Unser and Sage Development

(Albuquerque, New Mexico)

Draft Traffic Impact Study

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Unser and Sage Development
Intersection of Unser Blvd. at Sage Rd., in Albuquerque, NM
Traffic Impact Study

Executive Summary

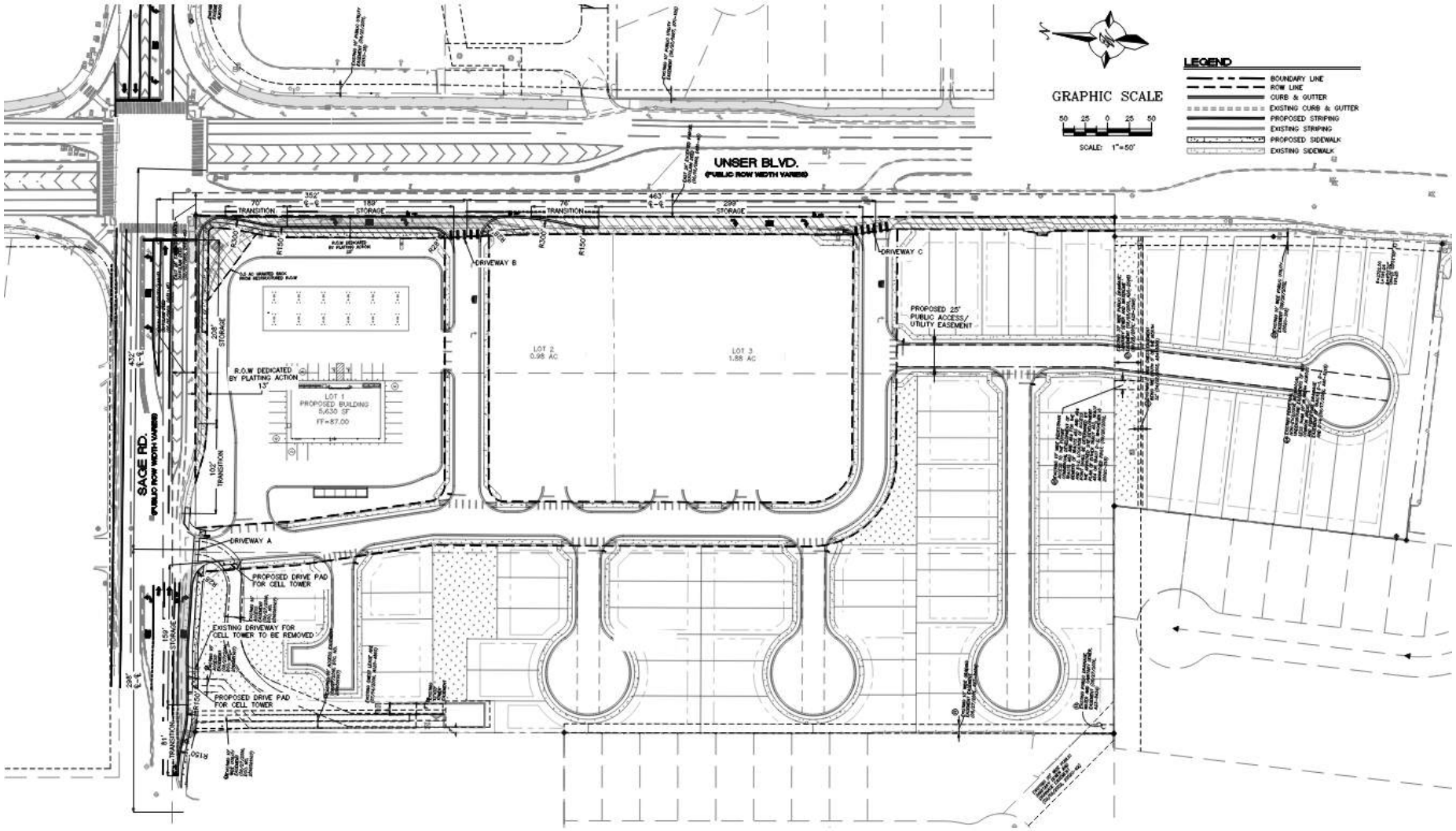
The purpose of this Traffic Impact Study (TIS) is to evaluate transportation conditions before and after the implementation of the proposed Unser and Sage Development, to determine the impact of the site development on the adjacent transportation system, and to recommend mitigation measures where necessary. This TIS is prepared in accordance with the requirements set forth by the City of Albuquerque (COA). The City of Albuquerque's scoping letter for the Unser and Sage Development TIS is included in Appendix on Page A-1.

