571	1777	1585	1781	1777	1585
Q Serve(g_s), s	23.4	9.1	0.0	9.5	9.9	0.0	13.8	32.3	0.0	14.3	0.0	0.0
Cycle Q Clear(g_c), s	23.4	9.1	0.0	9.5	9.9	0.0	13.8	32.3	0.0	14.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	811		363	629		267	1285		358	1884	
V/C Ratio(X)	0.72	0.39		0.62	0.33		0.33	0.82		0.92	0.52	
Avail Cap(c_a), veh/h	403	1036		363	733		267	1285		414	1884	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	44.8	39.3	0.0	33.9	29.7	0.0	28.9	34.8	0.0	21.0	0.0	0.0
Incr Delay (d2), s/veh	4.9	0.3	0.0	3.2	0.3	0.0	3.2	6.0	0.0	21.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	7.1	0.0	2.6	7.8	0.0	3.7	20.8	0.0	10.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	39.6	0.0	37.1	30.0	0.0	32.1	40.7	0.0	42.1	0.8	0.0
LnGrp LOS	D	D		D	C		C	D		D	A	
Approach Vol, veh/h		555			430			1141			1316	
Approach Delay, s/veh		43.9			33.7			40.1			11.2	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	20.2	51.4	13.0	35.4		71.6		48.4				
Change Period (Y+Rc), s	3.5	8.0	3.5	* 8		* 8		8.0				
Max Green Setting (Gmax), s	20.5	33.0	9.5	* 35		* 59		47.0				
Max Q Clear Time (g_c+I1), s	16.3	34.3	11.5	25.4		2.0		11.9				
Green Ext Time (p_c), s	0.4	0.0	0.0	2.0		8.3		1.1				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	246	318	87	224	206	402	87	1092	324	353	1024	65
Future Volume (vph)	246	318	87	224	206	402	87	1092	324	353	1024	65
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	25.0	25.0	25.0	11.0	26.0	26.0	26.0	26.0	26.0	9.5	24.0	
Total Split (s)	42.0	42.0	42.0	13.0	55.0	55.0	41.0	41.0	41.0	24.0	65.0	
Total Split (%)	35.0%	35.0%	35.0%	10.8%	45.8%	45.8%	34.2%	34.2%	34.2%	20.0%	54.2%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	4.0	4.0	4.0	4.0	4.0	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	8.0	8.0	8.0	8.0	8.0	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	29.5	29.5	29.5	46.0	41.5	41.5	37.4	37.4	37.4	67.0	64.5	120.0
Actuated g/C Ratio	0.25	0.25	0.25	0.38	0.35	0.35	0.31	0.31	0.31	0.56	0.54	1.00
v/c Ratio	0.86	0.37	0.18	0.56	0.32	0.50	0.54	0.99	0.45	0.92	0.54	0.04
Control Delay	69.1	37.8	4.3	31.3	29.2	4.6	51.3	67.0	5.8	65.0	5.0	0.0
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	69.1	37.8	4.3	31.3	29.2	4.6	51.3	67.0	5.8	65.0	5.0	0.0
LOS	E	D	A	C	C	A	D	E	A	E	A	A
Approach Delay		45.1			17.9			52.9			19.5	
Approach LOS		D			B			D			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117.6 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 34.3

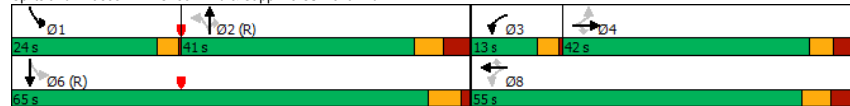
Intersection LOS: C

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	246	318	87	224	206	402	87	1092	324	353	1024	65
Future Volume (veh/h)	246	318	87	224	206	402	87	1092	324	353	1024	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	318	0	224	206	0	87	1092	0	353	1024	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	835		371	642		241	1165		372	1860	
Arrive On Green	0.23	0.23	0.00	0.08	0.34	0.00	0.33	0.33	0.00	0.33	1.00	0.00
Sat Flow, veh/h	1176	3554	1585	1781	1870	1585	551	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	246	318	0	224	206	0	87	1092	0	353	1024	0
Grp Sat Flow(s), veh/h/ln	1176	1777	1585	1781	1870	1585	551	1777	1585	1781	1777	1585
Q Serve(g_s), s	24.3	9.0	0.0	9.5	9.8	0.0	15.1	35.8	0.0	17.9	0.0	0.0
Cycle Q Clear(g_c), s	24.3	9.0	0.0	9.5	9.8	0.0	15.1	35.8	0.0	17.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	835		371	642		241	1165		372	1860	
V/C Ratio(X)	0.73	0.38		0.60	0.32		0.36	0.94		0.95	0.55	
Avail Cap(c_a), veh/h	403	1036		371	733		241	1165		380	1860	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.4	38.6	0.0	33.1	29.1	0.0	32.2	39.1	0.0	24.8	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.3	0.0	2.8	0.3	0.0	4.2	15.1	0.0	33.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.9	7.0	0.0	2.4	7.8	0.0	4.0	24.3	0.0	13.5	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	38.9	0.0	35.9	29.4	0.0	36.4	54.2	0.0	57.9	1.2	0.0
LnGrp LOS	D	D		D	C		D	D		E	A	
Approach Vol, veh/h	564			430			1179			1377		
Approach Delay, s/veh	43.6			32.8			52.9			15.7		
Approach LOS	D			C			D			B		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	23.5	47.3	13.0	36.2		70.8		49.2				
Change Period (Y+Rc), s	3.5	8.0	3.5	* 8		* 8		8.0				
Max Green Setting (Gmax), s	20.5	33.0	9.5	* 35		* 59		47.0				
Max Q Clear Time (g_c+I1), s	19.9	37.8	11.5	26.3		2.0		11.8				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.9		8.8		1.1				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Traffic Volume (vph)	94	112	87	262	156	536	50	879	224	437	1335	181
Future Volume (vph)	94	112	87	262	156	536	50	879	224	437	1335	181
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	44.2	44.2	44.2	15.6	59.8	59.8	44.2	44.2	44.2	26.0	70.2	
Total Split (s)	47.0	47.0	47.0	16.0	63.0	63.0	41.0	41.0	41.0	26.0	67.0	
Total Split (%)	36.2%	36.2%	36.2%	12.3%	48.5%	48.5%	31.5%	31.5%	31.5%	20.0%	51.5%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	2.0	2.0	1.5	1.5	1.5	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	6.0	6.0	5.5	5.5	5.5	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	15.4	15.4	15.4	34.9	32.4	32.4	40.3	40.3	40.3	88.1	85.6	130.0
Actuated g/C Ratio	0.12	0.12	0.12	0.27	0.25	0.25	0.31	0.31	0.31	0.68	0.66	1.00
v/c Ratio	0.65	0.27	0.33	0.75	0.34	0.74	0.42	0.80	0.35	0.68	0.57	0.11
Control Delay	73.9	52.2	14.1	54.8	41.0	15.3	49.9	47.9	6.0	38.7	33.6	0.0
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	73.9	52.2	14.1	54.8	41.0	15.3	49.9	47.9	6.0	38.7	33.6	0.0
LOS	E	D	B	D	D	B	D	D	A	D	C	A
Approach Delay		47.9			30.3			39.8			31.6	
Approach LOS		D			C			D			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 34.6

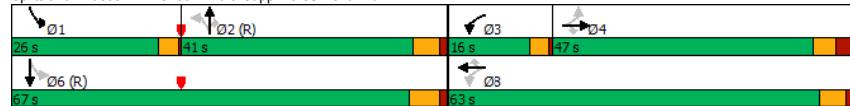
Intersection LOS: C

Intersection Capacity Utilization 90.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
Traffic Volume (veh/h)	94	112	87	262	156	536	50	879	224	437	1335	181
Future Volume (veh/h)	94	112	87	262	156	536	50	879	224	437	1335	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	112	87	262	156	536	50	879	224	437	1335	181
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	345		314	412		261	1784		537	2415	
Arrive On Green	0.10	0.10	0.00	0.10	0.22	0.00	0.50	0.50	0.00	0.30	1.00	0.00
Sat Flow, veh/h	1231	3554	1585	1781	1870	1585	410	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	94	112	0	262	156	0	50	879	0	437	1335	0
Grp Sat Flow(s),veh/h/ln	1231	1777	1585	1781	1870	1585	410	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.7	3.8	0.0	12.5	9.2	0.0	9.0	21.3	0.0	17.1	0.0	0.0
Cycle Q Clear(g_c), s	9.7	3.8	0.0	12.5	9.2	0.0	9.0	21.3	0.0	17.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	345		314	412		261	1784		537	2415	
V/C Ratio(X)	0.54	0.32		0.84	0.38		0.19	0.49		0.81	0.55	
Avail Cap(c_a), veh/h	434	1093		314	820		261	1784		577	2415	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	57.4	54.7	0.0	49.9	43.1	0.0	18.4	21.4	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.5	0.0	17.5	0.6	0.0	1.6	1.0	0.0	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.6	3.1	0.0	6.7	7.7	0.0	1.7	13.6	0.0	5.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	55.2	0.0	67.4	43.7	0.0	20.0	22.4	0.0	13.0	0.1	0.0
LnGrp LOS	E	E		E	D		B	C		B	A	
Approach Vol, veh/h	206			418			929			1772		
Approach Delay, s/veh	57.4			58.5			22.3			3.3		
Approach LOS	E			E			C			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	23.1	71.3	16.0	19.6		94.4		35.6				
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0		6.0		* 7				
Max Green Setting (Gmax), s	22.5	* 36	12.5	40.0		61.0		* 57				
Max Q Clear Time (g_c+I1), s	19.1	23.3	14.5	11.7		2.0		11.2				
Green Ext Time (p_c), s	0.5	5.1	0.0	0.9		13.6		0.9				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	103	112	87	262	156	557	50	916	224	457	1371	190
Future Volume (vph)	103	112	87	262	156	557	50	916	224	457	1371	190
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Free
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		Free
Detector Phase	4	4	4	3	8	8	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	3.0	8.0	8.0	16.0	16.0	16.0	3.0	16.0	
Minimum Split (s)	44.2	44.2	44.2	15.6	59.8	59.8	44.2	44.2	44.2	26.0	70.2	
Total Split (s)	47.0	47.0	47.0	16.0	63.0	63.0	41.0	41.0	41.0	26.0	67.0	
Total Split (%)	36.2%	36.2%	36.2%	12.3%	48.5%	48.5%	31.5%	31.5%	31.5%	20.0%	51.5%	
Yellow Time (s)	3.5	3.5	3.5	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.5	
All-Red Time (s)	3.5	3.5	3.5	0.5	2.0	2.0	1.5	1.5	1.5	0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	3.5	6.0	6.0	5.5	5.5	5.5	3.5	6.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	16.3	16.3	16.3	35.8	33.3	33.3	37.6	37.6	37.6	87.2	84.7	130.0
Actuated g/C Ratio	0.13	0.13	0.13	0.28	0.26	0.26	0.29	0.29	0.29	0.67	0.65	1.00
v/c Ratio	0.67	0.25	0.32	0.73	0.33	0.77	0.47	0.89	0.36	0.69	0.59	0.12
Control Delay	74.1	51.1	13.6	52.4	40.1	17.1	55.4	56.4	6.2	39.6	33.4	0.0
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	74.1	51.1	13.6	52.4	40.1	17.1	55.4	56.4	6.2	39.6	33.4	0.0
LOS	E	D	B	D	D	B	E	E	A	D	C	A
Approach Delay		48.1			30.3			46.9			31.7	
Approach LOS		D			C			D			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 36.5

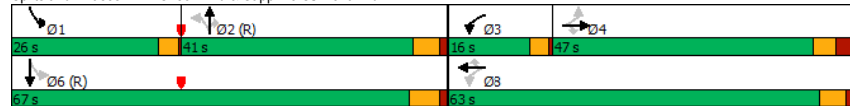
Intersection LOS: D

Intersection Capacity Utilization 91.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

HCM 6th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	103	112	87	262	156	557	50	916	224	457	1371	190
Future Volume (veh/h)	103	112	87	262	156	557	50	916	224	457	1371	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	112	87	262	156	557	50	916	224	457	1371	190
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	372		323	426		247	1718		529	2389	
Arrive On Green	0.10	0.10	0.00	0.10	0.23	0.00	0.48	0.48	0.00	0.32	1.00	0.00
Sat Flow, veh/h	1231	3554	1585	1781	1870	1585	396	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	103	112	0	262	156	0	50	916	0	457	1371	0
Grp Sat Flow(s),veh/h/ln	1231	1777	1585	1781	1870	1585	396	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.6	3.8	0.0	12.5	9.1	0.0	9.7	23.3	0.0	18.7	0.0	0.0
Cycle Q Clear(g_c), s	10.6	3.8	0.0	12.5	9.1	0.0	9.7	23.3	0.0	18.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	372		323	426		247	1718		529	2389	
V/C Ratio(X)	0.56	0.30		0.81	0.37		0.20	0.53		0.86	0.57	
Avail Cap(c_a), veh/h	434	1093		323	820		247	1718		549	2389	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.9	53.8	0.0	48.9	42.3	0.0	19.8	23.4	0.0	13.6	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.5	0.0	14.3	0.5	0.0	1.8	1.2	0.0	13.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1	3.1	0.0	6.1	7.6	0.0	1.8	14.8	0.0	10.1	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	54.3	0.0	63.3	42.8	0.0	21.7	24.5	0.0	26.7	1.0	0.0
LnGrp LOS	E	D		E	D		C	C		C	A	
Approach Vol, veh/h	215			418			966			1828		
Approach Delay, s/veh	56.8			55.6			24.4			7.4		
Approach LOS	E			E			C			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	24.5	68.9	16.0	20.6		93.4		36.6				
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0		6.0		* 7				
Max Green Setting (Gmax), s	22.5	* 36	12.5	40.0		61.0		* 57				
Max Q Clear Time (g_c+I1), s	20.7	25.3	14.5	12.6		2.0		11.1				
Green Ext Time (p_c), s	0.3	4.7	0.0	1.0		14.3		0.9				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	399	463	298	57	152	133	1471	139	120	1027	114
Future Volume (vph)	399	463	298	57	152	133	1471	139	120	1027	114
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	17.0	44.0		14.0	41.0	14.0	48.0		14.0	48.0	
Total Split (%)	14.2%	36.7%		11.7%	34.2%	11.7%	40.0%		11.7%	40.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	47.1	35.2	120.0	37.9	27.6	62.6	51.2	120.0	62.2	51.0	120.0
Actuated g/C Ratio	0.39	0.29	1.00	0.32	0.23	0.52	0.43	1.00	0.52	0.42	1.00
v/c Ratio	1.07	0.85	0.19	0.27	0.64	0.52	0.97	0.09	0.60	0.68	0.07
Control Delay	96.1	54.1	0.3	23.8	42.3	17.2	50.5	0.1	34.4	33.1	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
Total Delay	96.1	54.1	0.3	23.8	42.3	17.2	50.5	0.1	34.4	33.1	0.1
LOS	F	D	A	C	D	B	D	A	C	C	A
Approach Delay		54.7			39.1		43.9			30.2	
Approach LOS		D			D		D			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 42.5

Intersection LOS: D

Intersection Capacity Utilization 101.0%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	399	463	298	57	152	120	133	1471	139	120	1027	114
Future Volume (veh/h)	399	463	298	57	152	120	133	1471	139	120	1027	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	399	463	0	57	152	0	133	1471	0	120	1027	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	505		152	362		308	1740		196	1725	
Arrive On Green	0.11	0.27	0.00	0.04	0.19	0.00	0.05	0.49	0.00	0.05	0.49	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	399	463	0	57	152	0	133	1471	0	120	1027	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.5	28.8	0.0	3.1	8.6	0.0	4.5	43.3	0.0	4.0	25.1	0.0
Cycle Q Clear(g_c), s	13.5	28.8	0.0	3.1	8.6	0.0	4.5	43.3	0.0	4.0	25.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	505		152	362		308	1740		196	1725	
V/C Ratio(X)	0.97	0.92		0.37	0.42		0.43	0.85		0.61	0.60	
Avail Cap(c_a), veh/h	412	592		244	546		368	1740		262	1725	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.00	0.38	0.38	0.00	0.50	0.50	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.1	42.5	0.0	38.5	42.5	0.0	17.2	26.7	0.0	25.0	22.3	0.0
Incr Delay (d2), s/veh	27.6	12.2	0.0	0.6	0.3	0.0	0.5	2.7	0.0	3.1	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	19.8	0.0	2.4	6.0	0.0	3.2	22.7	0.0	3.1	15.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	54.7	0.0	39.1	42.7	0.0	17.7	29.4	0.0	28.1	23.9	0.0
LnGrp LOS	E	D		D	D		B	C		C	C	
Approach Vol, veh/h		862			209			1604			1147	
Approach Delay, s/veh		61.2			41.7			28.4			24.3	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	64.2	7.8	38.4	10.0	63.8	17.0	29.2				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.5	42.5	10.5	38.0	10.5	42.5	13.5	35.0				
Max Q Clear Time (g_c+1t), s	6.0	45.3	5.1	30.8	6.5	27.1	15.5	10.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.6	0.1	6.2	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay

35.3

HCM 6th LOS

D

Notes

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

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	497	494	298	66	170	133	1436	139	120	1064	131
Future Volume (vph)	497	494	298	66	170	133	1436	139	120	1064	131
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	17.0	44.0		14.0	41.0	14.0	48.0		14.0	48.0	
Total Split (%)	14.2%	36.7%		11.7%	34.2%	11.7%	40.0%		11.7%	40.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.4	36.3	120.0	39.6	29.0	61.2	49.9	120.0	60.8	49.7	120.0
Actuated g/C Ratio	0.40	0.30	1.00	0.33	0.24	0.51	0.42	1.00	0.51	0.41	1.00
v/c Ratio	1.33	0.88	0.19	0.33	0.65	0.56	0.98	0.09	0.60	0.73	0.08
Control Delay	193.9	56.2	0.3	24.6	42.7	17.9	49.6	0.1	34.8	35.2	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
Total Delay	193.9	56.2	0.3	24.6	42.7	17.9	49.6	0.1	34.8	35.2	0.1
LOS	F	E	A	C	D	B	D	A	C	D	A
Approach Delay		96.3			39.4		43.1			31.7	
Approach LOS		F			D		D			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 54.3

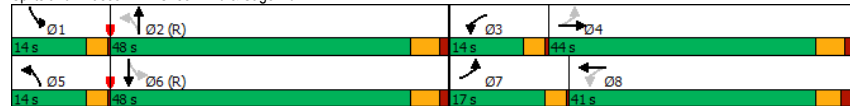
Intersection LOS: D

Intersection Capacity Utilization 106.4%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd



2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	497	494	298	66	170	120	133	1436	139	120	1064	131
Future Volume (veh/h)	497	494	298	66	170	120	133	1436	139	120	1064	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	497	494	0	66	170	0	133	1436	0	120	1064	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	533		158	398		284	1666		192	1652	
Arrive On Green	0.11	0.28	0.00	0.04	0.21	0.00	0.06	0.47	0.00	0.05	0.46	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	497	494	0	66	170	0	133	1436	0	120	1064	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.5	30.8	0.0	3.4	9.4	0.0	4.6	43.2	0.0	4.2	27.4	0.0
Cycle Q Clear(g_c), s	13.5	30.8	0.0	3.4	9.4	0.0	4.6	43.2	0.0	4.2	27.4	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	533		158	398		284	1666		192	1652	
V/C Ratio(X)	1.17	0.93		0.42	0.43		0.47	0.86		0.62	0.64	
Avail Cap(c_a), veh/h	424	592		241	546		341	1666		256	1652	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.7	41.7	0.0	36.9	40.9	0.0	19.1	28.4	0.0	25.8	24.5	0.0
Incr Delay (d2), s/veh	100.3	19.9	0.0	0.2	0.1	0.0	1.2	6.1	0.0	3.3	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	26.6	23.6	0.0	2.1	5.4	0.0	3.4	25.9	0.0	3.3	17.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	141.0	61.6	0.0	37.1	40.9	0.0	20.3	34.5	0.0	29.1	26.5	0.0
LnGrp LOS	F	E		D	D		C	C		C	C	
Approach Vol, veh/h		991			236			1569			1184	
Approach Delay, s/veh		101.4			39.9			33.3			26.7	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	61.8	8.4	40.2	10.2	61.3	17.0	31.6				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.5	42.5	10.5	38.0	10.5	42.5	13.5	35.0				
Max Q Clear Time (g_c+I1), s	6.2	45.2	5.4	32.8	6.6	29.4	15.5	11.4				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.4	0.1	5.8	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

Notes

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

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩↩	↩	↩	↩↩	↩
Traffic Volume (vph)	497	494	298	66	170	133	1436	139	120	1064	131
Future Volume (vph)	497	494	298	66	170	133	1436	139	120	1064	131
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	5.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	32.0	46.4	12.3	9.6	24.0	12.3	53.4		10.6	51.7	
Total Split (%)	26.7%	38.7%	10.3%	8.0%	20.0%	10.3%	44.5%		8.8%	43.1%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	47.6	37.4	53.0	21.7	13.1	62.1	50.6	120.0	61.6	50.3	120.0
Actuated g/C Ratio	0.40	0.31	0.44	0.18	0.11	0.52	0.42	1.00	0.51	0.42	1.00
v/c Ratio	0.96	0.45	0.40	0.33	0.62	0.55	0.96	0.09	0.59	0.72	0.08
Control Delay	62.9	33.7	21.4	29.8	35.5	16.9	48.2	0.1	33.6	32.1	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
Total Delay	62.9	33.7	21.4	29.8	35.5	16.9	48.2	0.1	33.6	32.1	0.1
LOS	E	C	C	C	D	B	D	A	C	C	A
Approach Delay		42.1			34.4		41.9			29.1	
Approach LOS		D			C		D			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69.6 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 37.8 Intersection LOS: D

Intersection Capacity Utilization 100.1% ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
10.6 s	53.4 s	9.6 s	46.4 s
Ø5	Ø6 (R)	Ø7	Ø8
12.3 s	51.7 s	32 s	24 s

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035AB_MIT.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩↩	↩	↩	↩↩	↩
Traffic Volume (veh/h)	497	494	298	66	170	120	133	1436	139	120	1064	131
Future Volume (veh/h)	497	494	298	66	170	120	133	1436	139	120	1064	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	497	494	298	66	170	0	133	1436	0	120	1064	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	550	1043	554	207	355		276	1623		185	1607	
Arrive On Green	0.24	0.29	0.29	0.04	0.10	0.00	0.06	0.46	0.00	0.05	0.45	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	497	494	298	66	170	0	133	1436	0	120	1064	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	28.5	13.7	18.1	4.0	5.4	0.0	4.8	44.2	0.0	4.3	28.1	0.0
Cycle Q Clear(g_c), s	28.5	13.7	18.1	4.0	5.4	0.0	4.8	44.2	0.0	4.3	28.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	550	1043	554	207	355		276	1623		185	1607	
V/C Ratio(X)	0.90	0.47	0.54	0.32	0.48		0.48	0.88		0.65	0.66	
Avail Cap(c_a), veh/h	550	1196	623	219	533		306	1623		198	1607	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.5	34.8	31.3	45.6	51.0	0.0	20.1	29.7	0.0	26.7	25.7	0.0
Incr Delay (d2), s/veh	18.4	0.3	0.8	0.9	1.0	0.0	1.3	7.5	0.0	6.6	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.9	9.9	11.3	3.2	4.4	0.0	3.5	26.8	0.0	3.7	17.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	35.1	32.1	46.5	52.0	0.0	21.4	37.2	0.0	33.2	27.9	0.0
LnGrp LOS	D	D	C	D	D		C	D		C	C	
Approach Vol, veh/h	1289			236			1569			1184		
Approach Delay, s/veh	41.7			50.5			35.8			28.4		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	60.3	8.8	41.2	10.2	59.8	32.0	18.0				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	7.1	47.9	6.1	40.4	8.8	46.2	28.5	18.0				
Max Q Clear Time (g_c+I1), s	6.3	46.2	6.0	20.1	6.8	30.1	30.5	7.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	4.2	0.1	6.6	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay 36.4

HCM 6th LOS D

Notes

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

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035AB_MIT.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	178	190	349	190	292	279	1198	89	133	1629	228
Future Volume (vph)	178	190	349	190	292	279	1198	89	133	1629	228
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	15.5	45.5		15.5	45.5	15.5	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	45.5	31.3	130.0	45.8	31.4	73.3	58.3	130.0	59.9	47.8	130.0
Actuated g/C Ratio	0.35	0.24	1.00	0.35	0.24	0.56	0.45	1.00	0.46	0.37	1.00
v/c Ratio	0.69	0.42	0.22	0.46	0.84	0.83	0.76	0.06	0.59	1.25	0.14
Control Delay	47.1	49.1	0.5	30.9	62.3	61.1	38.4	0.0	27.3	155.8	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	47.1	49.1	0.5	30.9	62.3	61.1	38.4	0.0	27.3	155.8	0.2
LOS	D	D	A	C	E	E	D	A	C	F	A
Approach Delay		24.9			51.7		40.3			129.4	
Approach LOS		C			D		D			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58.5 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 76.0

Intersection LOS: E

Intersection Capacity Utilization 107.0%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
14.3 s	14.6 s	15.6 s	45.5 s
Ø5	Ø6 (R)	Ø7	Ø8
15.6 s	15.3 s	15.5 s	45.5 s

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	178	190	349	190	292	82	279	1198	89	133	1629	228
Future Volume (veh/h)	178	190	349	190	292	82	279	1198	89	133	1629	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	190	0	190	292	0	279	1198	0	133	1629	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	333		323	334		241	1899		288	1754	
Arrive On Green	0.09	0.18	0.00	0.09	0.18	0.00	0.09	0.53	0.00	0.05	0.49	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	178	190	0	190	292	0	279	1198	0	133	1629	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.5	12.1	0.0	11.3	19.8	0.0	12.1	30.8	0.0	4.8	55.7	0.0
Cycle Q Clear(g_c), s	10.5	12.1	0.0	11.3	19.8	0.0	12.1	30.8	0.0	4.8	55.7	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	333		323	334		241	1899		288	1754	
V/C Ratio(X)	0.72	0.57		0.59	0.87		1.16	0.63		0.46	0.93	
Avail Cap(c_a), veh/h	249	568		323	568		241	1899		342	1754	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.00	0.74	0.74	0.00	0.55	0.55	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.2	48.9	0.0	39.3	52.0	0.0	40.5	21.3	0.0	18.0	30.8	0.0
Incr Delay (d2), s/veh	8.2	1.3	0.0	2.1	5.9	0.0	93.3	0.9	0.0	1.2	10.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	9.4	0.0	8.3	14.1	0.0	19.7	16.7	0.0	3.5	33.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	50.2	0.0	41.4	57.9	0.0	133.8	22.2	0.0	19.1	40.9	0.0
LnGrp LOS	D	D		D	E		F	C		B	D	
Approach Vol, veh/h		368			482			1477			1762	
Approach Delay, s/veh		49.4			51.4			43.2			39.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	75.0	15.6	29.1	15.6	69.7	15.5	29.2				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5				
Max Q Clear Time (g_c+1t), s	6.8	32.8	13.3	14.1	14.1	57.7	12.5	21.8				
Green Ext Time (p_c), s	0.1	7.5	0.0	1.0	0.0	0.0	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay 43.1

HCM 6th LOS D

Notes

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

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	262	218	349	201	313	279	1172	89	133	1677	248
Future Volume (vph)	262	218	349	201	313	279	1172	89	133	1677	248
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0		9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	15.5	45.5		15.5	45.5	15.5	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	47.1	32.6	130.0	46.9	32.5	71.7	56.9	130.0	59.9	47.8	130.0
Actuated g/C Ratio	0.36	0.25	1.00	0.36	0.25	0.55	0.44	1.00	0.46	0.37	1.00
v/c Ratio	1.04	0.47	0.22	0.50	0.86	0.87	0.76	0.06	0.59	1.29	0.16
Control Delay	101.7	48.3	0.3	31.1	63.6	65.0	43.6	0.0	27.6	171.1	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	101.7	48.3	0.3	31.1	63.6	65.0	43.6	0.0	27.6	171.1	0.2
LOS	F	D	A	C	E	E	D	A	C	F	A
Approach Delay		45.0			52.6		45.0			141.2	
Approach LOS		D			D		D			F	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58.5 (45%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.29

Intersection Signal Delay: 85.3

Intersection LOS: F

Intersection Capacity Utilization 114.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
14.3 s	14.6 s	15.6 s	45.5 s
Ø5	Ø6 (R)	Ø7	Ø8
15.6 s	15.3 s	15.5 s	45.5 s

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	262	218	349	201	313	82	279	1172	89	133	1677	248
Future Volume (veh/h)	262	218	349	201	313	82	279	1172	89	133	1677	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	262	218	0	201	313	0	279	1172	0	133	1677	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	354		317	356		227	1855		287	1713	
Arrive On Green	0.09	0.19	0.00	0.09	0.19	0.00	0.09	0.52	0.00	0.05	0.48	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	262	218	0	201	313	0	279	1172	0	133	1677	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	13.9	0.0	11.9	21.2	0.0	12.1	30.6	0.0	4.9	60.2	0.0
Cycle Q Clear(g_c), s	12.0	13.9	0.0	11.9	21.2	0.0	12.1	30.6	0.0	4.9	60.2	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	354		317	356		227	1855		287	1713	
V/C Ratio(X)	1.05	0.62		0.63	0.88		1.23	0.63		0.46	0.98	
Avail Cap(c_a), veh/h	249	568		317	568		227	1855		341	1713	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.61	0.61	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.6	48.3	0.0	38.6	51.2	0.0	43.0	22.2	0.0	18.6	33.0	0.0
Incr Delay (d2), s/veh	71.4	1.7	0.0	2.5	6.0	0.0	135.7	1.6	0.0	1.2	17.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.9	10.8	0.0	8.3	14.6	0.0	24.2	18.4	0.0	3.6	37.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.0	50.1	0.0	41.1	57.2	0.0	178.6	23.8	0.0	19.8	50.3	0.0
LnGrp LOS	F	D		D	E		F	C		B	D	
Approach Vol, veh/h	480			514			1451			1810		
Approach Delay, s/veh	86.0			50.9			53.6			48.0		
Approach LOS	F			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	73.4	15.6	30.6	15.6	68.2	15.5	30.7				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5				
Max Q Clear Time (g_c+I1), s	6.9	32.6	13.9	15.9	14.1	62.2	14.0	23.2				
Green Ext Time (p_c), s	0.1	7.4	0.0	1.1	0.0	0.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

Notes

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

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

Timings
2: Unser Blvd & Sage Rd

Tierra West LLC
12/09/2022

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (vph)	262	218	349	201	313	279	1172	89	133	1677	248
Future Volume (vph)	262	218	349	201	313	279	1172	89	133	1677	248
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	23.5		9.5	23.5	
Total Split (s)	17.2	24.2	20.0	17.0	24.0	20.0	75.2		13.6	68.8	
Total Split (%)	13.2%	18.6%	15.4%	13.1%	18.5%	15.4%	57.8%		10.5%	52.9%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	34.1	17.9	41.1	32.9	17.3	86.0	71.7	130.0	74.1	63.3	130.0
Actuated g/C Ratio	0.26	0.14	0.32	0.25	0.13	0.66	0.55	1.00	0.57	0.49	1.00
v/c Ratio	1.01	0.45	0.65	0.59	0.83	0.95	0.60	0.06	0.47	0.97	0.16
Control Delay	89.6	41.4	28.3	45.6	67.8	79.6	21.5	0.1	14.5	49.0	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	89.6	41.4	28.3	45.6	67.8	79.6	21.5	0.1	14.5	49.0	0.2
LOS	F	D	C	D	E	E	C	A	B	D	A
Approach Delay		51.1			60.3		30.8			40.9	
Approach LOS		D			E		C			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 41.8

Intersection LOS: D

Intersection Capacity Utilization 103.8%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Unser Blvd & Sage Rd

Ø1	Ø2 (R)	Ø3	Ø4
13.6 s	75.2 s	17 s	24.2 s
Ø5	Ø6 (R)	Ø7	Ø8
20 s	68.8 s	17.2 s	24 s

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PB_MIT.syn

HCM 6th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

Tierra West LLC
12/09/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Lane Configurations	↰	↱	↱	↰	↰	↰	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	262	218	349	201	313	82	279	1172	89	133	1677	248
Future Volume (veh/h)	262	218	349	201	313	82	279	1172	89	133	1677	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	262	218	349	201	313	0	279	1172	0	133	1677	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	498	423	311	492		290	1994		315	1730	
Arrive On Green	0.11	0.14	0.14	0.10	0.14	0.00	0.13	0.56	0.00	0.05	0.49	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	262	218	349	201	313	0	279	1172	0	133	1677	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.7	7.3	18.2	12.5	10.8	0.0	15.6	28.1	0.0	4.8	59.6	0.0
Cycle Q Clear(g_c), s	13.7	7.3	18.2	12.5	10.8	0.0	15.6	28.1	0.0	4.8	59.6	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	498	423	311	492		290	1994		315	1730	
V/C Ratio(X)	0.87	0.44	0.82	0.65	0.64		0.96	0.59		0.42	0.97	
Avail Cap(c_a), veh/h	302	498	423	311	492		290	1994		359	1730	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.4	51.2	44.8	42.3	52.9	0.0	43.5	18.7	0.0	16.7	32.4	0.0
Incr Delay (d2), s/veh	22.5	0.6	12.5	4.6	2.7	0.0	42.6	1.3	0.0	0.9	15.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	5.9	17.6	9.9	8.7	0.0	18.1	16.8	0.0	3.6	36.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	51.8	57.3	46.9	55.6	0.0	86.1	20.0	0.0	17.6	47.9	0.0
LnGrp LOS	E	D	E	D	E		F	B		B	D	
Approach Vol, veh/h		829			514			1451			1810	
Approach Delay, s/veh		59.5			52.2			32.7			45.6	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	78.4	17.0	24.2	20.0	68.8	17.2	24.0				
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0				
Max Green Setting (Gmax), s	10.1	69.7	13.5	18.2	16.5	63.3	13.7	18.0				
Max Q Clear Time (g_c+I1), s	6.8	30.1	14.5	20.2	17.6	61.6	15.7	12.8				
Green Ext Time (p_c), s	0.1	10.3	0.0	0.0	0.0	1.5	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

Notes

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

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

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PB_MIT.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	132	163	94	50	119	88	44	1346	38	641	82
Future Volume (vph)	132	163	94	50	119	88	44	1346	38	641	82
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0	23.0	10.0	23.0	10.0	24.5	24.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	14.0	62.0	14.0	62.0	62.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	11.7%	51.7%	11.7%	51.7%	51.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0	5.0	4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max	C-Max
Act Effct Green (s)	18.5	18.5	18.5	20.0	20.0	20.0	87.9	83.3	86.8	79.7	79.7
Actuated g/C Ratio	0.15	0.15	0.15	0.17	0.17	0.17	0.73	0.69	0.72	0.66	0.66
v/c Ratio	0.68	0.30	0.29	0.25	0.20	0.26	0.08	0.57	0.14	0.27	0.08
Control Delay	64.5	45.1	10.3	44.3	42.3	9.9	8.1	16.2	6.0	9.8	2.5
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	64.5	45.1	10.3	44.3	42.3	9.9	8.1	16.2	6.0	9.8	2.5
LOS	E	D	B	D	D	A	A	B	A	A	A
Approach Delay		43.3			31.6			15.9		8.8	
Approach LOS		D			C			B		A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.2

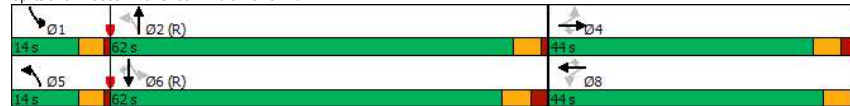
Intersection LOS: B

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd



2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	132	163	94	50	119	88	44	1346	50	38	641	82
Future Volume (veh/h)	132	163	94	50	119	88	44	1346	50	38	641	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	163	0	50	119	0	44	1346	0	38	641	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	560		203	560		572	2412		367	2407	
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.00	0.04	1.00	0.00	0.02	0.68	0.00
Sat Flow, veh/h	1273	3554	1585	1223	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	50	119	0	44	1346	0	38	641	0
Grp Sat Flow(s),veh/h/ln	1273	1777	1585	1223	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	12.1	4.9	0.0	4.5	3.5	0.0	0.9	0.0	0.0	0.8	8.5	0.0
Cycle Q Clear(g_c), s	15.6	4.9	0.0	9.4	3.5	0.0	0.9	0.0	0.0	0.8	8.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	560		203	560		572	2412		367	2407	
V/C Ratio(X)	0.59	0.29		0.25	0.21		0.08	0.56		0.10	0.27	
Avail Cap(c_a), veh/h	421	1111		408	1155		679	2412		476	2407	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.9	44.6	0.0	48.8	44.1	0.0	5.9	0.0	0.0	5.7	7.6	0.0
Incr Delay (d2), s/veh	2.5	0.3	0.0	0.6	0.2	0.0	0.1	0.9	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	3.9	0.0	2.5	2.8	0.0	0.6	0.6	0.0	0.5	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	44.9	0.0	49.4	44.2	0.0	5.9	0.9	0.0	5.8	7.9	0.0
LnGrp LOS	D	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			169			1390			679	
Approach Delay, s/veh		48.7			45.8			1.1			7.8	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	87.9		25.4	6.8	87.8		25.4				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.5	* 57		37.5	9.5	55.5		* 39				
Max Q Clear Time (g_c+I1), s	2.8	2.0		17.6	2.9	10.5		11.4				
Green Ext Time (p_c), s	0.0	13.7		1.3	0.0	4.6		0.8				

Intersection Summary

HCM 6th Ctrl Delay 11.4

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↰	↱	↱
Traffic Volume (vph)	132	163	107	55	119	88	57	1390	38	675	82
Future Volume (vph)	132	163	107	55	119	88	57	1390	38	675	82
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0	23.0	10.0	23.0	10.0	24.5	24.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	14.0	62.0	14.0	62.0	62.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	11.7%	51.7%	11.7%	51.7%	51.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0	5.0	4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	C-Max	C-Max
Act Effct Green (s)	18.5	18.5	18.5	20.0	20.0	20.0	88.1	83.3	86.5	79.4	79.4
Actuated g/C Ratio	0.15	0.15	0.15	0.17	0.17	0.17	0.73	0.69	0.72	0.66	0.66
v/c Ratio	0.68	0.30	0.32	0.27	0.20	0.26	0.10	0.59	0.15	0.29	0.08
Control Delay	64.5	45.1	10.1	45.0	42.3	9.9	7.8	16.5	6.2	10.1	2.5
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	64.5	45.1	10.1	45.0	42.3	9.9	7.8	16.5	6.2	10.1	2.5
LOS	E	D	B	D	D	A	A	B	A	B	A
Approach Delay		42.1			32.0			16.2		9.1	
Approach LOS		D			C			B		A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.2

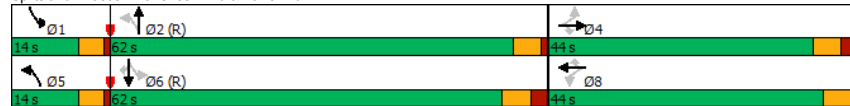
Intersection LOS: B

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd



2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱	↰	↱	↱
Traffic Volume (veh/h)	132	163	107	55	119	88	57	1390	55	38	675	82
Future Volume (veh/h)	132	163	107	55	119	88	57	1390	55	38	675	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	163	0	55	119	0	57	1390	0	38	675	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	560		203	560		557	2412		354	2394	
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.00	0.05	1.00	0.00	0.02	0.67	0.00
Sat Flow, veh/h	1273	3554	1585	1223	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	55	119	0	57	1390	0	38	675	0
Grp Sat Flow(s), veh/h/ln	1273	1777	1585	1223	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	12.1	4.9	0.0	5.0	3.5	0.0	1.2	0.0	0.0	0.8	9.2	0.0
Cycle Q Clear(g_c), s	15.6	4.9	0.0	9.8	3.5	0.0	1.2	0.0	0.0	0.8	9.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	560		203	560		557	2412		354	2394	
V/C Ratio(X)	0.59	0.29		0.27	0.21		0.10	0.58		0.11	0.28	
Avail Cap(c_a), veh/h	421	1111		408	1155		657	2412		463	2394	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.9	44.6	0.0	49.0	44.1	0.0	5.9	0.0	0.0	5.8	7.9	0.0
Incr Delay (d2), s/veh	2.5	0.3	0.0	0.7	0.2	0.0	0.1	1.0	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	3.9	0.0	2.8	2.8	0.0	0.7	0.6	0.0	0.5	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	44.9	0.0	49.7	44.2	0.0	6.0	1.0	0.0	6.0	8.2	0.0
LnGrp LOS	D	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			174			1447			713	
Approach Delay, s/veh		48.7			46.0			1.2			8.1	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	87.9		25.4	7.3	87.3		25.4				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.5	* 57		37.5	9.5	55.5		* 39				
Max Q Clear Time (g_c+I1), s	2.8	2.0		17.6	3.2	11.2		11.8				
Green Ext Time (p_c), s	0.0	14.5		1.3	0.0	4.9		0.9				