The proposed Unser and Sage Development site is located at the southwest corner of the intersection of Unser Blvd. and Sage Rd. in the City of Albuquerque, New Mexico. It is approximately 4,500 feet west of Coors Blvd. and approximately 7,000 feet south from U.S. Route 66. See vicinity map below and Appendix Page A-1:

The 15.38-acre Unser and Sage Development is proposed to be fully developed by the projected implementation year of 2025 and evaluated for the horizon year of 2035. The site is expected to generate both residential and commercial developments for the Westside of Albuquerque, serving the needs of the community. The proposed development includes the following facilities:

- One gas station/convenience store with 24 fueling positions
- One fast food restaurant with a drive-thru window (3,820 S.F. G.F.A.)
- 75 multifamily housing units (low-rise)
- One car wash with a single automatic tunnel

The proposed development will be accessed via three full-access driveways, referred to as Driveway “A”, Driveway “B”, and Driveway “C” located along Sage Rd. and Unser Blvd. The site plan, shown below, is included in Appendix A-3.


UNSER BLVD.
(PUBLIC ROW WIDTH VARIES)
SAGE RD.
(PUBLIC ROW WIDTH VARIES)
GRAPHIC SCALE
50 25 0 25 50
SCALE: 1"=50'
LEGEND
BOUNDARY LINE
ROW LINE
CURB & GUTTER
EXISTING CURB & GUTTER
PROPOSED STRIPING
EXISTING STRIPING
PROPOSED SIDEWALK
EXISTING SIDEWALK
DRIVEWAY A
DRIVEWAY B
DRIVEWAY C
LOT 1
PROPOSED BUILDING
5,630 SF
FF=87.00
LOT 2
0.98 AC
LOT 3
1.88 AC
R.O.W DEDICATED
BY PLATTING ACTION
PROPOSED 25'
PUBLIC ACCESS/
UTILITY EASEMENT
PROPOSED DRIVE PAD
FOR CELL TOWER
EXISTING DRIVEWAY FOR
CELL TOWER TO BE REMOVED
PROPOSED DRIVE PAD
FOR CELL TOWER

According to the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition, the ITE codes used for the proposed Unser and Sage Development include the following: ITE Code 945 (Gas Station/Convenience Store, 5.5K–10K GFA), ITE Code 934 (Fast Food Restaurant with Drive-Thru Window), ITE Code 948 (Automated Car Wash), and ITE Code 210 (Multifamily Housing, Low Rise). A 33% pass-by trip rate reduction was applied to the trip generation rates for retail trips only. The following table summarizes the trip generation rates utilized in this Study (Also see Page A-4 through A-8 in the Appendix):

Unser Blvd SW and Sage Rd SW 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 5.5-10K (945)	24	8,298	379	379	323	323
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		**10,587**	**473**	**485**	**461**	**442**
Retail Commercial Trips		**10,081**	**466**	**462**	**428**	**422**
Pass-By Trips	33%		*-154*	*-152*	*-141*	*-139*
Total New Primary Trips			**312**	**310**	**287**	**283**
Total New Residential Trips			**7**	**23**	**33**	**20**

The study area includes the following six intersections and three access points:

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 service tower driveway)
8. Unser Blvd. & Driveway "B" (Proposed – TCC Approval Recently acquired)
9. Unser Blvd. & Driveway "C" (Existing right-in, right-out, and left in only)

Analysis of the study area for this project was performed using Synchro 12 software developed by Trafficware, Inc., a CUBIC company. Reporting in this Traffic Impact Study are the HCM7 (Highway Capacity Manual, 7th Edition) reports from Synchro 12 software. Results of the analysis are summarized in the following table:

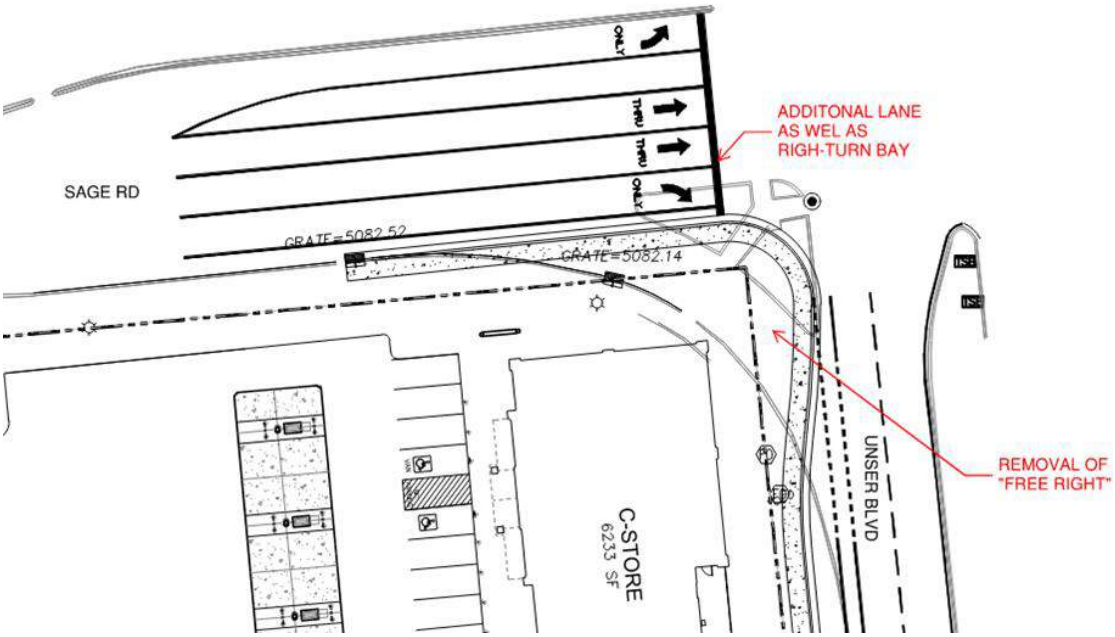
	Intersection Description	Intersection Operation	Case Evaluation	Implementation Year (2025) Conditions		Horizon Year (2035) Conditions	
				AM Peak LOS - Delay (s)	PM Peak LOS - Delay (s)	AM Peak LOS - Delay (s)	PM Peak LOS - Delay (s)
1	Unser Blvd. / Arenal Rd	Signalized	No Build	C (21.2)	B (15.1)	C (28.2)	B (18.8)
			Build	C (21.5)	B (15.3)	D (38.3)	C (21.6)
2	Unser Blvd. / Sage Rd.	Signalized	No Build	C (23.4)	B (16.2)	C (31.4)	C (22.8)
			Build	E (43.2)	C (22.8)	D (52.7)	D (44.8)
			Mitigated	C (29.1)	C (25.7)	D (46.8)	D (49.3)
3	Unser Blvd. / Tower Rd.	Signalized	No Build	B (11.7)	B (14.5)	B (12.7)	C (22.4)
			Build	B (11.4)	B (14.6)	B (12.6)	C (25.3)
4	Coors Blvd. / Sage Rd.	Signalized	No Build	F (610.7)	F (314.7)	F (705.5)	F (410.4)
			Build	F (672.4)	F (338.5)	F (770.1)	F (427.6)
5	86th St. / Sage Rd.	Signalized	No Build	D (38.3)	D (37.1)	D (36.5)	D (35.3)
			Build	D (36.7)	D (37.0)	D (35.0)	D (35.4)
6	Unser Blvd. / San Ygnacio Rd.	Unsignalized	No Build	A (0.2)	A (0.2)	A (0.2)	A (0.3)
			Build	A (0.2)	A (0.2)	A (0.2)	A (0.3)
7	Sage Rd. / Driveway "A"	Unsignalized	No Build	N/A	N/A	N/A	N/A
			Build	C (15.6)	B (12.5)	C (21.0)	B (13.8)
			Mitigated	B (16.1)	B (13.1)	C (19.9)	B (14.0)
8	Unser Blvd/. / Driveway "B"	Unsignalized	No Build	N/A	N/A	N/A	N/A
			Build	B (10.2)	B (11.8)	B (11.2)	B (12.9)
			Mitigated	B (10.5)	B (11.5)	B (11.2)	B (12.9)
9	Unser Blvd/. / Driveway "C"	Unsignalized	No Build	N/A	N/A	N/A	N/A
			Build	B (10.0)	B (13.5)	B (12.2)	D (34.1)
			Mitigated	B (10.0)	B (13.5)	B (12.2)	D (34.1)

The Unser and Sage Development presents four key areas of concern to adjacent transportation system, which are outlined below:

First Concern:

The analysis indicates that the overall signalized intersection of Unser Blvd. and Sage Rd. is projected to experience an increase of 19.4 seconds in delay during the 2025 AM Peak Hour Build condition compared to the No Build condition. This increase is attributed to additional traffic generated by the proposed development, resulting in a degraded LOS “E” at the intersection.