Intersection Summary

HCM 6th Ctrl Delay

11.4

HCM 6th LOS

B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	88	163	138	75	371	107	189	1258	69	1798	182
Future Volume (vph)	88	163	138	75	371	107	189	1258	69	1798	182
Turn Type	Perm	NA	Perm	Perm	NA	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8			2		6		6
Detector Phase	4	4	4	8	8		5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0		10.0	23.0	10.0	24.5	24.5
Total Split (s)	36.0	36.0	36.0	43.2	43.2		14.4	62.4	14.4	62.4	62.4
Total Split (%)	30.0%	30.0%	30.0%	36.0%	36.0%		12.0%	52.0%	12.0%	52.0%	52.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0		1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0		4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.6	18.6	18.6	20.1	20.1	0.0	90.4	80.5	78.5	69.6	69.6
Actuated g/C Ratio	0.16	0.16	0.16	0.17	0.17	0.00	0.75	0.67	0.65	0.58	0.58
v/c Ratio	0.94	0.30	0.38	0.37	0.62	0.81	0.69	0.55	0.23	0.88	0.19
Control Delay	126.1	44.8	9.6	47.7	50.4	45.7	40.2	12.9	7.7	29.2	6.5
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	126.1	44.8	9.6	47.7	50.4	45.7	40.2	12.9	7.7	29.2	6.5
LOS	F	D	A	D	D	D	D	B	A	C	A
Approach Delay		50.7			49.2			16.4		26.5	
Approach LOS		D			D			B		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 28.0

Intersection LOS: C

Intersection Capacity Utilization 99.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd

Ø1	Ø2 (R)	Ø4
14.4 s	62.4 s	36 s
Ø5	Ø6 (R)	Ø8
14.4 s	62.4 s	43.2 s

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	88	163	138	75	371	107	189	1258	44	69	1798	182
Future Volume (veh/h)	88	163	138	75	371	107	189	1258	44	69	1798	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	163	0	75	371	0	189	1258	0	69	1798	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	712		258	712		217	2220		297	2101	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.06	0.62	0.00	0.03	0.59	0.00
Sat Flow, veh/h	1011	3554	1585	1223	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	75	371	0	189	1258	0	69	1798	0
Grp Sat Flow(s),veh/h/ln	1011	1777	1585	1223	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	10.2	4.6	0.0	6.6	11.2	0.0	5.4	24.7	0.0	1.8	50.2	0.0
Cycle Q Clear(g_c), s	21.4	4.6	0.0	11.2	11.2	0.0	5.4	24.7	0.0	1.8	50.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	712		258	712		217	2220		297	2101	
V/C Ratio(X)	0.52	0.23		0.29	0.52		0.87	0.57		0.23	0.86	
Avail Cap(c_a), veh/h	214	874		402	1131		252	2220		392	2101	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.4	40.2	0.0	44.9	42.8	0.0	29.0	13.1	0.0	11.1	20.3	0.0
Incr Delay (d2), s/veh	2.5	0.2	0.0	0.6	0.6	0.0	24.1	1.1	0.0	0.4	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	3.6	0.0	3.6	8.6	0.0	8.1	14.2	0.0	1.3	27.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	40.4	0.0	45.5	43.4	0.0	53.1	14.1	0.0	11.5	25.0	0.0
LnGrp LOS	D	D		D	D		D	B		B	C	
Approach Vol, veh/h		251			446			1447			1867	
Approach Delay, s/veh		45.5			43.8			19.2			24.5	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	81.5		30.5	12.0	77.4		30.5				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.9	* 57		29.5	9.9	55.9		* 38				
Max Q Clear Time (g_c+I1), s	3.8	26.7		23.4	7.4	52.2		13.2				
Green Ext Time (p_c), s	0.1	10.7		0.6	0.1	3.1		2.6				

Intersection Summary

HCM 6th Ctrl Delay

26.1

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

Timings
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	88	163	151	80	371	107	201	1298	69	1847	182
Future Volume (vph)	88	163	151	80	371	107	201	1298	69	1847	182
Turn Type	Perm	NA	Perm	Perm	NA	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8			2		6		6
Detector Phase	4	4	4	8	8		5	2	1	6	6
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		3.0	12.0	3.0	12.0	12.0
Minimum Split (s)	24.5	24.5	24.5	23.0	23.0		10.0	23.0	10.0	24.5	24.5
Total Split (s)	36.0	36.0	36.0	43.2	43.2		14.4	62.4	14.4	62.4	62.4
Total Split (%)	30.0%	30.0%	30.0%	36.0%	36.0%		12.0%	52.0%	12.0%	52.0%	52.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0	3.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	1.0		1.0	1.0	1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	5.0		4.5	5.0	4.5	6.5	6.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.6	18.6	18.6	20.1	20.1	0.0	90.4	80.4	77.2	68.2	68.2
Actuated g/C Ratio	0.16	0.16	0.16	0.17	0.17	0.00	0.75	0.67	0.64	0.57	0.57
v/c Ratio	0.94	0.30	0.40	0.39	0.62	0.81	0.68	0.57	0.24	0.92	0.19
Control Delay	126.1	44.8	9.5	48.5	50.4	45.7	39.1	13.4	8.0	33.5	6.9
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	126.1	44.8	9.5	48.5	50.4	45.7	39.1	13.4	8.0	33.5	6.9
LOS	F	D	A	D	D	D	D	B	A	C	A
Approach Delay		49.3			49.3			16.8		30.3	
Approach LOS		D			D			B		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 74.4 (62%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 29.7

Intersection LOS: C

Intersection Capacity Utilization 101.2%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 3: Unser Blvd & Tower Rd

Ø1	Ø2 (R)	Ø4
14.4 s	62.4 s	36 s
Ø5	Ø6 (R)	Ø8
14.4 s	62.4 s	43.2 s

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

HCM 6th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (veh/h)	88	163	151	80	371	107	201	1298	49	69	1847	182
Future Volume (veh/h)	88	163	151	80	371	107	201	1298	49	69	1847	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	163	0	80	371	0	201	1298	0	69	1847	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	712		258	712		228	2218		286	2048	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.08	0.62	0.00	0.03	0.58	0.00
Sat Flow, veh/h	1011	3554	1585	1223	3554	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	80	371	0	201	1298	0	69	1847	0
Grp Sat Flow(s), veh/h/ln	1011	1777	1585	1223	1777	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	10.2	4.6	0.0	7.0	11.2	0.0	7.3	26.0	0.0	1.9	55.0	0.0
Cycle Q Clear(g_c), s	21.4	4.6	0.0	11.7	11.2	0.0	7.3	26.0	0.0	1.9	55.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	712		258	712		228	2218		286	2048	
V/C Ratio(X)	0.52	0.23		0.31	0.52		0.88	0.59		0.24	0.90	
Avail Cap(c_a), veh/h	214	874		402	1131		236	2218		380	2048	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.4	40.2	0.0	45.1	42.8	0.0	34.2	13.4	0.0	11.7	22.4	0.0
Incr Delay (d2), s/veh	2.5	0.2	0.0	0.7	0.6	0.0	29.3	1.1	0.0	0.4	7.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	3.6	0.0	3.9	8.6	0.0	12.2	14.9	0.0	1.3	30.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	40.4	0.0	45.8	43.4	0.0	63.5	14.5	0.0	12.2	29.4	0.0
LnGrp LOS	D	D		D	D		E	B		B	C	
Approach Vol, veh/h		251			451			1499			1916	
Approach Delay, s/veh		45.5			43.8			21.1			28.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	81.4		30.5	13.8	75.6		30.5				
Change Period (Y+Rc), s	4.5	* 6.5		6.5	4.5	6.5		* 6.5				
Max Green Setting (Gmax), s	9.9	* 57		29.5	9.9	55.9		* 38				
Max Q Clear Time (g_c+I1), s	3.9	28.0		23.4	9.3	57.0		13.7				
Green Ext Time (p_c), s	0.1	11.0		0.6	0.0	0.0		2.7				

Intersection Summary

HCM 6th Ctrl Delay

28.6

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	281	224	75	51	145	182	23	1192	19	61	655	75
Future Volume (vph)	281	224	75	51	145	182	23	1192	19	61	655	75
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	21.9	25.9	25.9
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	29.9%	35.4%	35.4%	29.9%	35.4%	35.4%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.5	18.5		18.5	18.5		28.5	20.6	20.6	30.6	27.9	27.9
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.45	0.32	0.32	0.48	0.44	0.44
v/c Ratio	1.30	0.14		1.26	0.31		0.04	1.05	0.03	0.12	0.42	0.10
Control Delay	177.9	1.7		186.6	5.7		7.4	66.4	0.1	8.1	14.7	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	177.9	1.7		186.6	5.7		7.4	66.4	0.1	8.1	14.7	0.2
LOS	F	A		F	A		A	E	A	A	B	A
Approach Delay	155.1			99.5				64.3			12.8	
Approach LOS	F			F				E			B	

Intersection Summary

Cycle Length: 73.2

Actuated Cycle Length: 63.8

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 72.7

Intersection LOS: E

Intersection Capacity Utilization 105.4%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø4
21.9 s	25.9 s	25.4 s
Ø5	Ø6	Ø8
21.9 s	25.9 s	25.4 s

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	281	224	75	51	145	182	23	1192	19	61	655	75
Future Volume (veh/h)	281	224	75	51	145	182	23	1192	19	61	655	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	281	224	75	51	145	182	23	1192	19	61	655	75
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	0	423	67	147	423	411	1054	470	377	1316	587
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.08	0.30	0.30	0.15	0.37	0.37
Sat Flow, veh/h	0	0	1585	0	552	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	505	0	75	196	0	182	23	1192	19	61	655	75
Grp Sat Flow(s),veh/h/ln	0	0	1585	552	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.5	0.0	0.0	6.4	0.6	20.0	0.6	1.3	9.6	2.1
Cycle Q Clear(g_c), s	18.0	0.0	2.5	18.0	0.0	6.4	0.6	20.0	0.6	1.3	9.6	2.1
Prop In Lane	0.56		1.00	0.26		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	0	423	215	0	423	411	1054	470	377	1316	587
V/C Ratio(X)	6.08	0.00	0.18	0.91	0.00	0.43	0.06	1.13	0.04	0.16	0.50	0.13
Avail Cap(c_a), veh/h	83	0	423	215	0	423	695	1054	470	530	1316	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	19.0	22.2	0.0	20.5	13.5	23.7	16.9	13.3	16.4	14.0
Incr Delay (d2), s/veh	2309.8	0.0	0.2	38.5	0.0	0.7	0.1	71.0	0.2	0.2	1.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	90.6	0.0	1.5	8.1	0.0	4.1	0.4	26.3	0.4	0.8	6.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2343.5	0.0	19.2	60.6	0.0	21.2	13.6	94.7	17.0	13.5	17.7	14.5
LnGrp LOS	F	A	B	E	A	C	B	F	B	B	B	B
Approach Vol, veh/h	580			378			1234				791	
Approach Delay, s/veh	2042.9			41.6			92.0				17.1	
Approach LOS	F			D			F				B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	25.9		25.4	11.1	30.9		25.4				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	16.0	20.0		18.0	16.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	3.3	22.0		20.0	2.6	11.6		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 445.1

HCM 6th LOS F

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	348	245	81	99	191	254	27	1269	19	61	658	89
Future Volume (vph)	348	245	81	99	191	254	27	1269	19	61	658	89
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	25.4	25.4	25.4	25.4	25.4	25.4	21.9	25.9	25.9	21.9	25.9	25.9
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	29.9%	35.4%	35.4%	29.9%	35.4%	35.4%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.5	18.5		18.5	18.5	18.5	28.5	20.6	20.6	29.5	24.2	24.2
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.45	0.32	0.32	0.46	0.38	0.38
v/c Ratio	1.85	0.15		3.72	0.40	0.05	1.11	0.03	0.12	0.49	0.13	
Control Delay	417.7	2.2		1271.5	5.5	7.5	89.8	0.1	8.2	18.7	1.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	417.7	2.2		1271.5	5.5	7.5	89.8	0.1	8.2	18.7	1.3	
LOS	F	A		F	A	A	F	A	A	B	A	
Approach Delay	367.8			680.4			86.8			16.0		
Approach LOS	F			F			F			B		

Intersection Summary

Cycle Length: 73.2

Actuated Cycle Length: 63.8

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 3.72

Intersection Signal Delay: 223.0

Intersection LOS: F

Intersection Capacity Utilization 115.6%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø4
21.9 s	25.9 s	25.4 s
Ø5	Ø6	Ø8
21.9 s	25.9 s	25.4 s

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	348	245	81	99	191	254	27	1269	19	61	658	89
Future Volume (veh/h)	348	245	81	99	191	254	27	1269	19	61	658	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	348	245	81	99	191	254	27	1269	19	61	658	89
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	0	423	72	71	423	417	1054	470	377	1279	570
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.30	0.30	0.15	0.36	0.36
Sat Flow, veh/h	0	0	1585	0	266	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	593	0	81	290	0	254	27	1269	19	61	658	89
Grp Sat Flow(s),veh/h/ln	0	0	1585	266	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.7	0.0	0.0	9.4	0.6	20.0	0.6	1.3	9.8	2.6
Cycle Q Clear(g_c), s	18.0	0.0	2.7	18.0	0.0	9.4	0.6	20.0	0.6	1.3	9.8	2.6
Prop In Lane	0.59		1.00	0.34		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	0	423	143	0	423	417	1054	470	377	1279	570
V/C Ratio(X)	7.00	0.00	0.19	2.03	0.00	0.60	0.06	1.20	0.04	0.16	0.51	0.16
Avail Cap(c_a), veh/h	85	0	423	143	0	423	683	1054	470	530	1279	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	19.1	25.4	0.0	21.6	13.2	23.7	16.9	13.5	16.9	14.6
Incr Delay (d2), s/veh	2723.6	0.0	0.2	488.4	0.0	2.4	0.1	100.8	0.2	0.2	1.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	107.3	0.0	1.7	37.4	0.0	6.3	0.4	33.0	0.4	0.8	6.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2757.3	0.0	19.3	513.8	0.0	23.9	13.2	124.5	17.0	13.7	18.4	15.2
LnGrp LOS	F	A	B	F	A	C	B	F	B	B	B	B
Approach Vol, veh/h	674			544			1315				808	
Approach Delay, s/veh	2428.3			285.1			120.7				17.7	
Approach LOS	F			F			F				B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	25.9		25.4	11.9	30.2		25.4				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	16.0	20.0		18.0	16.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	3.3	22.0		20.0	2.6	11.8		20.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 588.1

HCM 6th LOS F

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	65	75	5	103	299	224	94	968	201	103	888	126
Future Volume (vph)	65	75	5	103	299	224	94	968	201	103	888	126
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	17.4	17.4	17.4	17.4	17.4	17.4	20.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	24.2	24.2		24.2	24.2		41.2	30.1	30.1	41.2	30.1	30.1
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.49	0.36	0.36	0.49	0.36	0.36
v/c Ratio	0.63	0.01		0.86	0.39		0.22	0.76	0.29	0.25	0.70	0.19
Control Delay	41.7	0.0		48.4	10.7		11.3	31.2	4.8	11.8	29.1	5.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	0.0		48.4	10.7		11.3	31.2	4.8	11.8	29.1	5.3
LOS	D	A		D	B		B	C	A	B	C	A
Approach Delay	40.3			34.9			25.5			24.8		
Approach LOS	D			C			C			C		

Intersection Summary

Cycle Length: 90.9

Actuated Cycle Length: 83.6

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 27.8

Intersection LOS: C

Intersection Capacity Utilization 91.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø3	Ø4
20.9 s	35 s		35 s
Ø5	Ø6	Ø7	Ø8
20.9 s	35 s		35 s

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	65	75	5	103	299	224	94	968	201	103	888	126
Future Volume (veh/h)	65	75	5	103	299	224	94	968	201	103	888	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	75	5	103	299	224	94	968	201	103	888	126
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	48	487	50	60	487	407	1152	514	389	1164	519
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.33	0.33
Sat Flow, veh/h	0	156	1585	0	195	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	140	0	5	402	0	224	94	968	201	103	888	126
Grp Sat Flow(s),veh/h/ln	156	0	1585	195	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.2	0.0	0.0	10.2	2.6	22.7	8.8	2.9	20.1	5.2
Cycle Q Clear(g_c), s	27.6	0.0	0.2	27.6	0.0	10.2	2.6	22.7	8.8	2.9	20.1	5.2
Prop In Lane	0.46		1.00	0.26		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	0	487	110	0	487	407	1152	514	389	1164	519
V/C Ratio(X)	1.31	0.00	0.01	3.65	0.00	0.46	0.23	0.84	0.39	0.26	0.76	0.24
Avail Cap(c_a), veh/h	107	0	487	110	0	487	435	1152	514	412	1164	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	0.0	21.6	30.7	0.0	25.1	15.7	28.2	23.5	16.6	27.1	22.1
Incr Delay (d2), s/veh	191.6	0.0	0.0	1213.0	0.0	0.7	0.3	7.4	2.2	0.4	4.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	0.0	0.1	67.9	0.0	6.8	1.8	15.2	6.1	1.9	13.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	224.6	0.0	21.6	1243.7	0.0	25.7	16.0	35.6	25.7	17.0	31.8	23.2
LnGrp LOS	F	A	C	F	A	C	B	D	C	B	C	C
Approach Vol, veh/h	145			626			1263				1117	
Approach Delay, s/veh	217.6			807.9			32.6				29.5	
Approach LOS	F			F			C				C	
Timer - Assigned Phs	1	2		4	5	6	8					
Phs Duration (G+Y+Rc), s	19.7	35.0		35.0	19.5	35.3	35.0					
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9	7.4					
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1	27.6					
Max Q Clear Time (g_c+I1), s	4.9	24.7		29.6	4.6	22.1	29.6					
Green Ext Time (p_c), s	0.1	2.6		0.0	0.1	3.3	0.0					

Intersection Summary

HCM 6th Ctrl Delay 194.0

HCM 6th LOS F

Notes

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

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

Timings
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	98	92	10	143	345	280	100	1000	201	103	890	143
Future Volume (vph)	98	92	10	143	345	280	100	1000	201	103	890	143
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	17.4	17.4	17.4	17.4	17.4	17.4	20.9	25.9	25.9	20.9	25.9	25.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.4		7.4	7.4		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	27.9	27.9		27.9	27.9		40.9	29.4	29.4	40.9	29.4	29.4
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.47	0.34	0.34	0.47	0.34	0.34
v/c Ratio	1.13	0.02		0.98	0.45		0.25	0.83	0.30	0.27	0.74	0.23
Control Delay	143.4	0.1		68.1	13.4		11.9	35.3	4.9	12.2	31.1	5.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	143.4	0.1		68.1	13.4		11.9	35.3	4.9	12.2	31.1	5.1
LOS	F	A		E	B		B	D	A	B	C	A
Approach Delay	136.3			48.2			28.8			26.1		
Approach LOS	F			D			C			C		

Intersection Summary

Cycle Length: 90.9

Actuated Cycle Length: 86.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 38.6

Intersection LOS: D

Intersection Capacity Utilization 98.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Coors Blvd & Sage Rd

Ø1	Ø2	Ø3	Ø4
20.9 s	35 s		35 s
Ø5	Ø6	Ø7	Ø8
20.9 s	35 s		35 s

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

HCM 6th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (veh/h)	98	92	10	143	345	280	100	1000	201	103	890	143
Future Volume (veh/h)	98	92	10	143	345	280	100	1000	201	103	890	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	92	10	143	345	280	100	1000	201	103	890	143
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	39	487	52	22	487	408	1152	514	383	1156	516
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.33	0.33
Sat Flow, veh/h	0	127	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	190	0	10	488	0	280	100	1000	201	103	890	143
Grp Sat Flow(s),veh/h/ln	127	0	1585	73	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.0
Cycle Q Clear(g_c), s	27.6	0.0	0.4	27.6	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.0
Prop In Lane	0.52		1.00	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	0	487	74	0	487	408	1152	514	383	1156	516
V/C Ratio(X)	1.90	0.00	0.02	6.57	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Avail Cap(c_a), veh/h	100	0	487	74	0	487	432	1152	514	406	1156	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	21.7	36.7	0.0	26.1	15.7	28.5	23.5	16.9	27.3	22.5
Incr Delay (d2), s/veh	440.6	0.0	0.0	2534.6	0.0	1.6	0.3	8.9	2.2	0.4	5.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	25.9	0.0	0.3	90.6	0.0	8.7	1.9	16.0	6.1	1.9	13.5	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	475.0	0.0	21.7	2571.3	0.0	27.8	16.1	37.4	25.7	17.3	32.2	23.8
LnGrp LOS	F	A	C	F	A	C	B	D	C	B	C	C
Approach Vol, veh/h	200			768			1301				1136	
Approach Delay, s/veh	452.4			1644.0			34.0				29.8	
Approach LOS	F			F			C				C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	35.0		35.0	19.7	35.1		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.9	25.7		29.6	4.8	22.2		29.6				
Green Ext Time (p_c), s	0.1	2.1		0.0	0.1	3.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay 420.3

HCM 6th LOS F

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↰↱	↰	↰↱	↰	↰	↰	↰
Traffic Volume (vph)	70	638	45	249	5	135	50	35
Future Volume (vph)	70	638	45	249	5	135	50	35
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	23.0	9.5	22.5	23.5	23.5	23.5	23.5
Total Split (s)	19.0	54.0	14.0	49.0	52.0	52.0	52.0	52.0
Total Split (%)	15.8%	45.0%	11.7%	40.8%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	36.5	29.1	35.0	27.5	71.1	71.1	71.1	71.1
Actuated g/C Ratio	0.30	0.24	0.29	0.23	0.59	0.59	0.59	0.59
v/c Ratio	0.23	0.76	0.23	0.39	0.01	0.22	0.08	0.09
Control Delay	27.6	48.0	28.0	35.3	13.6	12.0	13.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	48.0	28.0	35.3	13.6	12.0	13.8	6.3
LOS	C	D	C	D	B	B	B	A
Approach Delay		46.0		34.4		12.0		8.9
Approach LOS		D		C		B		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 106.8 (89%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 34.0