The existing intersection geometry includes one eastbound and one westbound through lane on Sage Rd., as currently striped. However, the available pavement width can accommodate an additional through lane in each direction. Therefore, it is proposed to re-stripe the existing pavement to provide two eastbound and two westbound through lanes. Additional improvements at the southwest corner of the intersection include the removal of the channelized free-flow right-turn lane and modification of traffic signal timing and phasing. These improvements are illustrated in Figure 22 shown below.

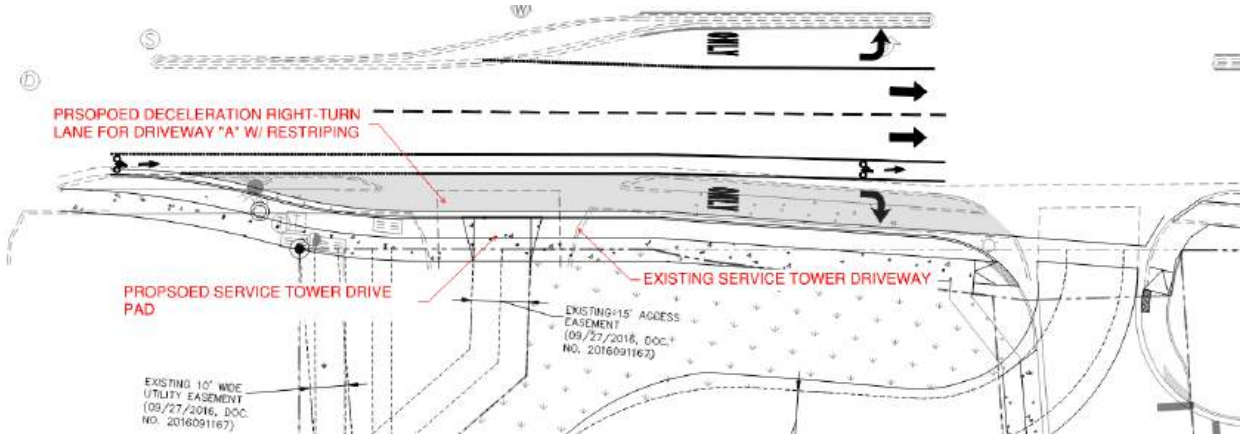


These proposed mitigations are expected to improve the intersection's LOS from the substandard LOS "E" to LOS "C," which matches the No Build condition.

Second Concern:

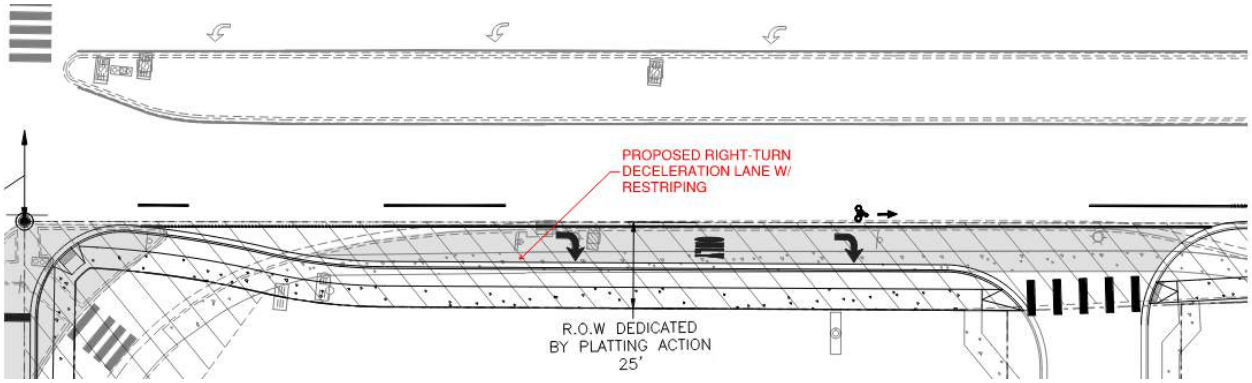
In accordance with the City of Albuquerque DPM Table 7.7.67, an eastbound right-turn deceleration lane into the existing Driveway "A" is warranted. However, with the existing Service Tower driveway in place, there is only approximately 154 feet from centerline to centerline between the Service Tower and Driveway "A"

The Service Tower driveway experiences minimal usage, with an estimated frequency of one trip per month. To reflect this low volume, it is proposed to convert the existing driveway into a drive pad. This change facilitates additional deceleration lane length for Driveway "A." of 240 feet (including taper). These improvements are illustrated on Figure 23 shown below.



Third Concern:

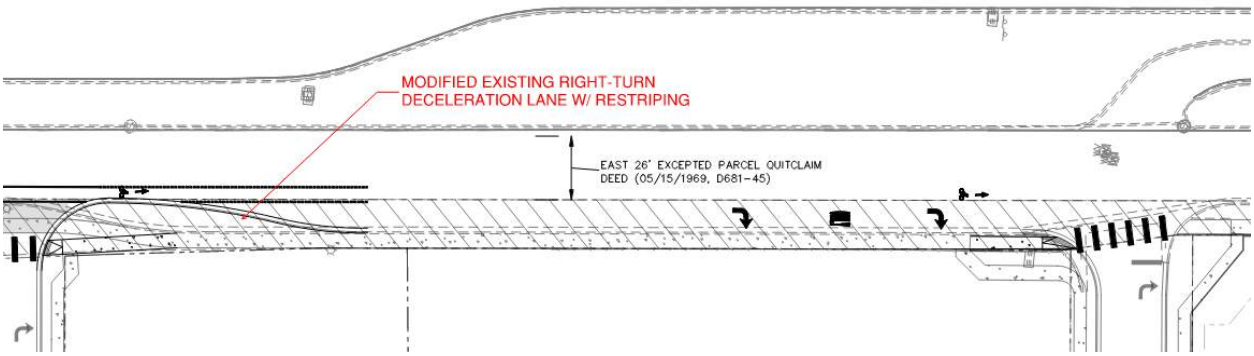
Per DPM Tables 7.7.67 and 7.4.68, a southbound right-turn deceleration lane is warranted on Unser Blvd. at Driveway "B." The proposed deceleration lane provides approximately 260 feet (including taper). However, to address safety, the eastbound right-turn curb return should be extended to the eastern limit of the southbound deceleration lane. These improvements are illustrated on Figure 24 shown below.



Fourth Concern:

According to DPM Table 7.4.68, Driveway "C" warrants a northbound left-turn deceleration lane on Unser Blvd. This lane currently exists and provides 400 feet of storage.

Driveway "C" does not warrant a southbound left-turn deceleration lane; however, the lane currently exists. Due to the proposed mitigation for Driveway "B," the southbound left-turn deceleration lane for Driveway "C" is proposed to be reconfigured to provide approximately 375 feet of length (including taper). These improvements are illustrated in Figure 25 below.



Based on the analysis provided in this Traffic Impact Study, the following recommendations are made:

- General
  - Construction of the Unser and Sage Development and landscaping **shall maintain adequate sight distances** at all access points.
- Unser Blvd. / Sage Blvd.
  - **Optimize signal timing splits** for both the Implementation Year (2025) and the Horizon Year (2035) to improve overall intersection operations and minimize delay.
  - **Adding an additional eastbound and westbound through lane before and after the signalized intersection.** Restriping and additional geometry adjustments are feasible, as there is sufficient width for these lanes from Driveway "A" access point to Abeyta Rd.
  - The channelized free-flow right-turn lane at the southwest corner of intersection should be **removed and replaced with an signalized eastbound right-turn lane at the intersection**. This eastbound right-turn movement will maintain the existing turn-bay storage length of 280 feet.
- Sage Rd. / Driveway "A"
  - It should continue to operate as a full-access driveway with existing width. However, a **new eastbound right-turn deceleration lane is warranted for right-turn access into the development site, with a storage plus transition length of 220 feet**.
  - **Remove and replace the existing Service Tower driveway with a residential type of drive pad**. Proposed drive pad shall be constructed at the centerline of existing driveway to maintain access to the existing 15' private access and utility easement.
- Unser Blvd. / Driveway "B"
  - **A southbound right-turn deceleration lane is warranted to provide southbound right-in to access the development site**. The total storage and transition length will be approximately 260 feet (including taper). To improve safety, the **eastbound right curb return at Sage / Unser should be extended to the east side of the southbound deceleration lane**.