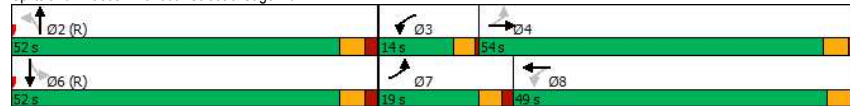
Intersection LOS: C

Intersection Capacity Utilization 57.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd



2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰		↰	↰	↰
Traffic Volume (veh/h)	70	638	15	45	249	70	5	135	95	50	35	60
Future Volume (veh/h)	70	638	15	45	249	70	5	135	95	50	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	638	15	45	249	70	5	135	95	50	35	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	785	18	151	534	147	855	647	455	724	392	672
Arrive On Green	0.04	0.22	0.22	0.06	0.39	0.39	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1781	3549	83	1781	2753	758	1301	1022	719	1151	619	1061
Grp Volume(v), veh/h	70	319	334	45	159	160	5	0	230	50	0	95
Grp Sat Flow(s), veh/h/ln	1781	1777	1855	1781	1777	1734	1301	0	1741	1151	0	1679
Q Serve(g_s), s	3.7	20.5	20.5	2.4	8.0	8.3	0.2	0.0	6.7	2.3	0.0	2.6
Cycle Q Clear(g_c), s	3.7	20.5	20.5	2.4	8.0	8.3	2.8	0.0	6.7	9.0	0.0	2.6
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.41	1.00		0.63
Lane Grp Cap(c), veh/h	270	393	411	151	344	336	855	0	1103	724	0	1064
V/C Ratio(X)	0.26	0.81	0.81	0.30	0.46	0.48	0.01	0.00	0.21	0.07	0.00	0.09
Avail Cap(c_a), veh/h	400	726	758	255	659	643	855	0	1103	724	0	1064
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	44.4	44.4	37.4	32.1	32.2	9.1	0.0	9.3	11.2	0.0	8.6
Incr Delay (d2), s/veh	0.5	4.1	3.9	1.0	0.8	0.9	0.0	0.0	0.4	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	14.4	14.9	1.9	5.7	5.8	0.1	0.0	4.7	1.1	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	48.4	48.3	38.3	32.9	33.1	9.1	0.0	9.7	11.4	0.0	8.7
LnGrp LOS	D	D	D	D	C	C	A	A	A	B	A	A
Approach Vol, veh/h		723			364			235			145	
Approach Delay, s/veh		47.2			33.6			9.7			9.6	
Approach LOS		D			C			A			A	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	81.5	6.9	31.6		81.5	10.2	28.3					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	46.5	10.5	49.0		46.5	14.0	* 45					
Max Q Clear Time (g_c+I1), s	8.7	4.4	22.5		11.0	5.7	10.3					
Green Ext Time (p_c), s	1.5	0.0	4.1		0.8	0.1	1.9					

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2035 AM Peak Hour No Build Conditions- Exist Geom

Synchro 11 Report
2035ANX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	70	685	61	295	5	135	63	35
Future Volume (vph)	70	685	61	295	5	135	63	35
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	23.0	9.5	22.5	23.5	23.5	23.5	23.5
Total Split (s)	19.0	54.0	14.0	49.0	52.0	52.0	52.0	52.0
Total Split (%)	15.8%	45.0%	11.7%	40.8%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	38.5	31.1	38.4	30.2	68.4	68.4	68.4	68.4
Actuated g/C Ratio	0.32	0.26	0.32	0.25	0.57	0.57	0.57	0.57
v/c Ratio	0.23	0.76	0.30	0.43	0.01	0.24	0.10	0.10
Control Delay	25.7	46.4	27.0	33.5	15.2	13.2	15.4	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	46.4	27.0	33.5	15.2	13.2	15.4	6.9
LOS	C	D	C	C	B	B	B	A
Approach Delay		44.5		32.6		13.3		10.3
Approach LOS		D		C		B		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 106.8 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 33.1

Intersection LOS: C

Intersection Capacity Utilization 60.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↰ Ø3	↱ Ø4
52 s	14 s	54 s
↱ Ø6 (R)	↱ Ø7	↰ Ø8
52 s	19 s	49 s

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	70	685	15	61	295	82	5	135	111	63	35	60
Future Volume (veh/h)	70	685	15	61	295	82	5	135	111	63	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	685	15	61	295	82	5	135	111	63	35	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	838	18	167	601	164	823	579	476	678	378	647
Arrive On Green	0.04	0.24	0.24	0.08	0.44	0.44	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1781	3555	78	1781	2758	753	1301	949	781	1134	619	1061
Grp Volume(v), veh/h	70	342	358	61	188	189	5	0	246	63	0	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1735	1301	0	1730	1134	0	1679
Q Serve(g_s), s	3.6	21.9	21.9	3.2	9.1	9.4	0.2	0.0	7.8	3.2	0.0	2.8
Cycle Q Clear(g_c), s	3.6	21.9	21.9	3.2	9.1	9.4	3.0	0.0	7.8	11.0	0.0	2.8
Prop In Lane	1.00		0.04	1.00		0.43	1.00		0.45	1.00		0.63
Lane Grp Cap(c), veh/h	277	419	437	167	387	378	823	0	1055	678	0	1025
V/C Ratio(X)	0.25	0.82	0.82	0.37	0.49	0.50	0.01	0.00	0.23	0.09	0.00	0.09
Avail Cap(c_a), veh/h	408	726	758	255	659	643	823	0	1055	678	0	1025
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.5	43.4	43.4	34.8	29.1	29.1	10.3	0.0	10.6	13.1	0.0	9.7
Incr Delay (d2), s/veh	0.5	4.0	3.8	1.3	0.9	1.0	0.0	0.0	0.5	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	15.1	15.7	2.5	6.3	6.3	0.1	0.0	5.5	1.6	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	47.4	47.3	36.1	30.0	30.2	10.3	0.0	11.2	13.4	0.0	9.8
LnGrp LOS	D	D	D	D	C	C	B	A	B	B	A	A
Approach Vol, veh/h		770			438			251				158
Approach Delay, s/veh		46.2			30.9			11.1				11.3
Approach LOS		D			C			B				B
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	78.7	8.0	33.3		78.7	10.1	31.1					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	46.5	10.5	49.0		46.5	14.0	* 45					
Max Q Clear Time (g_c+I1), s	9.8	5.2	23.9		13.0	5.6	11.4					
Green Ext Time (p_c), s	1.7	0.0	4.4		0.8	0.1	2.3					

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2035 AM Peak Hour Build Conditions - Prop Geom

Synchro 11 Report
2035ABX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	65	354	60	484	20	100	35	130
Future Volume (vph)	65	354	60	484	20	100	35	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	60.8	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	46.8%	9.2%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	35.9	28.3	34.2	26.6	81.8	81.8	81.8	81.8
Actuated g/C Ratio	0.28	0.22	0.26	0.20	0.63	0.63	0.63	0.63
v/c Ratio	0.35	0.53	0.23	0.76	0.03	0.11	0.04	0.22
Control Delay	35.6	44.8	35.1	56.9	12.4	10.8	12.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	44.8	35.1	56.9	12.4	10.8	12.4	10.8
LOS	D	D	D	E	B	B	B	B
Approach Delay		43.6		54.8		11.0		11.0
Approach LOS		D		D		B		B

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 38.9

Intersection LOS: D

Intersection Capacity Utilization 56.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↰ Ø3	↰ Ø4
57.2 s	12 s	60.8 s
↰ Ø6 (R)	↰ Ø7	↰ Ø8
57.2 s	15.6 s	57.2 s

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	65	354	50	60	484	65	20	100	30	35	130	110
Future Volume (veh/h)	65	354	50	60	484	65	20	100	30	35	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	354	50	60	484	65	20	100	30	35	130	110
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	620	87	215	578	77	741	907	272	849	615	520
Arrive On Green	0.04	0.20	0.20	0.08	0.37	0.37	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1781	3130	438	1781	3150	421	1140	1381	414	1260	936	792
Grp Volume(v), veh/h	65	200	204	60	272	277	20	130	35	0	240	
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1795	1140	0	1796	1260	0	1728
Q Serve(g_s), s	3.8	13.2	13.4	3.5	18.2	18.4	0.9	0.0	3.5	1.4	0.0	7.2
Cycle Q Clear(g_c), s	3.8	13.2	13.4	3.5	18.2	18.4	8.1	0.0	3.5	4.9	0.0	7.2
Prop In Lane	1.00		0.24	1.00		0.23	1.00		0.23	1.00		0.46
Lane Grp Cap(c), veh/h	164	352	355	215	326	329	741	0	1179	849	0	1135
V/C Ratio(X)	0.40	0.57	0.58	0.28	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Avail Cap(c_a), veh/h	237	763	769	265	720	727	741	0	1179	849	0	1135
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	47.1	47.2	39.7	39.4	39.4	10.5	0.0	8.3	9.2	0.0	8.9
Incr Delay (d2), s/veh	1.5	1.4	1.5	0.5	4.0	4.2	0.1	0.0	0.2	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	10.0	10.2	2.7	10.5	10.7	0.4	0.0	2.5	0.7	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.6	48.5	48.7	40.2	43.4	43.6	10.6	0.0	8.5	9.3	0.0	9.3
LnGrp LOS	D	D	D	D	D	D	B	A	A	A	A	A
Approach Vol, veh/h		469			609			150			275	
Approach Delay, s/veh		47.9			43.2			8.7			9.3	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	90.9	8.4	30.7		90.9	10.3	28.8					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	51.7	8.5	55.8		51.7	10.6	* 53					
Max Q Clear Time (g_c+I1), s	10.1	5.5	15.4		9.2	5.8	20.4					
Green Ext Time (p_c), s	0.9	0.0	2.5		1.7	0.0	3.5					

Intersection Summary

HCM 6th Ctrl Delay 35.0

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2035 PM Peak Hour No Build Conditions - Exist Geom

Synchro 11 Report
2035PNX.syn

Timings
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	65	398	75	527	20	100	47	130
Future Volume (vph)	65	398	75	527	20	100	47	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	60.8	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	46.8%	9.2%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	0.5	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	3.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	38.1	30.5	36.7	28.9	79.5	79.5	79.5	79.5
Actuated g/C Ratio	0.29	0.23	0.28	0.22	0.61	0.61	0.61	0.61
v/c Ratio	0.35	0.54	0.29	0.77	0.03	0.13	0.06	0.22
Control Delay	34.1	44.0	34.0	54.2	13.5	11.4	13.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	44.0	34.0	54.2	13.5	11.4	13.6	11.8
LOS	C	D	C	D	B	B	B	B
Approach Delay		42.7		52.0		11.6		12.0
Approach LOS		D		D		B		B

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 38.1

Intersection LOS: D

Intersection Capacity Utilization 57.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: 86th Street & Sage Rd

↰ Ø2 (R)	↱ Ø3	↰ Ø4
57.2 s	12 s	60.8 s
↰ Ø6 (R)	↱ Ø7	↰ Ø8
57.2 s	15.6 s	57.2 s

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

HCM 6th Signalized Intersection Summary
5: 86th Street & Sage Rd

Tierra West LLC
12/28/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	65	398	50	75	527	77	20	100	45	47	130	110
Future Volume (veh/h)	65	398	50	75	527	77	20	100	45	47	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	398	50	75	527	77	20	100	45	47	130	110
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	655	82	223	621	90	720	783	352	812	600	508
Arrive On Green	0.04	0.21	0.21	0.09	0.40	0.40	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1781	3179	397	1781	3112	453	1140	1222	550	1243	936	792
Grp Volume(v), veh/h	65	221	227	75	300	304	20	0	145	47	0	240
Grp Sat Flow(s),veh/h/ln	1781	1777	1799	1781	1777	1789	1140	0	1771	1243	0	1728
Q Serve(g_s), s	3.7	14.7	14.9	4.3	19.9	20.1	1.0	0.0	4.2	2.0	0.0	7.5
Cycle Q Clear(g_c), s	3.7	14.7	14.9	4.3	19.9	20.1	8.5	0.0	4.2	6.2	0.0	7.5
Prop In Lane	1.00		0.22	1.00		0.25	1.00		0.31	1.00		0.46
Lane Grp Cap(c), veh/h	164	366	371	223	355	357	720	0	1135	812	0	1107
V/C Ratio(X)	0.40	0.60	0.61	0.34	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.22
Avail Cap(c_a), veh/h	237	763	772	258	720	725	720	0	1135	812	0	1107
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.7	46.8	46.9	37.6	37.2	37.3	11.5	0.0	9.1	10.3	0.0	9.7
Incr Delay (d2), s/veh	1.6	1.6	1.6	0.9	5.6	5.7	0.1	0.0	0.2	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	10.9	11.1	3.3	12.1	12.2	0.5	0.0	3.0	1.0	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	48.4	48.5	38.5	42.8	43.0	11.6	0.0	9.4	10.5	0.0	10.2
LnGrp LOS	D	D	D	D	D	D	B	A	A	B	A	B
Approach Vol, veh/h		513			679			165				287
Approach Delay, s/veh		47.7			42.4			9.6				10.2
Approach LOS		D			D			A				B
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	88.8	9.4	31.8		88.8	10.2	31.0					
Change Period (Y+Rc), s	5.5	3.5	5.0		5.5	5.0	* 5					
Max Green Setting (Gmax), s	51.7	8.5	55.8		51.7	10.6	* 53					
Max Q Clear Time (g_c+I1), s	10.5	6.3	16.9		9.5	5.7	22.1					
Green Ext Time (p_c), s	1.0	0.0	2.8		1.8	0.0	3.9					

Intersection Summary

HCM 6th Ctrl Delay

HCM 6th LOS

D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

2035 PM Peak Hour Build Conditions- Prop Geom

Synchro 11 Report
2035PBX.syn

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Future Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2273	16	0	3102	47

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	1575	-	-	1145	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	-	0	0	*114	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %			2			1	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*114	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		41.7	0	0
HCM LOS	-	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	114	-
HCM Lane V/C Ratio	-	-	-	0.14	-
HCM Control Delay (s)	-	-	-	41.7	-
HCM Lane LOS	-	-	-	E	-
HCM 95th %tile Q(veh)	-	-	-	0.5	-

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

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	47	0	0	16	0	3165	16	0	2020	16
Future Vol, veh/h	0	0	47	0	0	16	0	3165	16	0	2020	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	3165	16	0	2020	16

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	1018	-	-	1591	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	*216	0	0	-	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %			1			2	-	-
Mov Cap-1 Maneuver	-	-	*216	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.2		0	0
HCM LOS	D	-		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	216	-	-
HCM Lane V/C Ratio	-	-	0.218	-	-
HCM Control Delay (s)	-	-	26.2	-	-
HCM Lane LOS	-	-	D	-	-
HCM 95th %tile Q(veh)	-	-	0.8	-	-

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

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Future Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2273	16	0	3102	47

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	1575	-	-	1145	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	-	0	0	*114	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %			2			1	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*114	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		41.7	0	0
HCM LOS	-	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	114	-
HCM Lane V/C Ratio	-	-	-	0.14	-
HCM Control Delay (s)	-	-	-	41.7	-
HCM Lane LOS	-	-	-	E	-
HCM 95th %tile Q(veh)	-	-	-	0.5	-

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

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	47	0	0	16	0	2331	16	0	3170	47
Future Vol, veh/h	0	0	47	0	0	16	0	2331	16	0	3170	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2331	16	0	3170	47

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	1609	-	-	1174	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	-	0	0	*90	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %			2			1	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	*90	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		53.5	0	0
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	90	-	-
HCM Lane V/C Ratio	-	-	0.178	-	-
HCM Control Delay (s)	-	-	53.5	-	-
HCM Lane LOS	-	-	F	-	-
HCM 95th %tile Q(veh)	-	-	0.6	-	-

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

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	
Traffic Vol, veh/h	1160	102	44	399	85	152
Future Vol, veh/h	1160	102	44	399	85	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1160	102	44	399	85	152
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1262	0	1448	580
Stage 1	-	-	-	-	1160	-
Stage 2	-	-	-	-	288	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	*920	-	*495	*615
Stage 1	-	-	-	-	*580	-
Stage 2	-	-	-	-	*871	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*920	-	*471	*615
Mov Cap-2 Maneuver	-	-	-	-	*506	-
Stage 1	-	-	-	-	*580	-
Stage 2	-	-	-	-	*829	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		15.7	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	571	-	-	* 920	-	
HCM Lane V/C Ratio	0.415	-	-	0.048	-	
HCM Control Delay (s)	15.7	-	-	9.1	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	2	-	-	0.1	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	717	87	55	799	85	126
Future Vol, veh/h	717	87	55	799	85	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	87	55	799	85	126
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	804	0	1227	359
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	510	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1186	-	*452	*793
Stage 1	-	-	-	-	*748	-
Stage 2	-	-	-	-	*726	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1186	-	*431	*793
Mov Cap-2 Maneuver	-	-	-	-	*524	-
Stage 1	-	-	-	-	*748	-
Stage 2	-	-	-	-	*693	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		13.1	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	657	-	-	1186	-	
HCM Lane V/C Ratio	0.321	-	-	0.046	-	
HCM Control Delay (s)	13.1	-	-	8.2	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	↗
Traffic Vol, veh/h	0	69	0	1708	1404	85
Future Vol, veh/h	0	69	0	1708	1404	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	69	0	1708	1404	85
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	702	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	381	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	381	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	16.5	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	381	-	-		
HCM Lane V/C Ratio	-	0.181	-	-		
HCM Control Delay (s)	-	16.5	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %tile Q(veh)	-	0.7	-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗	↗	↗
Traffic Vol, veh/h	0	73	0	1539	2147	110
Future Vol, veh/h	0	73	0	1539	2147	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	73	0	1539	2147	110
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	1074	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	216	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	216	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	29.9	0	0			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	216	-	-		
HCM Lane V/C Ratio	-	0.338	-	-		
HCM Control Delay (s)	-	29.9	-	-		
HCM Lane LOS	-	D	-	-		
HCM 95th %tile Q(veh)	-	1.4	-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↗↘	↗↘	↗
Traffic Vol, veh/h	0	13	105	1708	1418	13
Future Vol, veh/h	0	13	105	1708	1418	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	105	1708	1418	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	709	1431	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	377	471	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	377	471	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.9	0.9		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	471	-	377	-	-	
HCM Lane V/C Ratio	0.223	-	0.034	-	-	
HCM Control Delay (s)	14.8	-	14.9	-	-	
HCM Lane LOS	B	-	B	-	-	
HCM 95th %tile Q(veh)	0.8	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↗↘	↗↘	↗
Traffic Vol, veh/h	0	12	95	1539	2191	15
Future Vol, veh/h	0	12	95	1539	2191	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	95	1539	2191	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1096	2206	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	208	235	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	208	235	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	23.4	1.8		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	235	-	208	-	-	
HCM Lane V/C Ratio	0.404	-	0.058	-	-	
HCM Control Delay (s)	30.3	-	23.4	-	-	
HCM Lane LOS	D	-	C	-	-	
HCM 95th %tile Q(veh)	1.8	-	0.2	-	-	

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"					
Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			Right Turn		
Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access	Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	55	30-40	50	102
Warranted (WBL Existing)			Warranted		
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	N/A	30-40	50	101
			Warranted		
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	105	30-40	50	20
Warranted (NBL Existing)			Not Warranted (SBR Existing)		

Traffic Count Data Sheet

Year Counts Taken: #VALUE!

E-W Street:

Sage Rd

Speed Limit (Sage Rd)=

30

MPH

N-S Street:

Unser Bd.

Speed Limit (Unser Bd.)=

40

MPH

Signalized

4/27/2022.