- Unser Blvd. / Driveway “C”
    - Maintain existing right-in/right-out with a left-in only unsignalized driveway.
    - **Reconfigure existing southbound right-turn deceleration lane to be approximately 375 feet (including taper).**

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Traffic Impact Study

Introduction

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The proposed Unser and Sage Development site is located at the southwest corner of the intersection of Unser Blvd. and Sage Rd. in the City of Albuquerque, New Mexico. It is approximately 4,500 feet west of Coors Blvd. and approximately 7,000 feet south from U.S. Route 66. See vicinity map below and Appendix Page A-1.

Figure 1 - Vicinity Map

Description of Proposed Development

Land Use and Intensity

The 15.38-acre development is expected to generate both residential and commercial developments for the Westside of Albuquerque, serving the needs of the community. The proposed development includes the following facilities:

- One gas station/convenience store with 24 fueling positions
- One fast food restaurant with a drive-thru window (3,.820 S.F. G.F.A.)
- 75 multifamily housing units (low-rise)
- One car wash with a single automatic tunnel

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Table 1 - Trip Generation Data

Unser Blvd SW and Sage Rd SW 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 5.5-10K (945)	24	8,298	379	379	323	323
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Pass-By Trips	33%		*-154*	*-152*	*-141*	*-139*
Total New Primary Trips			**312**	**310**	**287**	**283**
Total New Residential Trips			**7**	**23**	**33**	**20**

Development Phasing and Timing

The development will be constructed in a single phase, with an anticipated implementation year of 2025 and a horizon year of 2035.

Existing and Planned Zoning

The proposed development is located within the Geographic Information System IDO Zone Atlas Page M-10-Z. The northern portion of the development, covering approximately 15 acres, is currently zoned Planned Development (PD). The southern portion of the development, totaling 2.62 acres, is zoned Mixed Use – Low Intensity (MX-L). Following platting and EPC site plan approval, the entire development will be rezoned as Planned Development (PD). See Zone Atlas Map below and Appendix Page A-2.

Figure 2 - Zone Atlas Map page M-10-Z

Site Access

There are three access driveways planned for the development: Driveway 'A,' Driveway 'B,' and Driveway "C"

Driveway "A" is an existing full-access driveway located on the south side of Sage Rd., approximately 430 feet west (centerline to centerline) of the Unser Blvd. / Sage Rd. intersection. It is the only full-access driveway serving both the residential and commercial portions of the development.

Driveway "B" is a proposed right-in/right-out access located on the west side of Unser Blvd., approximately 352 feet south (centerline to centerline) of the Unser Blvd. / Sage Rd. intersection. This driveway will help separate most commercial traffic from the residential area.

Driveway "C" is an existing right-in/right-out/left-in access located on the west side of Unser Blvd., approximately 815 feet south (centerline to centerline) of the Unser Blvd. / Sage Rd. intersection. It will provide access to the residential portion while maintaining partial left-in access for northbound traffic entering the commercial area.

The proposed site plan is shown on the following page and in Appendix Page A-3.

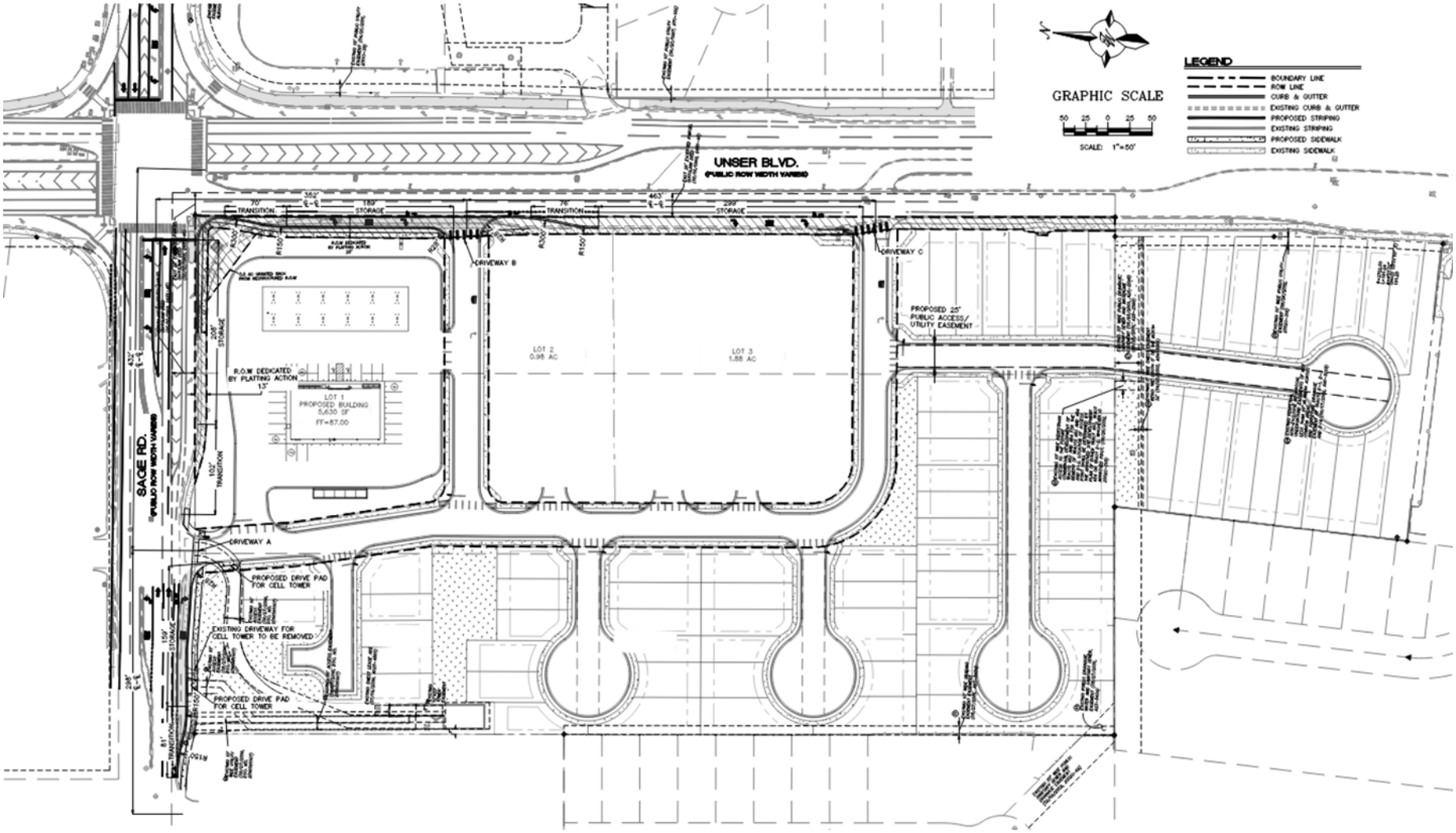


Figure 3 - Proposed Site Plan

Study Area Conditions

The initial Traffic Impact Study (TIS) scoping meeting was held on April 12, 2022. Attendees included Jeanne Wolfenbarger, P.E. (City of Albuquerque), Matthew Grush, P.E. (City of Albuquerque), Julie Luna, P.E. (Bernalillo County), Ronald R. Bohannan, P.E. (Tierra West LLC), Terry Brown, P.E. (Tierra West LLC), and Amanda Herrera, P.E. (Tierra West LLC).

During the meeting, it was determined that the study area for the TIS would include the six intersections and three access points listed below:

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. 86th St. & Sage Rd. (Signalized)
6. Unser Blvd & San Ygnacio Rd (Unsignalized)
7. Sage Rd. & Driveway “A”
8. Unser Blvd & Driveway “B”
9. Unser Blvd & Driveway “C”

Due to recent adjustments in land use and the retail commercial site footprint within the project area, an amended TIS report and updated analysis were deemed necessary. A secondary scoping meeting was held on March 20, 2024. Attendees included Matthew Grush, P.E. (City of Albuquerque), Julie Luna, P.E. (Bernalillo County), Ronald R. Bohannan, P.E. (Tierra West LLC), Terry Brown, P.E. (Tierra West LLC), Derek Bohannan (Tierra West LLC), and Jimeia Roberts (Tierra West LLC).

The City of Albuquerque scoping letter for this TIS is provided in Appendix A-146 through A-148.

Existing land Use

The subject property is currently undeveloped. The surrounding area within the study limits is predominantly developed with residential uses, with limited commercial development present.

Other Planned or Approved Development and Transportation Improvements

Two major developments have been planned or approved within the area of influence defined during the scoping of the Unser Blvd. and Sage Rd. Traffic Impact Study (TIS): the MAS Charter School and the Sage Park Subdivision.