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	26	36	42	0	4	14	13	0	12	262	11	1	10	118	6	0
7:00 AM	7:15 AM	41	49	38	0	13	18	18	0	17	254	28	1	18	153	8	0
7:15 AM	7:30 AM	35	49	34	0	9	25	12	0	25	268	22	0	15	156	7	0
7:30 AM	7:45 AM	63	73	47	0	9	24	19	0	21	232	22	0	19	162	18	0
7:45 AM	8:00 AM	37	61	37	0	11	48	18	0	23	194	18	0	15	141	12	0
8:00 AM	8:15 AM	60	55	22	0	16	29	17	0	19	185	29	0	9	132	15	0
8:15 AM	8:30 AM	24	49	31	0	15	32	7	0	26	213	11	0	12	142	10	0
8:30 AM	8:45 AM	29	24	27	0	11	18	16	0	22	167	5	0	10	115	11	0
4X Peak 15-Min. Vol. (AM)		252	292	188	0	36	96	76	0	84	928	88	0	76	648	72	0

% of Total Traffic

8.9%

10.3%

6.6%

1.3%

3.4%

2.7%

3.0%

32.7%

3.1%

2.7%

22.8%

2.5%

% Directional

25.8%

7.3%

Intersection

38.8%

28.1%

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:15 PM	4:30 PM	32	28	22	0	30	62	19	0	42	176	4	0	26	224	27	0
4:30 PM	4:45 PM	26	27	30	0	24	55	18	0	43	176	13	1	15	224	25	0
4:45 PM	5:00 PM	21	27	35	0	29	67	20	0	44	154	10	0	19	216	26	0
5:00 PM	5:15 PM	28	30	55	0	30	46	13	2	44	189	14	0	21	257	36	0
5:15 PM	5:30 PM	27	30	31	0	20	46	14	2	54	159	7	0	20	241	31	0
5:30 PM	5:45 PM	25	30	44	0	21	60	20	0	37	165	12	0	16	251	31	0
5:45 PM	6:00 PM	27	31	40	0	15	53	15	0	39	144	9	0	20	216	34	0
6:00 PM	6:15 PM	28	23	36	0	18	26	15	0	36	152	15	0	15	247	33	0
4X Peak 15-Min. Vol. (PM)		112	120	220	0	120	184	52	4	176	756	56	0	84	1028	144	0

% of Total Traffic

3.7%

3.9%

7.2%

3.9%

6.0%

1.7%

5.8%

24.7%

1.8%

2.7%

33.6%

4.7%

% Directional

14.8%

11.6%

Intersection

32.3%

41.0%

Traffic Count Data Sheet

Year Counts Taken: **2018**
 E-W Street: **Tower**
 N-S Street: **Unser Bd.**

 Speed Limit (Tower)= **25** MPH
 Speed Limit (Unser Bd.)= **35** MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (Tower)				Westbound (Tower)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:30 AM	6:45 AM	36	38	13	0	2	10	7	0	7	245	5	0	4	90	3	0
6:45 AM	7:00 AM	33	31	13	0	8	12	5	0	12	265	8	0	13	126	4	0
7:00 AM	7:15 AM	34	44	12	0	12	17	13	0	25	298	10	0	13	137	4	0
7:15 AM	7:30 AM	40	45	11	0	4	19	12	0	19	275	9	0	14	172	25	0
7:30 AM	7:45 AM	42	43	19	0	8	25	7	0	28	275	26	0	14	162	14	0
7:45 AM	8:00 AM	32	36	8	0	5	21	10	0	19	224	6	0	20	171	14	0
8:00 AM	8:15 AM	27	40	8	0	8	31	5	0	15	241	10	0	14	115	16	0
8:15 AM	8:30 AM	25	19	14	0	9	16	18	0	8	222	7	0	4	140	10	0
4X Peak 15-Min. Vol. (AM)		84	104	60	0	32	76	56	0	28	856	32	0	24	408	52	0

% of Total Traffic

3.2%

3.9%

2.3%

1.2%

2.9%

2.1%

1.1%

32.3%

1.2%

0.9%

15.4%

2.0%

% Directional

9.4%

6.2%

Intersection

34.5%

18.3%

Begin Time	End Time	Eastbound (Tower)				Westbound (Tower)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:30 PM	4:45 PM	15	19	13	0	9	40	18	0	18	211	9	0	13	277	25	0
4:45 PM	5:00 PM	26	22	24	1	10	37	17	0	22	190	5	0	12	266	21	0
5:00 PM	5:15 PM	17	26	23	0	19	31	16	0	16	172	5	0	11	280	30	0
5:15 PM	5:30 PM	14	26	22	0	12	59	17	0	30	200	7	0	11	286	29	0
5:30 PM	5:45 PM	14	24	25	0	9	56	14	2	27	192	9	2	16	274	31	0
5:45 PM	6:00 PM	23	22	30	0	7	46	17	0	23	209	7	0	17	263	26	0
6:00 PM	6:15 PM	18	27	20	0	7	44	13	0	23	200	6	1	17	257	36	0
6:15 PM	6:30 PM	23	18	22	1	6	41	9	0	18	194	4	0	12	263	26	0
4X Peak 15-Min. Vol. (PM)		56	104	88	0	48	236	68	2	120	800	28	3	44	1144	116	0

% of Total Traffic

2.0%

3.6%

3.1%

1.7%

8.3%

2.4%

4.2%

28.1%

1.0%

1.5%

40.1%

4.1%

% Directional

8.7%

12.3%

Intersection

33.2%

45.7%

Traffic Count Data Sheet

Year Counts Taken: **2022**
 E-W Street: **Sage Rd**
 N-S Street: **Coors Blvd**

 Speed Limit (Sage Rd)= **35** MPH
 Speed Limit (Coors Blvd)= **45** MPH

Signalized

4/26/22

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Coors Blvd)				Southbound (Coors Blvd)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	44	29	9	0	2	9	9	0	7	153	3	0	6	92	11	0
7:00 AM	7:15 AM	58	39	7	0	3	15	27	0	7	179	0	0	17	129	8	0
7:15 AM	7:30 AM	57	67	9	0	2	15	41	0	8	205	3	0	16	111	8	0
7:30 AM	7:45 AM	60	48	16	0	11	31	39	0	5	255	4	0	13	140	16	0
7:45 AM	8:00 AM	46	55	13	0	7	42	53	0	4	185	3	0	12	123	25	0
8:00 AM	8:15 AM	51	31	14	0	10	36	57	0	8	181	8	0	14	112	15	0
8:15 AM	8:30 AM	28	43	9	0	6	25	33	0	10	186	4	0	19	128	12	0
8:30 AM	8:45 AM	25	28	3	0	3	9	27	0	8	170	1	0	6	126	15	0
4X Peak 15-Min. Vol. (AM)		240	192	64	0	44	124	156	0	20	1020	16	0	52	560	64	0

% of Total Traffic

9.4%

7.5%

2.5%

1.7%

4.9%

6.1%

0.8%

40.0%

0.6%

2.0%

21.9%

2.5%

% Directional

19.4%

12.7%

Intersection

41.4%

26.5%

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Coors Blvd)				Southbound (Coors Blvd)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	29	17	9	0	8	57	27	0	12	175	36	0	16	173	37	0
4:15 PM	4:30 PM	14	16	1	0	22	64	48	0	20	207	43	0	22	190	27	0
4:30 PM	4:45 PM	18	25	11	0	9	51	41	0	11	194	2	0	13	207	40	0
4:45 PM	5:00 PM	24	23	13	0	3	66	24	0	14	189	2	0	11	208	42	0
5:00 PM	5:15 PM	19	19	6	0	11	61	36	0	15	184	1	0	7	237	42	0
5:15 PM	5:30 PM	26	17	11	0	6	76	45	0	13	201	0	0	10	177	43	0
5:30 PM	5:45 PM	22	22	7	0	6	46	23	0	20	176	0	0	12	166	45	0
5:45 PM	6:00 PM	23	23	9	0	5	40	18	0	13	172	1	0	15	162	43	0
4X Peak 15-Min. Vol. (PM)		56	64	4	0	88	256	192	0	80	828	172	0	88	760	108	0

% of Total Traffic

2.1%

2.4%

0.1%

3.3%

9.5%

7.1%

3.0%

30.7%

6.4%

3.3%

28.2%

4.0%

% Directional

4.6%

19.9%

Intersection

40.1%

35.5%

Traffic Count Data Sheet

Year Counts Taken: **2022**E-W Street: **Sage Rd**N-S Street: **86th St**Speed Limit (Sage Rd)= **35** MPHSpeed Limit (86th St)= **30** MPH**4/27/22**

Signalized

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (86th St)				Southbound (86th St)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	13	70	2	0	5	30	1	0	0	16	6	0	5	2	9	0
7:00 AM	7:15 AM	16	90	2	0	1	35	6	0	0	16	11	0	6	7	12	0
7:15 AM	7:30 AM	13	98	5	0	5	42	10	1	5	25	11	0	4	9	3	0
7:30 AM	7:45 AM	14	128	3	0	9	50	14	0	1	27	19	0	10	7	12	0
7:45 AM	8:00 AM	16	106	5	2	9	59	10	0	4	18	12	1	14	7	27	0
8:00 AM	8:15 AM	14	112	3	0	9	65	8	0	3	17	11	0	4	6	13	0
8:15 AM	8:30 AM	9	77	2	0	2	55	6	0	1	14	5	0	5	6	12	0
8:30 AM	8:45 AM	6	50	1	0	0	34	8	0	2	14	4	0	7	6	7	0
4X Peak 15-Min. Vol. (AM)		56	512	12	2	36	200	56	0	4	108	76	1	40	28	48	0

% of Total Traffic

4.8%

43.5%

1.0%

3.1%

17.0%

4.8%

0.3%

9.2%

6.5%

3.4%

2.4%

4.1%

% Directional

49.3%

24.8%

Intersection

16.0%

9.9%

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (86th St)				Southbound (86th St)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	11	77	0	0	7	76	14	0	3	15	10	0	13	18	31	0
4:15 PM	4:30 PM	16	64	9	0	8	108	8	0	3	10	5	0	10	20	18	0
4:30 PM	4:45 PM	11	63	4	0	3	93	9	0	5	13	5	1	8	33	28	0
4:45 PM	5:00 PM	9	77	2	0	2	101	15	0	2	12	4	0	8	20	22	0
5:00 PM	5:15 PM	16	88	5	2	4	96	14	0	1	13	4	0	8	25	23	0
5:15 PM	5:30 PM	14	67	6	0	5	99	12	0	2	9	5	0	12	27	24	0
5:30 PM	5:45 PM	17	80	3	0	9	92	4	0	3	18	6	0	5	26	18	0
5:45 PM	6:00 PM	13	71	10	0	12	97	13	0	4	20	6	0	7	26	22	0
4X Peak 15-Min. Vol. (PM)		52	284	40	2	48	388	52	0	16	80	24	0	28	104	88	0

% of Total Traffic

4.3%

23.6%

3.3%

4.0%

32.2%

4.3%

1.3%

6.6%

2.0%

2.3%

8.6%

7.3%

% Directional

31.2%

40.5%

Intersection

10.0%

18.3%

Streetlight Data (San Ygnacio / Unser Blvd.)

2022	Eastbound (San Ygnacio)			Westbound (San Ygnacio)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
	San Ygnacio - West Leg (Eastbound)			San Ygnacio - East Leg (Westbound)			Unser Blvd. - South Leg (Northbound)			Unser Blvd. - North Leg (Southbound)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00am		0	0	0	0	0	0	0	104	0	0	37
6:15am		0	0	0	0	0	0	0	152	0	0	65
6:30am		0	0	2	0	0	0	0	196	1	0	96
6:45am		0	0	2	0	0	0	0	247	1	0	112
Hourly Total		0	0	4	0	0	0	0	699	2	0	310
7:00am		0	0	3	0	0	0	0	298	1	0	120
7:15am		0	0	4	0	0	0	0	301	1	0	144
7:30am		0	0	8	0	0	0	0	320	2	0	177
7:45am		0	0	14	0	0	0	0	269	2	0	186
Hourly Total		0	0	29	0	0	0	0	1188	6	0	627
8:00am		0	0	4	0	0	0	0	260	1	0	114
8:15am		0	0	1	0	0	0	0	279	0	0	127
8:30am		0	0	2	0	0	1	0	225	0	0	157
8:45am		0	0	2	0	0	1	0	235	0	0	149
Hourly Total		0	0	9	0	0	2	0	999	1	0	547
9:00am		0	0	1	0	0	1	0	181	0	0	117
9:15am		0	0	0	0	0	1	0	182	0	0	113
9:30am		0	0	0	0	0	1	0	200	0	0	123
9:45am		0	0	2	0	0	1	0	173	0	0	126
Hourly Total		0	0	3	0	0	4	0	736	0	0	479
3:00pm		0	0	7	0	0	2	0	390	0	0	301
3:15pm		0	0	7	0	0	2	0	351	0	0	370
3:30pm		0	0	6	0	0	2	0	315	0	0	353
3:45pm		0	0	5	0	0	3	0	292	1	0	319
Hourly Total		0	0	25	0	0	9	0	1348	1	0	1343
4:00pm		0	0	4	0	0	2	0	321	0	0	335
4:15pm		0	0	4	0	0	2	0	324	1	0	405
4:30pm		0	0	5	0	0	2	0	315	2	0	400
4:45pm		0	0	4	0	0	1	0	302	1	0	397
Hourly Total		0	0	17	0	0	7	0	1262	4	0	1537
5:00pm		0	0	4	0	0	2	0	310	2	0	370
5:15pm		0	0	6	0	0	1	0	306	2	0	362
5:30pm		0	0	6	0	0	1	0	315	1	0	371
5:45pm		0	0	7	0	0	2	0	301	0	0	367
Hourly Total		0	0	23	0	0	6	0	1232	5	0	1470
6:00pm		0	0	7	0	0	2	0	315	1	0	339
6:15pm		0	0	6	0	0	1	0	318	0	0	340
6:30pm		0	0	6	0	0	1	0	288	1	0	348
6:45pm		0	0	5	0	0	1	0	257	0	0	309
Hourly Total		0	0	24	0	0	5	0	1178	2	0	1336
AM Peak				29			4			6		9
PM Peak				25			9			4		34

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Ronald R. Bohannon, P.E.
Tierra West, LLC
5571 Midway Park Pl. NE
Albuquerque, NM, 87109

MEETING DATE: April 12, 2022

ATTENDEES: Ronald R. Bohannon P.E. and Amanda Herrera, P.E. (Tierra West, LLC), Terry Brown, P.E., Matthew Grush, P.E., Jeanne Wolfenbarger, P.E. (City of Albuquerque Transportation Development Section, Planning Dept.), and Julie Luna (Bernalillo County)

PROJECT: Sage / Unser Development (SW Corner), Zone Atlas Page L-10-Z

REQUESTED CITY ACTION: ☐ Zone Change ☒ Site Development Plan

☒ Subdivision ☐ Building Permit ☐ Sector Plan ☐ Sector Plan Amendment

☐ Curb Cut Permit ☐ Conditional Use ☐ Annexation ☐ Site Plan Amendment

ASSOCIATED APPLICATION: Mixed-use development consisting of approximately 97 townhome lots and retail commercial uses including 1 gasoline station / convenience market and 2 fast food restaurants with drive-thru windows. The project is being submitted to EPC for approval of a Planned Development Community and will review the establishment of a right in right out just south of the intersection of Sage & Unser.

SCOPE OF REPORT:

The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 11th Edition.
Local data may be used for certain land use types as determined by staff.
Consultant to provide.
2. Appropriate study area:
Signalized Intersections;
 - a. Sage Rd. / Unser Blvd. (signalized)
 - b. Tower Rd. / Unser Blvd. (signalized)
 - c. Sage Rd. / Coors Blvd. (signalized – County)
 - d. Sage Rd. / 86th St. (signalized)
Unsignalized Intersections;
 - a. San Ygnacio Rd. / Unser Blvd.
Driveway Intersections: all site drives (3).
3. Intersection turning movement counts
Study Time – 6:00 am 8:45 a.m. peak hour, 4-7 p.m. peak hour
Consultant to provide for all intersections listed above.
4. Type of intersection progression and factors to be used.

Type III arrival type (see “Highway Capacity Manual, current edition” or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

5. Boundaries of area to be used for trip distribution.

City Wide - residential, office or industrial;

2 mile radius – commercial;

Interstate or to be determined by consultant - motel/hotel

APS district boundary mapping for each school and bus routes

6. Basis for trip distribution.

Residential – Use inverse relationship based upon distance and employment. Use employment data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Residential - $T_s = (T_t) (S_e / D) / (S_e / D)$

T_s = Development to Individual Subarea Trips

T_t = Total Trips

S_e = Subarea Employment

D = Distance from Development to Subarea

Office/Industrial - $T_s = (T_t) (S_p / D) / (S_p / D)$

T_s = Development to Individual Subarea Trips

T_t = Total Trips

S_p = Subarea Population

D = Distance from Development to Subarea

Commercial -

$T_s = (T_t) (S_p) / (S_p)$

T_s = Development to Individual Subarea Trips

T_t = Total Trips

S_p = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Proposed developments which have been approved but not constructed that are to be Included in the analyses. Projects in the area include:

a. MAS Charter School

b. Sage Park Subdivision (NW Corner of Sage Rd. / Coors Blvd.)

9. Method of intersection capacity analysis - planning or operational (see “2016 Highway Capacity Manual” or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.

10. Traffic conditions for analysis:
- Existing analysis ☐ yes ☒ no - year (N/A);
 - Phase implementation year(s) without proposed development – 2025
 - Phase implementation year(s) with proposed development – 2025
 - Project completion year without proposed development – 2035
 - Project completion year with proposed development – 2035
 - Other –
11. Background traffic growth.
Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.
12. Planned (programmed) traffic improvements.
List planned CIP improvements in study area and projected project implementation year:
- None
13. Items to be included in the study:
- Intersection analysis. Yes
 - Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method: Not Required
 - Arterial LOS analysis; Not Required
 - Recommended street, intersection and signal improvements. Yes
 - Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility. Yes
 - Transportation system impacts. Yes
 - Other mitigating measures. None.
 - Accident analyses ☒ yes ☐ no; Location(s): Sage Rd. / Unser Blvd. – 5 year crash history
 - Weaving analyses ☐ yes ☒ no; Location(s):
14. Other:

SUBMITTAL REQUIREMENTS:

- Number of copies of report required
 - CoA - 1 digital copy – Yes (no paper copy)
 - Bernalillo County – Yes (one hard copy in 3-ring binder & a digital copy)
- CoA Submittal Fee – \$1300 for up to 3 reviews

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3362.

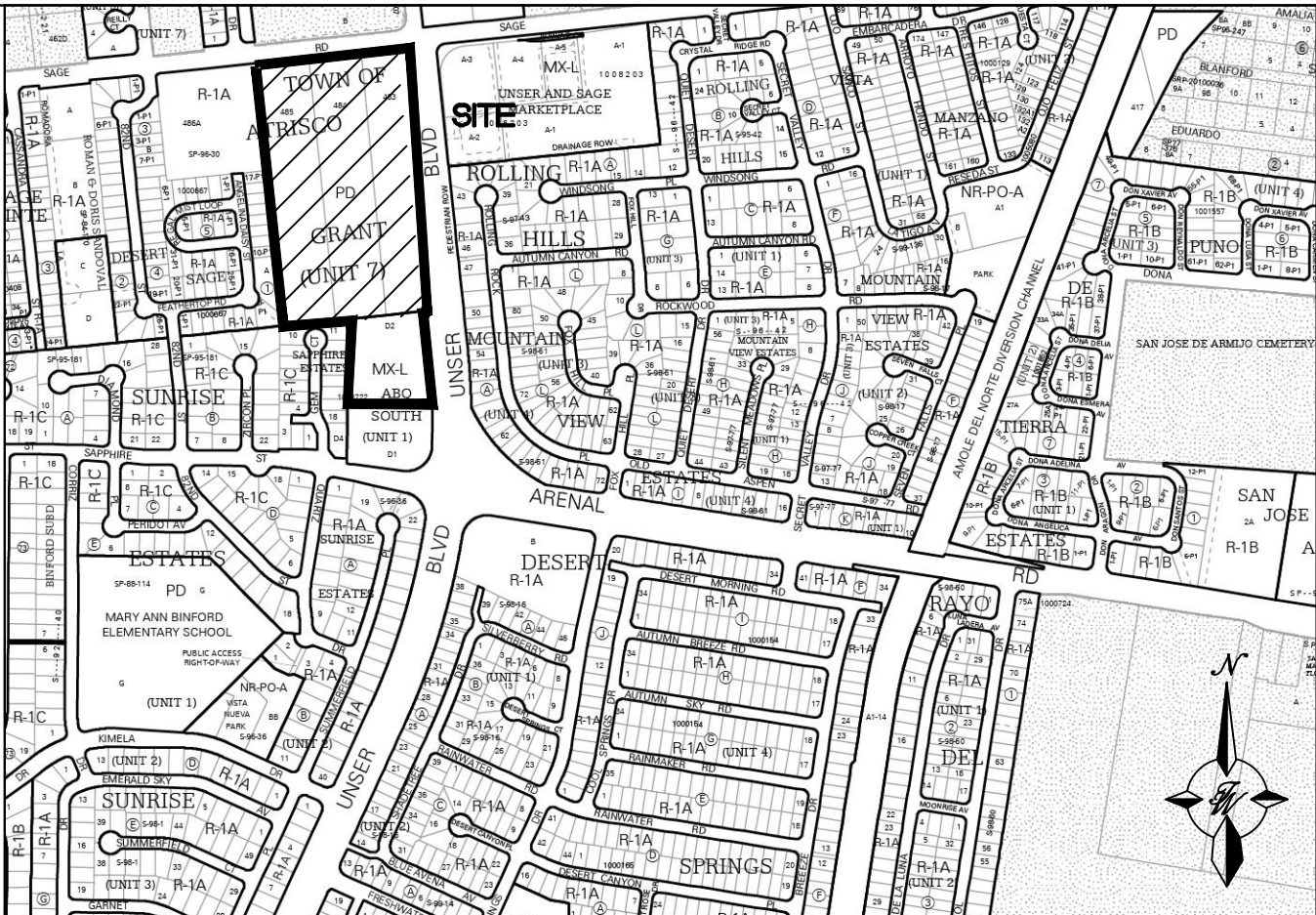
 P.E.

4/14/2022

Matt Grush, P.E., PTOE
Senior Engineer
City of Albuquerque, Planning
Transportation Development Section

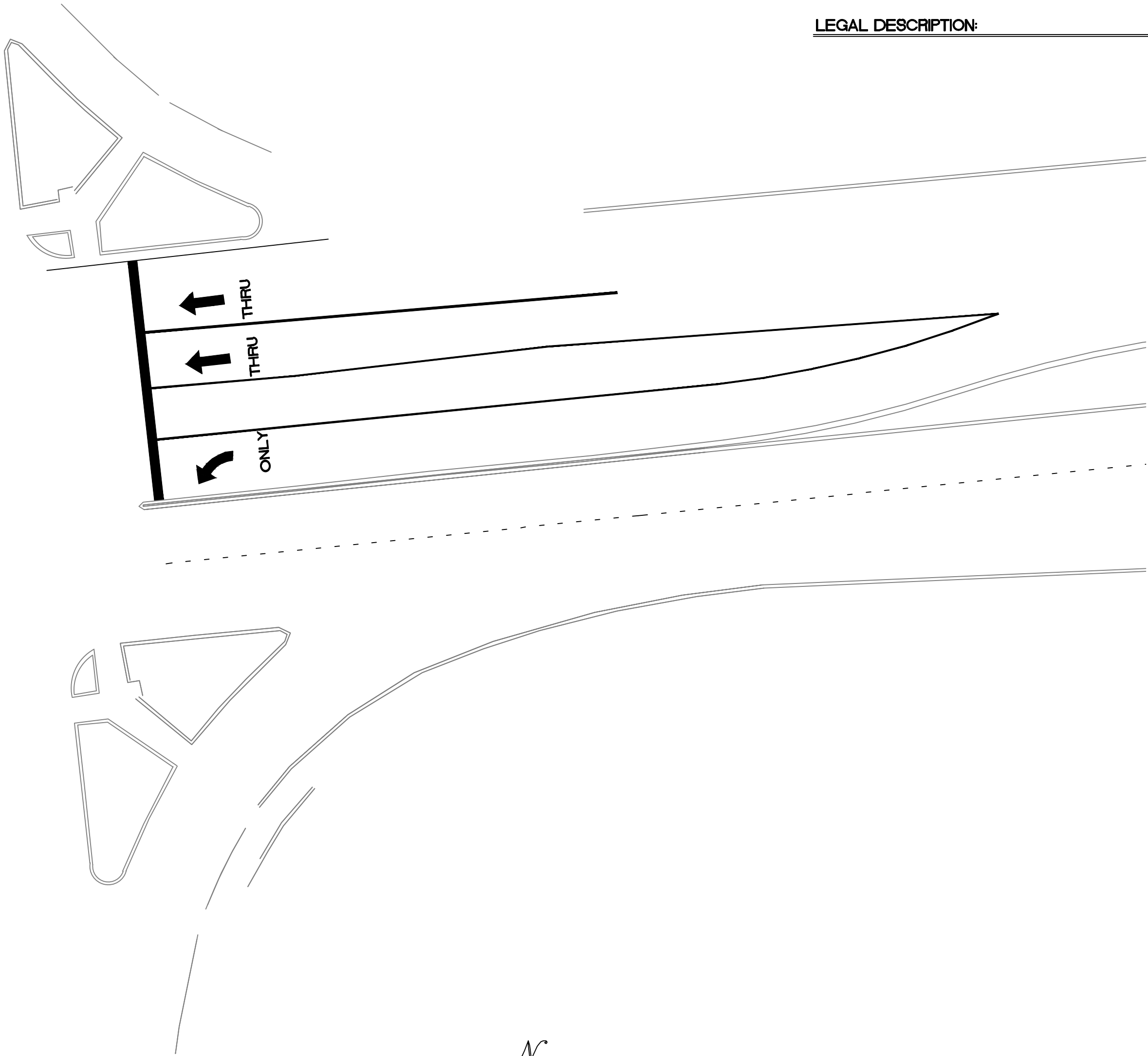
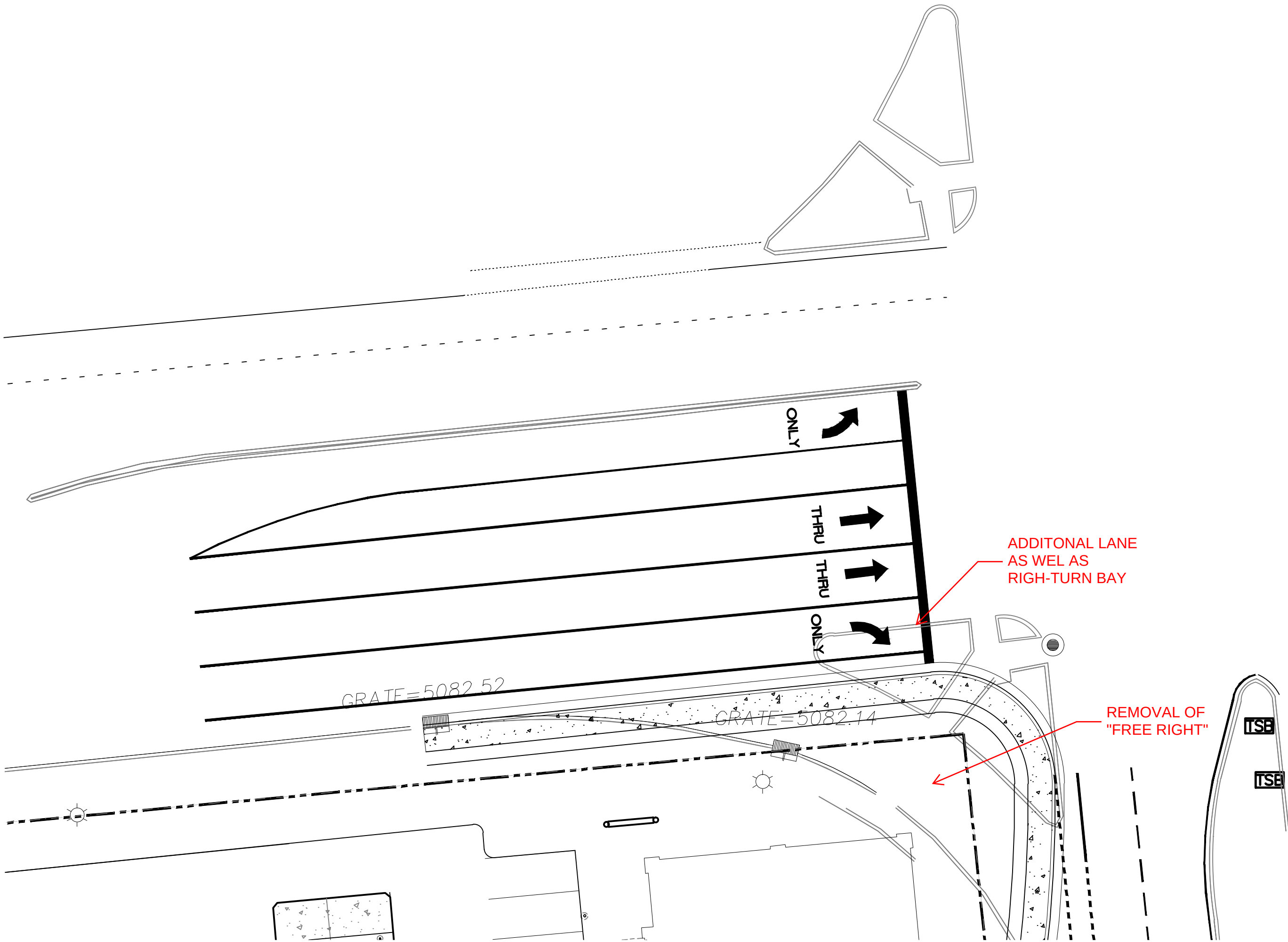
Date

via: email
C: TIS Task Force Attendees, file

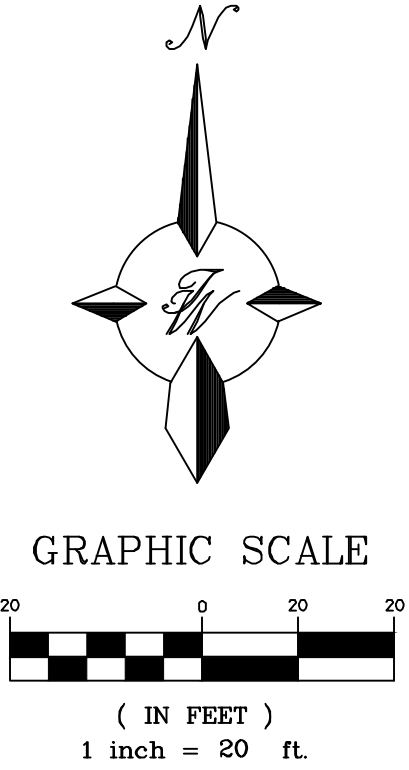


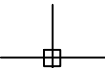
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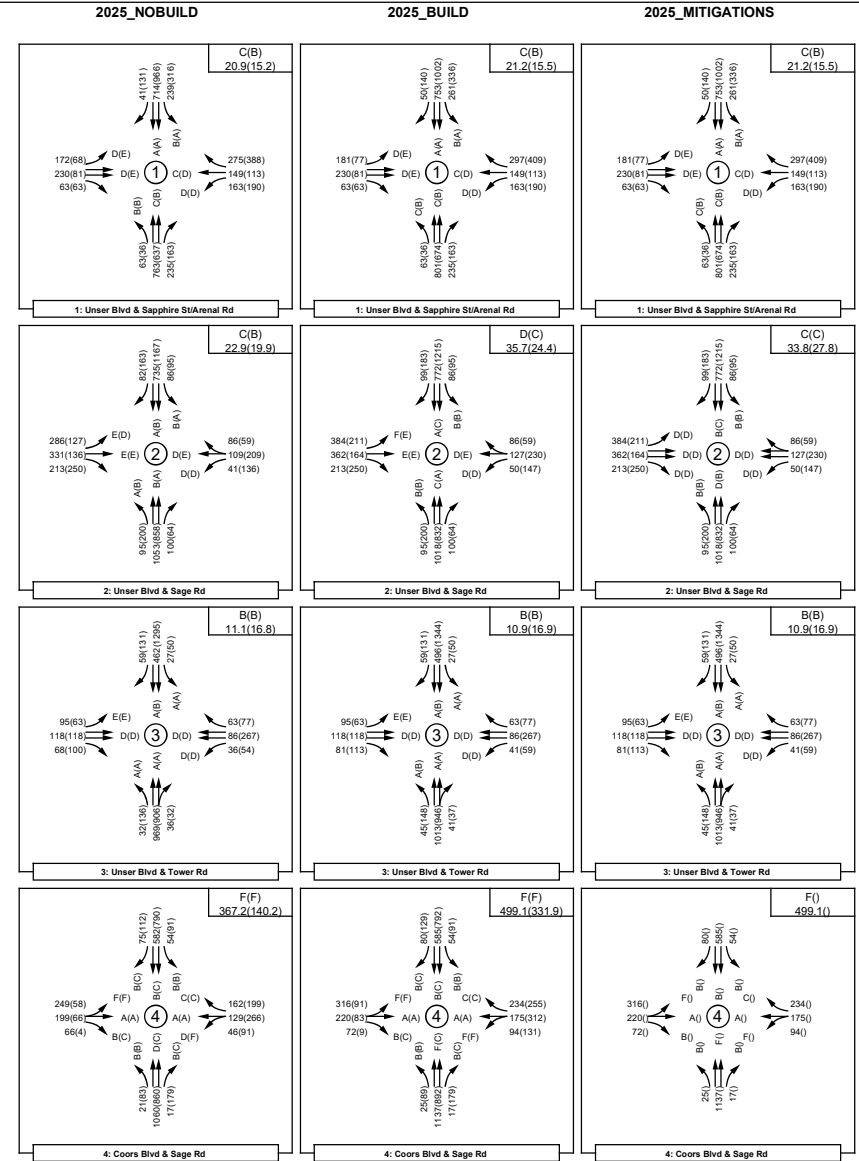
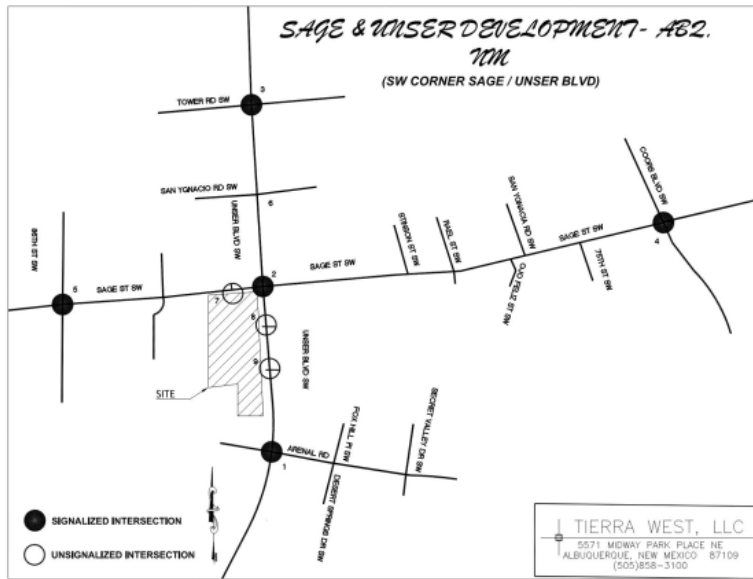


- LEGEND**
- CURB & GUTTER
 - - - EASEMENT
 - - - CENTERLINE
 - RIGHT-OF-WAY
 - BUILDING
 - [Pattern] SIDEWALK
 - - - EXISTING BOUNDARY LINE
 - - - LOT LINES



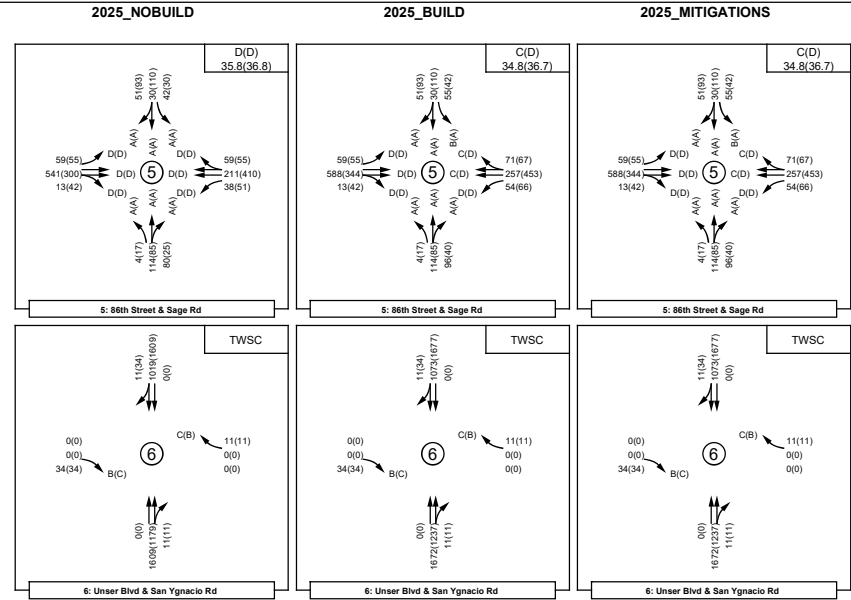
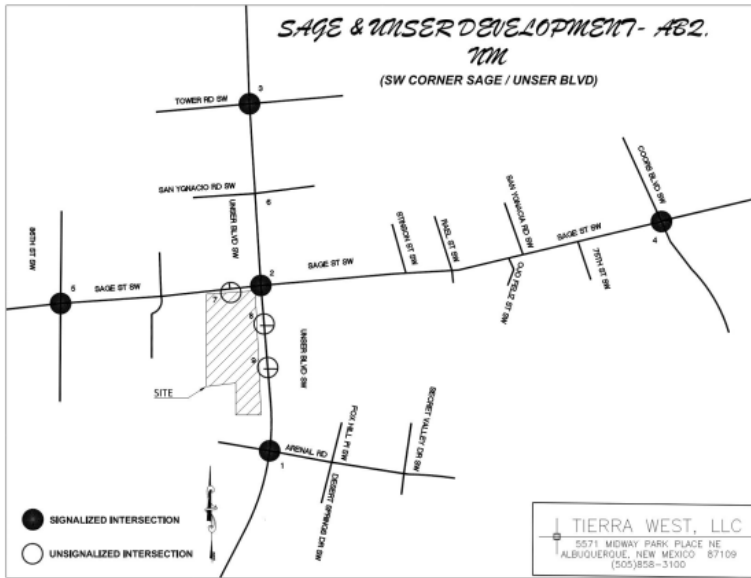
ENGINEER'S SEAL	UNSER AND SAGE UNSER BLVD ABQ, NM	DRAWN BY LN
		DATE 7-31-2020
	EXHIBIT A	DRAWING
		SHEET #
RONALD R. BOHANNAN P.E. #7868	 TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	JOB # 2019061



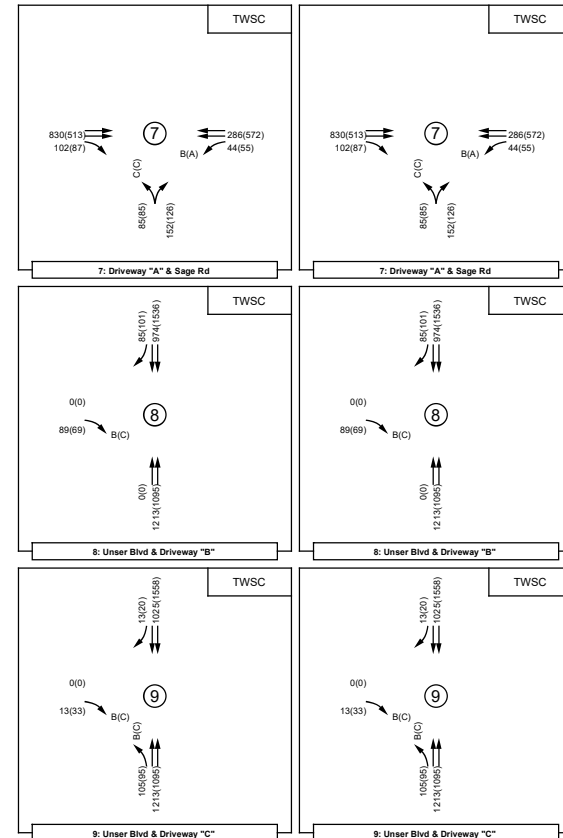


Unser and Sage Development
2025 (INTERSECTIONS 1-4)
LOS / Volume Analysis Map

AM(PM)



Unser and Sage Development
 2025 (INTERSECTIONS 1-6)
 LOS / Volume Analysis Map



Unser and Sage Development
(SW Corner)
LOS / Volume Analysis Map

Synchro Results Summary Sheet

1: Unser Blvd & Sapphire St/Arenal Rd

2025_Conditions

Arenal Rd.

Unser Blvd.

Signalized

Unser Blvd. / Arenal Rd. 2025_Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	1	1	1	2	1	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.65	0.39		0.50	0.29		0.15	0.45		0.53	0.34	
Level-of-Service	D	D		D	C		B	C		B	A	
Control Delay (Seconds)	51.2	45.1	0.0	37.6	34.7	0.0	19.0	22.1	0.0	14.0	0.4	0.0
Intersection LOS	C - 20.9											
95th Percentile Queue (veh)	8.8	5.5	0.0	7.1	6.2	0.0	1.9	11.5	0.0	4.9	0.2	0.0
2025_BUILD Volumes	181	230	63	163	149	297	63	801	235	261	753	50
V/C Ratio	0.66	0.37		0.49	0.28		0.16	0.49		0.59	0.36	
Level-of-Service	D	D		D	C		C	C		B	A	
Control Delay (Seconds)	50.8	44.3	0.0	36.8	34.0	0.0	20.3	23.9	0.0	15.3	0.5	0.0
Intersection LOS	C - 21.2											
95th Percentile Queue (veh)	9.1	5.4	0.0	7.0	6.1	0.0	2.0	12.5	0.0	5.5	0.3	0.0

PM Peak Hour

2025_NOBUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.31		0.65	0.31		0.09	0.31		0.51	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	53.5	45.3	0.0	12.6	14.3	0.0	8.4	0.4	0.0
Intersection LOS	B - 15.2											
95th Percentile Queue (veh)	4.1	2.3	0.0	9.9	5.6	0.0	0.9	8.2	0.0	4.8	0.2	0.0
2025_BUILD Volumes	77	81	63	190	113	409	36	674	163	336	1,002	140
V/C Ratio	0.49	0.29		0.63	0.30		0.10	0.34		0.56	0.40	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.0	56.9	0.0	51.8	44.4	0.0	13.6	15.6	0.0	9.3	0.5	0.0
Intersection LOS	B - 15.5											
95th Percentile Queue (veh)	4.6	2.3	0.0	9.8	5.6	0.0	1.0	9.0	0.0	5.4	0.3	0.0

Synchro Results Summary Sheet

2: Unser Blvd & Sage Rd

2025_Conditions

Sage Rd.

Unser Blvd.

Signalized

Unser Blvd. / Sage Rd. 2025_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
Existing Lane Geometry	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NOBUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.83	0.86		0.29	0.48		0.18	0.51		0.26	0.36	
Level-of-SERVICE	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	56.9	60.0	0.0	46.1	50.7	0.0	9.6	16.0	0.0	11.7	0.5	0.0
Intersection LOS	C - 22.9											
95th Percentile Queue (veh)	4.8	15.7	0.0	2.0	5.6	0.0	1.8	12.6	0.0	1.6	0.3	0.0
2025_BUILD Volumes	384	362	213	50	127	86	95	1,018	100	86	772	99
V/C Ratio	1.06	0.87		0.33	0.48		0.18	0.52		0.28	0.39	
Level-of-SERVICE	F	E		D	D		B	C		B	A	
Control Delay (Seconds)	112.0	63.6	0.0	42.8	47.4	0.0	10.9	26.2	0.0	14.1	0.6	0.0
Intersection LOS	D - 35.7											
95th Percentile Queue (veh)	16.4	18.5	0.0	1.8	4.4	0.0	1.9	17.7	0.0	1.7	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_MITIGATIONS Volumes	384	362	213	50	127	86	95	1,018	100	86	772	99
V/C Ratio	0.75	0.37	0.43	0.24	0.36		0.23	0.57		0.33	0.44	
Level-of-SERVICE	D	D	D	D	D		B	D		B	B	
Control Delay (Seconds)	46.5	45.3	42.2	46.4	50.5	0.0	14.8	39.5	0.0	18.8	12.9	0.0
Intersection LOS	C - 33.8											
95th Percentile Queue (veh)	16.7	9.4	10.3	1.9	2.4	0.0	2.3	21.8	0.0	2.0	7.6	0.0
PM Peak Hour												
2025_NOBUILD Volumes	127	136	250	136	209	59	200	858	64	95	1,167	163
V/C Ratio	0.58	0.57		0.50	0.84		0.57	0.39		0.19	0.56	
Level-of-SERVICE	D	E		D	E		B	A		A	B	
Control Delay (Seconds)	49.9	60.5	0.0	45.5	61.0	0.0	13.8	0.5	0.0	10.0	17.7	0.0
Intersection LOS	B - 19.9											
95th Percentile Queue (veh)	6.9	8.1	0.0	6.7	10.9	0.0	3.5	0.3	0.0	1.9	15.7	0.0
2025_BUILD Volumes	211	164	250	147	230	59	200	832	64	95	1,215	183
V/C Ratio	0.85	0.58		0.51	0.85		0.62	0.40		0.19	0.62	
Level-of-SERVICE	E	E		D	E		B	A		B	C	
Control Delay (Seconds)	71.6	59.5	0.0	43.5	59.5	0.0	17.8	0.6	0.0	11.6	21.0	0.0
Intersection LOS	C - 24.4											
95th Percentile Queue (veh)	4.7	9.7	0.0	6.8	11.5	0.0	4.1	0.3	0.0	2.1	17.9	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_MITIGATIONS Volumes	211	164	250	147	230	59	200	832	64	95	1,215	183
V/C Ratio	0.62	0.28	0.69	0.46	0.51		0.63	0.41		0.23	0.62	
Level-of-SERVICE	D	D	D	D	D		B	B		B	C	
Control Delay (Seconds)	44.0	47.8	50.2	44.7	53.0	0.0	19.3	15.8	0.0	12.8	21.6	0.0
Intersection LOS	C - 27.8											
95th Percentile Queue (veh)	9.9	4.2	12.3	5.6	4.9	0.0	4.4	10.9	0.0	2.1	18.1	0.0

Synchro Results Summary Sheet

3: Unser Blvd & Tower Rd

2025_Conditions

Tower Rd.

Unser Blvd.

Signalized

Unser Blvd. / Tower Rd. 2025_Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	2	1	1	2>	0	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.51	0.28		0.21	0.21		0.04	0.38		0.05	0.18	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	55.2	48.8	0.0	52.1	48.2	0.0	4.3	0.4	0.0	4.3	5.5	0.0
Intersection LOS	B - 11.1											
95th Percentile Queue (veh)	5.2	2.9	0.0	1.9	2.1	0.0	0.3	0.3	0.0	0.3	3.0	0.0
2025_BUILD Volumes	95	118	81	41	86	63	45	1,013	41	27	496	59
V/C Ratio	0.51	0.28		0.24	0.21		0.06	0.39		0.06	0.19	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	55.2	48.8	0.0	52.4	48.2	0.0	4.3	0.5	0.0	4.4	5.7	0.0
Intersection LOS	B - 10.9											
95th Percentile Queue (veh)	5.2	2.9	0.0	2.1	2.1	0.0	0.5	0.3	0.0	0.3	3.2	0.0

PM Peak Hour

2025_NOBUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.43	0.23		0.26	0.51		0.40	0.37		0.11	0.55	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	56.1	45.4	0.0	49.4	48.0	0.0	9.6	8.4	0.0	6.7	11.5	0.0
Intersection LOS	B - 16.8											
95th Percentile Queue (veh)	3.5	2.8	0.0	2.7	6.7	0.0	1.8	7.9	0.0	0.7	13.0	0.0
2025_BUILD Volumes	63	118	113	59	267	77	148	946	37	50	1,344	131
V/C Ratio	0.43	0.23		0.28	0.51		0.46	0.39		0.11	0.57	
Level-of-Service	E	D		D	D		B	A		A	B	
Control Delay (Seconds)	56.1	45.4	0.0	49.7	48.0	0.0	10.6	8.5	0.0	6.8	11.9	0.0
Intersection LOS	B - 16.9											
95th Percentile Queue (veh)	3.5	2.8	0.0	3.0	6.7	0.0	2.0	8.3	0.0	0.7	13.7	0.0

Synchro Results Summary Sheet

4: Coors Blvd & Sage Rd

2025_Conditions

Sage Rd.

Coors Blvd.

Signalized

Coors Blvd. / Sage Rd. 2025_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
AM Peak Hour												
2025_NOBUILD Volumes	249	199	66	46	129	162	21	1,060	17	54	582	75
V/C Ratio	5.33	0.00	0.15	0.81	0.00	0.38	0.05	0.99	0.04	0.15	0.44	0.13
Level-of-Service	F	A	B	D	A	C	B	D	B	B	B	B
Control Delay (Seconds)	999.0	0.0	18.7	41.4	0.0	20.3	13.4	49.6	16.7	13.7	16.9	14.4
Intersection LOS	F - 367.2											
95th Percentile Queue (veh)	79.5	0.0	1.3	5.8	0.0	3.5	0.3	16.4	0.3	0.7	5.4	1.3
2025_BUILD Volumes	316	220	72	94	175	234	25	1,137	17	54	585	80
V/C Ratio	6.25	0.00	0.17	1.76	0.00	0.55	0.06	1.07	0.04	0.15	0.46	0.14
Level-of-Service	F	A	B	F	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	18.8	393.0	0.0	22.3	13.1	70.6	16.7	13.9	17.6	15.0
Intersection LOS	F - 499.1											
95th Percentile Queue (veh)	96.2	0.0	1.5	31.1	0.0	5.4	0.4	21.1	0.3	0.7	5.6	1.4

PM Peak Hour

2025_NOBUILD Volumes	58	66	4	91	266	199	83	860	179	91	790	112
V/C Ratio	1.16	0.00	0.01	2.80	0.00	0.41	0.19	0.74	0.35	0.22	0.67	0.21
Level-of-Service	F	A	C	F	A	C	B	C	C	B	C	C
Control Delay (Seconds)	170.0	0.0	21.4	860.0	0.0	24.9	15.1	31.1	24.7	15.7	28.9	22.5
Intersection LOS	F - 140.2											
95th Percentile Queue (veh)	11.3	0.0	0.1	55.9	0.0	5.9	1.5	12.8	5.3	1.7	11.5	3.1
2025_BUILD Volumes	91	83	9	131	312	255	89	892	179	91	792	129
V/C Ratio	1.75	0.00	0.02	5.25	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F	A	C	F	A	C	B	C	C	B	C	C
Control Delay (Seconds)	409.0	0.0	21.5	999.0	0.0	26.4	15.1	32.1	24.7	16.0	29.3	23.2
Intersection LOS	F - 331.9											
95th Percentile Queue (veh)	22.5	0.0	0.2	80.2	0.0	7.8	1.6	13.5	5.3	1.7	11.6	3.6

Synchro Results Summary Sheet

5: 86th Street & Sage Rd

2025_Conditions

Sage Rd.

86th St.

Signalized

86th St. / Sage Rd. 2025_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (86th St.)			SB (86th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
AM Peak Hour												
2025_NOBUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.80	0.80	0.27	0.46	0.48	0.00	0.00	0.17	0.05	0.00	0.07
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	40.1	50.7	50.6	41.0	37.0	37.2	7.3	0.0	7.8	8.8	0.0	7.1
Intersection LOS	D - 35.8											
95th Percentile Queue (veh)	2.6	12.7	13.1	1.7	5.2	5.3	0.1	0.0	3.4	0.8	0.0	1.3
2025_BUILD Volumes	59	588	13	54	257	71	4	114	96	55	30	51
V/C Ratio	0.24	0.81	0.81	0.34	0.48	0.50	0.00	0.00	0.19	0.07	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A	A	A	B	A	A
Control Delay (Seconds)	37.9	49.6	49.5	38.4	33.9	34.1	8.4	0.0	9.0	10.5	0.0	8.1
Intersection LOS	C - 34.8											
95th Percentile Queue (veh)	2.5	13.5	14.0	2.3	6.0	6.0	0.1	0.0	4.1	1.2	0.0	1.4

PM Peak Hour

2025_NOBUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.55	0.56	0.25	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	46.0	50.7	50.8	43.1	47.3	47.6	8.4	0.0	6.9	7.5	0.0	7.6
Intersection LOS	D - 36.8											
95th Percentile Queue (veh)	2.8	8.8	9.0	2.4	9.7	9.9	0.3	0.0	1.9	0.5	0.0	3.7
2025_BUILD Volumes	55	344	42	66	453	67	17	85	40	42	110	93
V/C Ratio	0.36	0.59	0.60	0.31	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.18
Level-of-Service	D	D	D	D	D	D	A	A	A	A	A	A
Control Delay (Seconds)	44.5	50.6	50.8	41.1	46.1	46.4	9.3	0.0	7.8	8.6	0.0	8.3
Intersection LOS	D - 36.7											
95th Percentile Queue (veh)	2.7	9.8	10.0	3.1	11.0	11.2	0.3	0.0	2.3	0.8	0.0	3.9

Synchro Results Summary Sheet

6: Unser Blvd & San Ygnacio Rd

2025_Conditions

San Ygnacio Rd.

Unser Blvd.

Unsignalized

Unser Blvd. / San Ygnacio Rd. 2025_Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
AM Peak Hour												
2025_NOBUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.07			0.03						
Level-of-Service			B			C						
Control Delay (Seconds)			12.6			16.5						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.2			0.1						
2025_BUILD Volumes	0	0	34	0	0	11	0	1,672	11	0	1,073	11
V/C Ratio			0.07			0.04						
Level-of-Service			B			C						
Control Delay (Seconds)			13.0			17.1						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.2			0.1						

PM Peak Hour

2025_NOBUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.11			0.03						
Level-of-Service			C			B						
Control Delay (Seconds)			17.7			13.3						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.4			0.1						
2025_BUILD Volumes	0	0	34	0	0	11	0	1,237	11	0	1,677	34
V/C Ratio			0.11			0.03						
Level-of-Service			C			B						
Control Delay (Seconds)			18.5			13.6						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.4			0.1						

Synchro Results Summary Sheet

7: Driveway "A" & Sage Rd

2025_Conditions

Sage Rd.

Driveway "A"

Unsignalized

Driveway "A" / Sage Rd. 2025_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry									
AM Peak Hour									
2025_BUILD Volumes		830	102	44	286		85		152
V/C Ratio				0.06			0.53		
Level-of-Service				B			C		
Control Delay (Seconds)				10.2			21.9		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.2			3.0		

PM Peak Hour

2025_BUILD Volumes		513	87	55	572		85		126
V/C Ratio				0.06			0.39		
Level-of-Service				A			C		
Control Delay (Seconds)				8.9			15.8		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.2			1.8		

Synchro Results Summary Sheet

8: Unser Blvd & Driveway "B"

2025_Conditions

Driveway "B"

Unser Blvd.

Unsignalized

Unser Blvd. / Driveway "B" 2025_Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	0	2			2	1
AM Peak Hour									
2025_BUILD Volumes	0		13	105	1,213			1,025	13
V/C Ratio			0.03	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.3	11.4					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.1						

PM Peak Hour

2025_BUILD Volumes	0		13	105	1,213			1,025	13
V/C Ratio			0.03	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.3	11.4					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.1						

Synchro Results Summary Sheet

9: Unser Blvd & Driveway "C"

2025_Conditions

Driveway "C"

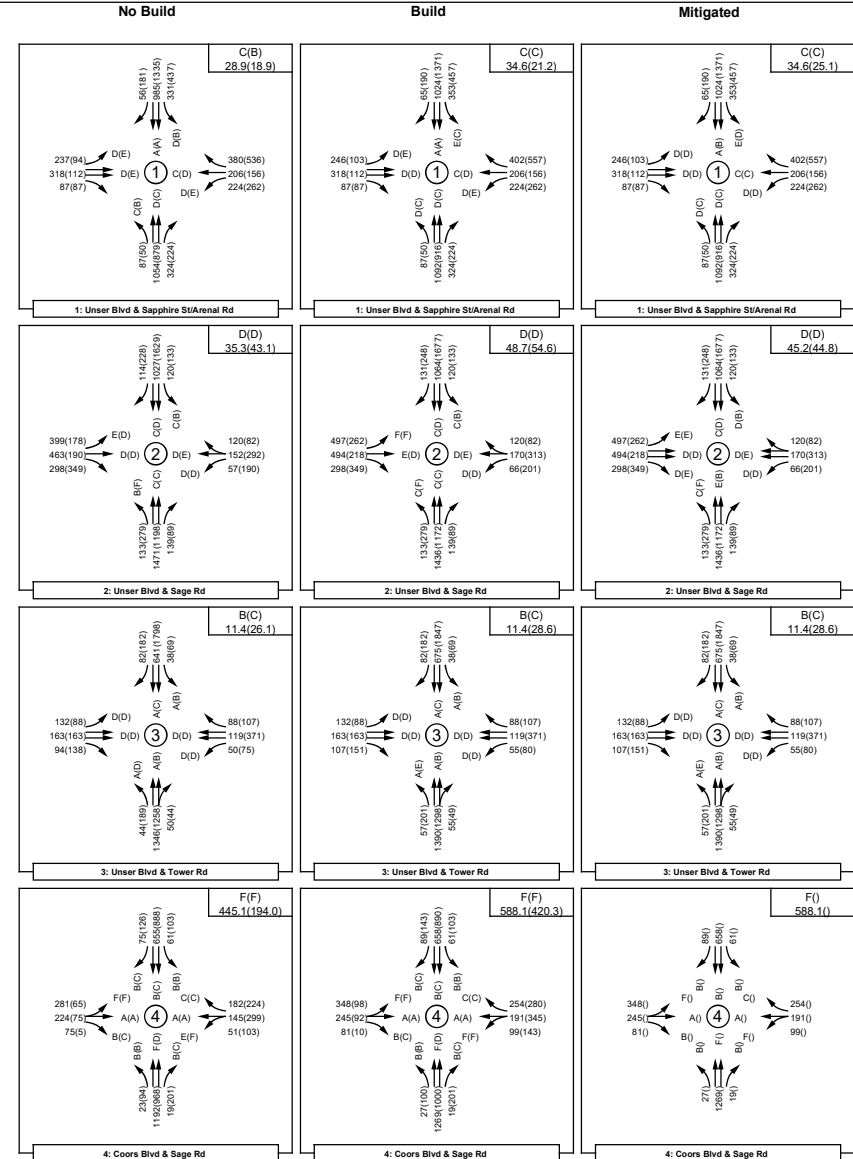
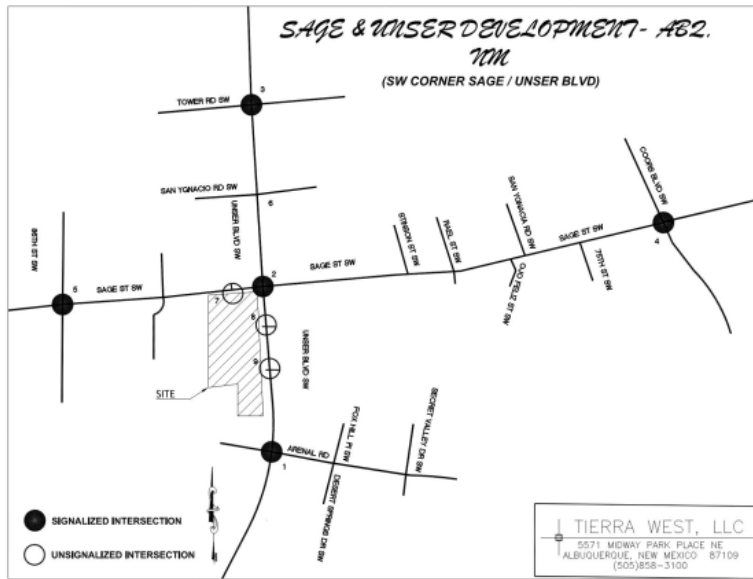
Unser Blvd.

Unsignalized

Unser Blvd. / Driveway "C" 2025_Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	1	2			2	1
AM Peak Hour									
2025_BUILD Volumes	0		34	105	1,213			1,005	18
V/C Ratio			0.07	0.16					
Level-of-Service			B	B					
Control Delay (Seconds)			12.5	11.3					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.2	0.5					

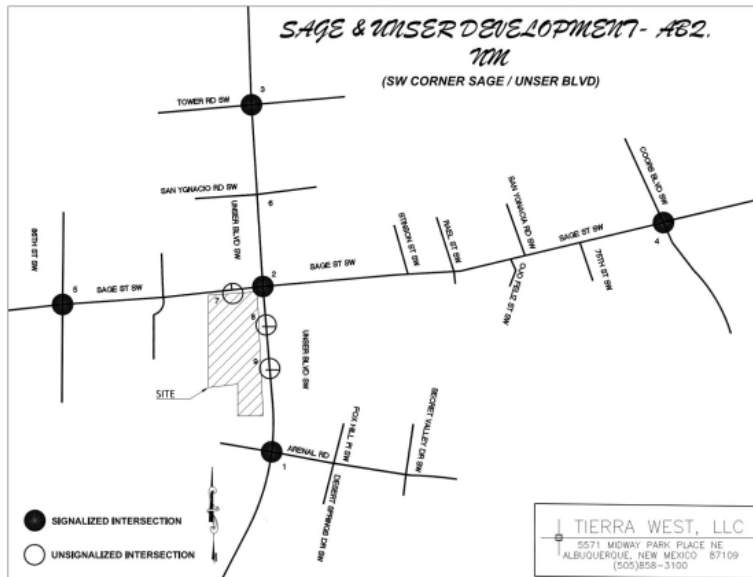
PM Peak Hour

2025_BUILD Volumes	0		33	95	1,095			1,558	20
V/C Ratio			0.10	0.23					
Level-of-Service			C	C					
Control Delay (Seconds)			16.8	16.3					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.3	0.9					

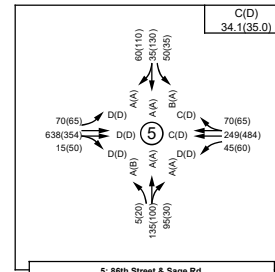


Unser and Sage Development
 2035 (Intersections 1-4)
 LOS / Volume Analysis Map

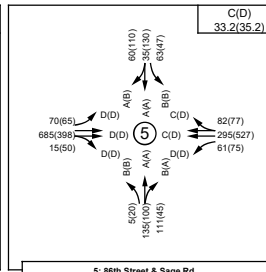
AM(PM)



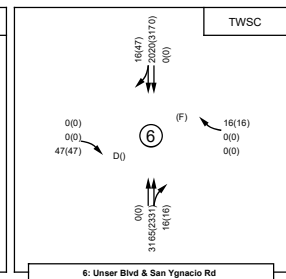
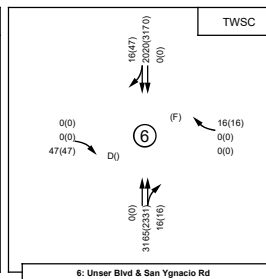
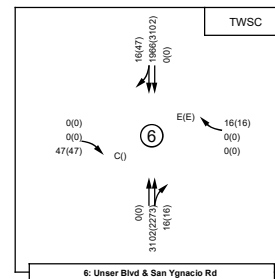
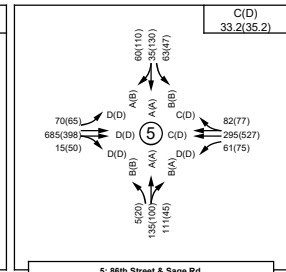
2035_NOBUILD



2035_BUILD



2035_MITIGATIONS

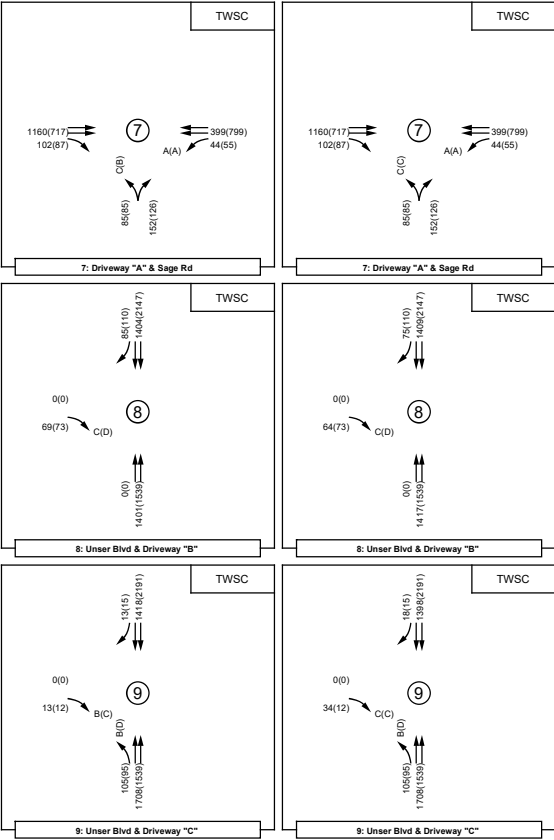
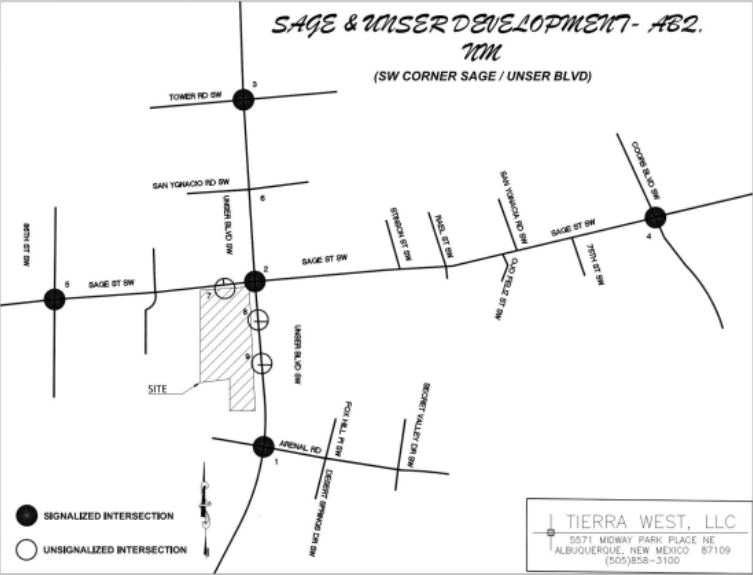


Unser and Sage Development
 2035 (INTERSECTIONS 5-6)
 LOS / Volume Analysis Map

2035_NOBUILD

2035_BUILD

2035_MITIGATIONS



Unser and Sage Development
(SW Corner)
LOS / Volume Analysis Map

Synchro Results Summary Sheet

1: Unser Blvd & Sapphire St/Arenal Rd

2035_Conditions

Arenal Rd.

Unser Blvd.

Signalized

Arenal Rd. / Unser Blvd. 2035_Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	1	1	1	2	1	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	237	318	87	224	206	380	87	1,054	324	331	985	56
V/C Ratio	0.72	0.39		0.62	0.33		0.33	0.82		0.92	0.52	
Level-of-Service	D	D		D	C		C	D		D	A	
Control Delay (Seconds)	49.6	39.6	0.0	37.1	30.0	0.0	32.1	40.7	0.0	42.1	0.8	0.0
Intersection LOS	C - 28.9											
95th Percentile Queue (veh)	11.5	7.1	0.0	2.6	7.8	0.0	3.7	20.8	0.0	10.0	0.4	0.0
2035_BUILD Volumes	246	318	87	224	206	402	87	1,092	324	353	1,024	65
V/C Ratio	0.73	0.38		0.60	0.32		0.36	0.94		0.95	0.55	
Level-of-Service	D	D		D	C		D	D		E	A	
Control Delay (Seconds)	49.8	38.9	0.0	35.9	29.4	0.0	36.4	54.2	0.0	57.9	1.2	0.0
Intersection LOS	C - 34.6											
95th Percentile Queue (veh)	11.9	7.0	0.0	2.4	7.8	0.0	4.0	24.3	0.0	13.5	0.5	0.0

PM Peak Hour

2035_NOBUILD Volumes	94	112	87	262	156	536	50	879	224	437	1,335	181
V/C Ratio	0.54	0.32		0.84	0.38		0.19	0.49		0.81	0.55	
Level-of-Service	E	E		E	D		B	C		B	A	
Control Delay (Seconds)	59.9	55.2	0.0	67.4	43.7	0.0	20.0	22.4	0.0	13.0	0.1	0.0
Intersection LOS	B - 18.9											
95th Percentile Queue (veh)	5.6	3.1	0.0	6.7	7.7	0.0	1.7	13.6	0.0	5.0	0.1	0.0
2035_BUILD Volumes	103	112	87	262	156	557	50	916	224	457	1,371	190
V/C Ratio	0.56	0.30		0.81	0.37		0.20	0.53		0.86	0.57	
Level-of-Service	E	D		E	D		C	C		C	A	
Control Delay (Seconds)	59.5	54.3	0.0	63.3	42.8	0.0	21.7	24.5	0.0	26.7	1.0	0.0
Intersection LOS	C - 21.2											
95th Percentile Queue (veh)	6.1	3.1	0.0	6.1	7.6	0.0	1.8	14.8	0.0	10.1	0.6	0.0

Synchro Results Summary Sheet

2: Unser Blvd & Sage Rd

2035_Conditions

Sage Rd.

Unser Blvd.

Signalized

Sage Rd. / Unser Blvd. 2035_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
AM Peak Hour												
Untitled Volumes	399	463	298	57	152	120	133	1,471	139	120	1,027	114
V/C Ratio	0.97	0.92		0.37	0.42		0.43	0.85		0.61	0.60	
Level-of-Service	E	D		D	D		B	C		C	C	
Control Delay (Seconds)	68.8	54.7	0.0	39.1	42.7	0.0	17.7	29.4	0.0	28.1	23.9	0.0
Intersection LOS	D - 35.3											
95th Percentile Queue (veh)	12.3	19.8	0.0	2.4	6.0	0.0	3.2	22.7	0.0	3.1	15.6	0.0
Untitled Volumes	497	494	298	66	170	120	133	1,436	139	120	1,064	131
V/C Ratio	1.17	0.93		0.42	0.43		0.47	0.86		0.62	0.64	
Level-of-Service	F	E		D	D		C	C		C	C	
Control Delay (Seconds)	141.0	61.6	0.0	37.1	40.9	0.0	20.3	34.5	0.0	29.1	26.5	0.0
Intersection LOS	D - 48.7											
95th Percentile Queue (veh)	26.6	23.6	0.0	2.1	5.4	0.0	3.4	25.9	0.0	3.3	17.0	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
Untitled Volumes	497	494	298	66	170	120	133	1,436	139	120	1,064	131
V/C Ratio	0.90	0.47	0.54	0.32	0.48		0.48	0.88		0.69	0.66	
Level-of-Service	E	D	D	D	D		C	E		D	C	
Control Delay (Seconds)	60.6	45.8	41.6	46.5	52.0	0.0	22.2	55.3	0.0	36.6	27.8	0.0
Intersection LOS	D - 45.2											
95th Percentile Queue (veh)	23.1	12.1	13.4	3.2	4.4	0.0	3.7	32.3	0.0	3.8	17.4	0.0
PM Peak Hour												
Untitled Volumes	178	190	349	190	292	82	279	1,198	89	133	1,629	228
V/C Ratio	0.72	0.57		0.59	0.87		1.16	0.63		0.46	0.93	
Level-of-Service	D	D		D	E		F	C		B	D	
Control Delay (Seconds)	48.4	50.2	0.0	41.4	57.9	0.0	134.0	22.2	0.0	19.1	40.9	0.0
Intersection LOS	D - 43.1											
95th Percentile Queue (veh)	8.6	9.4	0.0	8.3	14.1	0.0	19.7	16.7	0.0	3.5	33.2	0.0
Untitled Volumes	262	218	349	201	313	82	279	1,172	89	133	1,677	248
V/C Ratio	1.05	0.62		0.63	0.88		1.23	0.63		0.46	0.98	
Level-of-Service	F	D		D	E		F	C		B	D	
Control Delay (Seconds)	116.0	50.1	0.0	41.1	57.2	0.0	179.0	23.8	0.0	19.8	50.3	0.0
Intersection LOS	D - 54.6											
95th Percentile Queue (veh)	11.9	10.8	0.0	8.3	14.6	0.0	24.2	18.4	0.0	3.6	37.3	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
Untitled Volumes	262	218	349	201	313	82	279	1,172	89	133	1,677	248
V/C Ratio	0.87	0.44	0.82	0.65	0.64		0.96	0.59		0.42	0.97	
Level-of-Service	E	D	E	D	E		F	B		B	D	
Control Delay (Seconds)	68.8	51.8	57.3	46.9	55.6	0.0	86.1	20.0	0.0	17.6	47.9	0.0
Intersection LOS	D - 44.8											
95th Percentile Queue (veh)	6.6	5.9	17.6	9.9	8.7	0.0	18.1	16.8	0.0	3.6	36.5	0.0

Synchro Results Summary Sheet

3: Unser Blvd & Tower Rd

2035_Conditions

Tower Rd.

Unser Blvd.

Signalized

Tower Rd. / Unser Blvd. 2035_Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2	1	1	2	1	1	2>	0	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	132	163	94	50	119	88	44	1,346	50	38	641	82
V/C Ratio	0.59	0.29		0.25	0.21		0.08	0.56		0.10	0.27	
Level-of-Service	D	D		D	D		A	A		A	A	
Control Delay (Seconds)	53.3	44.9	0.0	49.4	44.2	0.0	5.9	0.9	0.0	5.8	7.9	0.0
Intersection LOS	B - 11.4											
95th Percentile Queue (veh)	7.2	3.9	0.0	2.5	2.8	0.0	0.6	0.6	0.0	0.5	5.4	0.0
2035_BUILD Volumes	132	163	107	55	119	88	57	1,390	55	38	675	82
V/C Ratio	0.59	0.29		0.27	0.21		0.10	0.58		0.11	0.28	
Level-of-Service	D	D		D	D		A	A		A	A	
Control Delay (Seconds)	53.3	44.9	0.0	49.7	44.2	0.0	6.0	1.0	0.0	6.0	8.2	0.0
Intersection LOS	B - 11.4											
95th Percentile Queue (veh)	7.2	3.9	0.0	2.8	2.8	0.0	0.7	0.6	0.0	0.5	5.8	0.0

PM Peak Hour

2035_NOBUILD Volumes	88	163	138	75	371	107	189	1,258	44	69	1,798	182
V/C Ratio	0.52	0.23		0.29	0.52		0.87	0.57		0.23	0.86	
Level-of-Service	D	D		D	D		D	B		B	C	
Control Delay (Seconds)	54.9	40.4	0.0	45.5	43.4	0.0	53.1	14.1	0.0	11.5	25.0	0.0
Intersection LOS	C - 26.1											
95th Percentile Queue (veh)	4.8	3.6	0.0	3.6	8.6	0.0	8.1	14.2	0.0	1.3	27.5	0.0
2035_BUILD Volumes	88	163	151	80	371	107	201	1,298	49	69	1,847	182
V/C Ratio	0.52	0.23		0.31	0.52		0.88	0.59		0.24	0.90	
Level-of-Service	D	D		D	D		E	B		B	C	
Control Delay (Seconds)	54.9	40.4	0.0	45.8	43.4	0.0	63.5	14.5	0.0	12.2	29.4	0.0
Intersection LOS	C - 28.6											
95th Percentile Queue (veh)	4.8	3.6	0.0	3.9	8.6	0.0	12.2	14.9	0.0	1.3	30.5	0.0

Synchro Results Summary Sheet

4: Coors Blvd & Sage Rd

2035_Conditions

Sage Rd.

Coors Blvd.

Signalized

Sage Rd. / Coors Blvd. 2035_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
AM Peak Hour												
2035_NOBUILD Volumes	281	224	75	51	145	182	23	1,192	19	61	655	75
V/C Ratio	6.08	0.00	0.18	0.91	0.00	0.43	0.06	1.13	0.04	0.16	0.50	0.13
Level-of-Service	F	A	B	E	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	19.2	60.6	0.0	21.2	13.6	94.7	17.0	13.5	17.7	14.5
Intersection LOS	F - 445.1											
95th Percentile Queue (veh)	90.6	0.0	1.5	8.1	0.0	4.1	0.4	26.3	0.4	0.8	6.4	1.3
2035_BUILD Volumes	348	245	81	99	191	254	27	1,269	19	61	658	89
V/C Ratio	7.00	0.00	0.19	2.03	0.00	0.60	0.06	1.20	0.04	0.16	0.51	0.16
Level-of-Service	F	A	B	F	A	C	B	F	B	B	B	B
Control Delay (Seconds)	999.0	0.0	19.3	514.0	0.0	23.9	13.2	125.0	17.0	13.7	18.4	15.2
Intersection LOS	F - 588.1											
95th Percentile Queue (veh)	107.3	0.0	1.7	37.4	0.0	6.3	0.4	33.0	0.4	0.8	6.6	1.6

PM Peak Hour

2035_NOBUILD Volumes	65	75	5	103	299	224	94	968	201	103	888	126
V/C Ratio	1.31	0.00	0.01	3.65	0.00	0.46	0.23	0.84	0.39	0.26	0.76	0.24
Level-of-Service	F	A	C	F	A	C	B	D	C	B	C	C
Control Delay (Seconds)	225.0	0.0	21.6	999.0	0.0	25.7	16.0	35.6	25.7	17.0	31.8	23.2
Intersection LOS	F - 194.0											
95th Percentile Queue (veh)	14.4	0.0	0.1	67.9	0.0	6.8	1.8	15.2	6.1	1.9	13.4	3.5
2035_BUILD Volumes	98	92	10	143	345	280	100	1,000	201	103	890	143
V/C Ratio	1.90	0.00	0.02	6.57	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Level-of-Service	F	A	C	F	A	C	B	D	C	B	C	C
Control Delay (Seconds)	475.0	0.0	21.7	999.0	0.0	27.8	16.1	37.4	25.7	17.3	32.2	23.8
Intersection LOS	F - 420.3											
95th Percentile Queue (veh)	25.9	0.0	0.3	90.6	0.0	8.7	1.9	16.0	6.1	1.9	13.5	4.1

Synchro Results Summary Sheet

5: 86th Street & Sage Rd

2035_Conditions

Sage Rd.

86th St.

Signalized

Sage Rd. / 86th St. 2035_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (86th St.)			SB (86th St.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
AM Peak Hour												
2035_NOBUILD Volumes	70	638	15	45	249	70	5	135	95	50	35	60
V/C Ratio	0.26	0.81	0.81	0.30	0.46	0.48	0.01	0.00	0.21	0.07	0.00	0.09
Level-of-Service	D	D	D	D	C	C	A	A	A	B	A	A
Control Delay (Seconds)	36.9	48.4	48.3	38.3	32.9	33.1	9.1	0.0	9.7	11.4	0.0	8.7
Intersection LOS	C - 34.1											
95th Percentile Queue (veh)	3.0	14.4	14.9	1.9	5.7	5.8	0.1	0.0	4.7	1.1	0.0	1.8
2035_BUILD Volumes	70	685	15	61	295	82	5	135	111	63	35	60
V/C Ratio	0.25	0.82	0.82	0.37	0.49	0.50	0.01	0.00	0.23	0.09	0.00	0.09
Level-of-Service	D	D	D	D	C	C	B	A	B	B	A	A
Control Delay (Seconds)	35.0	47.4	47.3	36.1	30.0	30.2	10.3	0.0	11.2	13.4	0.0	9.8
Intersection LOS	C - 33.2											
95th Percentile Queue (veh)	2.9	15.1	15.7	2.5	6.3	6.3	0.1	0.0	5.5	1.6	0.0	1.9

PM Peak Hour

2035_NOBUILD Volumes	65	354	50	60	484	65	20	100	30	35	130	110
V/C Ratio	0.40	0.57	0.58	0.28	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Level-of-Service	D	D	D	D	D	D	B	A	A	A	A	A
Control Delay (Seconds)	43.6	48.5	48.7	40.2	43.4	43.6	10.6	0.0	8.5	9.3	0.0	9.3
Intersection LOS	D - 35.0											
95th Percentile Queue (veh)	3.1	10.0	10.2	2.7	10.5	10.7	0.4	0.0	2.5	0.7	0.0	5.0
2035_BUILD Volumes	65	398	50	75	527	77	20	100	45	47	130	110
V/C Ratio	0.40	0.60	0.61	0.34	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.22
Level-of-Service	D	D	D	D	D	D	B	A	A	B	A	B
Control Delay (Seconds)	42.2	48.4	48.5	38.5	42.8	43.0	11.6	0.0	9.4	10.5	0.0	10.2
Intersection LOS	D - 35.2											
95th Percentile Queue (veh)	3.1	10.9	11.1	3.3	12.1	12.2	0.5	0.0	3.0	1.0	0.0	5.3

Synchro Results Summary Sheet

6: Unser Blvd & San Ygnacio Rd

2035_Conditions

San Ygnacio Rd.

Unser Blvd.

Unsignalized

San Ygnacio Rd. / Unser Blvd. 2035_Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
AM Peak Hour												
2035_NOBUILD Volumes	0	0	47	0	0	16	0	3,102	16	0	1,966	16
V/C Ratio			0.19			0.16						
Level-of-Service			C			E						
Control Delay (Seconds)			23.1			47.2						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.7			0.5						
2035_BUILD Volumes	0	0	47	0	0	16	0	3,165	16	0	2,020	16
V/C Ratio			0.20			0.17						
Level-of-Service			C			E						
Control Delay (Seconds)			24.1			49.9						
Intersection LOS	TWSC											
95th Percentile Queue (veh)			0.7			0.6						

PM Peak Hour

2035_NOBUILD Volumes	0	0	47	0	0	16	0	2,273	16	0	3,102	47
V/C Ratio						0.14						
Level-of-Service						E						
Control Delay (Seconds)						41.7						
Intersection LOS	TWSC											
95th Percentile Queue (veh)						0.5						
2035_BUILD Volumes	0	0	47	0	0	16	0	2,331	16	0	3,170	47
V/C Ratio						0.18						
Level-of-Service						F						
Control Delay (Seconds)						53.5						
Intersection LOS	TWSC											
95th Percentile Queue (veh)						0.6						

Synchro Results Summary Sheet

7: Driveway "A" & Sage Rd

2035_Conditions

Sage Rd.

Driveway "A"

Unsignalized

Sage Rd. / Driveway "A" 2035_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry		2	1	1	2		1>		0
AM Peak Hour									
2035_BUILD Volumes		1,160	102	44	399		85		152
V/C Ratio				0.05			0.42		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			15.7		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.1			2.0		

PM Peak Hour

2035_BUILD Volumes		717	87	55	799		85		126
V/C Ratio				0.05			0.32		
Level-of-Service				A			B		
Control Delay (Seconds)				8.2			13.1		
Intersection LOS	TWSC								
95th Percentile Queue (veh)				0.1			1.4		

Synchro Results Summary Sheet

8: Unser Blvd & Driveway "B"

2035_Conditions

Driveway "B"

Unser Blvd.

Unsignalized

Driveway "B" / Unser Blvd. 2035_Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	0	2			2	1
AM Peak Hour									
2035_BUILD Volumes	0		69	0	1,401			1,404	85
V/C Ratio			0.18						
Level-of-Service			C						
Control Delay (Seconds)			16.5						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.7						

PM Peak Hour

2035_BUILD Volumes	0		64	0	1,417			1,409	75
V/C Ratio			0.17						
Level-of-Service			C						
Control Delay (Seconds)			16.4						
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.6						

Synchro Results Summary Sheet

9: Unser Blvd & Driveway "C"

2035_Conditions

Driveway "C"

Unser Blvd.

Unsignalized

Driveway "C" / Unser Blvd. 2035_Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	0		1	1	2			2	1
AM Peak Hour									
2035_BUILD Volumes	0		13	105	1,708			1,418	13
V/C Ratio			0.03	0.22					
Level-of-Service			B	B					
Control Delay (Seconds)			14.9	14.8					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.1	0.8					

PM Peak Hour

2035_BUILD Volumes	0		34	105	1,708			1,398	18
V/C Ratio			0.09	0.22					
Level-of-Service			C	B					
Control Delay (Seconds)			15.3	14.7					
Intersection LOS	TWSC								
95th Percentile Queue (veh)			0.3	0.8					