The MAS Charter School was established as a charter institution in 2018, occupying a 16-acre site. Initially serving grades K–5 during the 2018–2019 school year, the school has since

expanded to serve grades K–7 as of the 2021–2022 school year. Future expansion plans include serving grades K–12 by the 2026–2027 school year. The Final Traffic Impact Study (TIS) Report for the MAS Charter School Expansion, dated March 30, 2021, projected a total enrollment of 1,470 students. This projection included a reduction of 288 students to account for those utilizing school-provided transportation via five buses.

Table 2 - MAS Charter School Trip Generation Summary

MAS Charter School Expansion (San Ygnacio Rd. / Old Corrs Rd.)

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

COMMENT	USE (ITE CODE) DESCRIPTION		24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
	Summary Sheet	Units					
Existing school w/ 1 bus	Private School [K-12] (536)	138	342	65	42	58	81
Future (2032) w/ 5 buses	Private School [K-12] (536)	1,183	2,934	575	368	247	341
	Increase in Trips		**2,592**	**510**	**326**	**189**	**260**

Traffic volumes associated with the MAS Charter School were collected in 2022 and incorporated into the base traffic volumes at the intersection of Sage Rd. and Coors Blvd. The AM and PM peak hour volumes are presented in the tables below:

Table 3 - MAS Charter School AM Peak Trips Generated

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

Table 4 - Mas Charter School PM Peak Trips Generated

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 was also accounted for in the base traffic volumes for the Unser Blvd. and Sage Rd. TIS. This subdivision is located at the northwest corner of Sage Rd. and Coors Blvd. According to the Traffic Impact Study prepared by Lee Engineering in March 2021, the proposed development consists of 62 single-family dwelling units across approximately 9.96 acres. Site access is provided via two driveways: one on San Ygnacio Rd. and one on Sage Rd. Projected traffic volumes from this subdivision were derived from the 2021 Lee Engineering report and are summarized in the following tables:

Table 5 - Sage Park Subdivision AM Peak Trips Generated

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

Table 6 - Sage Park Subdivision PM Peak Trips Generated

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 Roadways

According to the Futures 2040 Long Range Roadway System Map (MRMPO, 2024), the roadway classifications and characteristics within the study area are as follows:

Tower Rd. is classified as a **Major Collector** west of Unser Blvd. and a **Community Principal Arterial** east of Unser Blvd. 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 is 35 MPH.

San Ygnacio Rd. is classified as a **Local Urban** street. It is typically a two-lane paved roadway with minimal curbs and gutters, limited sidewalks, and no medians within the study area. The posted speed limit is 35 MPH.

Arenal Rd. is classified as a **Regional Principal Arterial**. It is generally a four-lane paved roadway with raised curbs and gutters, sidewalks, and raised medians in the study area. The posted speed limit is 40 MPH.

Coors Blvd. is classified as a **Regional Principal Arterial**. It is typically a four-lane paved roadway with raised curbs and gutters, sidewalks, and raised medians. The intersection of Coors Blvd. and Sage Rd. is part of a coordinated signal system along Coors Blvd. The posted speed limit is 40 MPH.

Unser Blvd. is classified as a **Regional Principal Arterial**. It is generally a four-lane paved roadway with raised curbs and gutters, sidewalks, and raised medians. The intersections of Unser Blvd. with Arenal Rd., Sage Rd., and Tower Rd. are part of an actuated coordinated signal system along Unser Blvd. The posted speed limit is 40 MPH.

Sage Rd. is classified as a **Major Collector**. West of Unser Blvd., it is typically a four-lane paved roadway with raised curbs and gutters, sidewalks, and raised medians. East of Unser Blvd., Sage Rd. becomes a two-lane paved roadway with raised curbs and gutters, a sidewalk on the south side, and striped medians. The posted speed limit is 35 MPH.

86th St. is classified as a **Major Collector**. It is generally a two-lane paved roadway with raised curbs and gutters, sidewalks, and raised medians in the study area. The posted speed limit is 30 MPH.

A portion of the Futures 2040 Long Range Roadway System Map is shown below.

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

Figure 4 - Portion of Futures 2040 Long Range Roadway System

Alternative Travel Modes

There is one Primary Transit Route (ABQ RIDE) within the area of analysis—Route 155, which travels along Coors Blvd. from Gun Club Rd. to Interstate 40. This primary route spans approximately 21.6 miles in length.

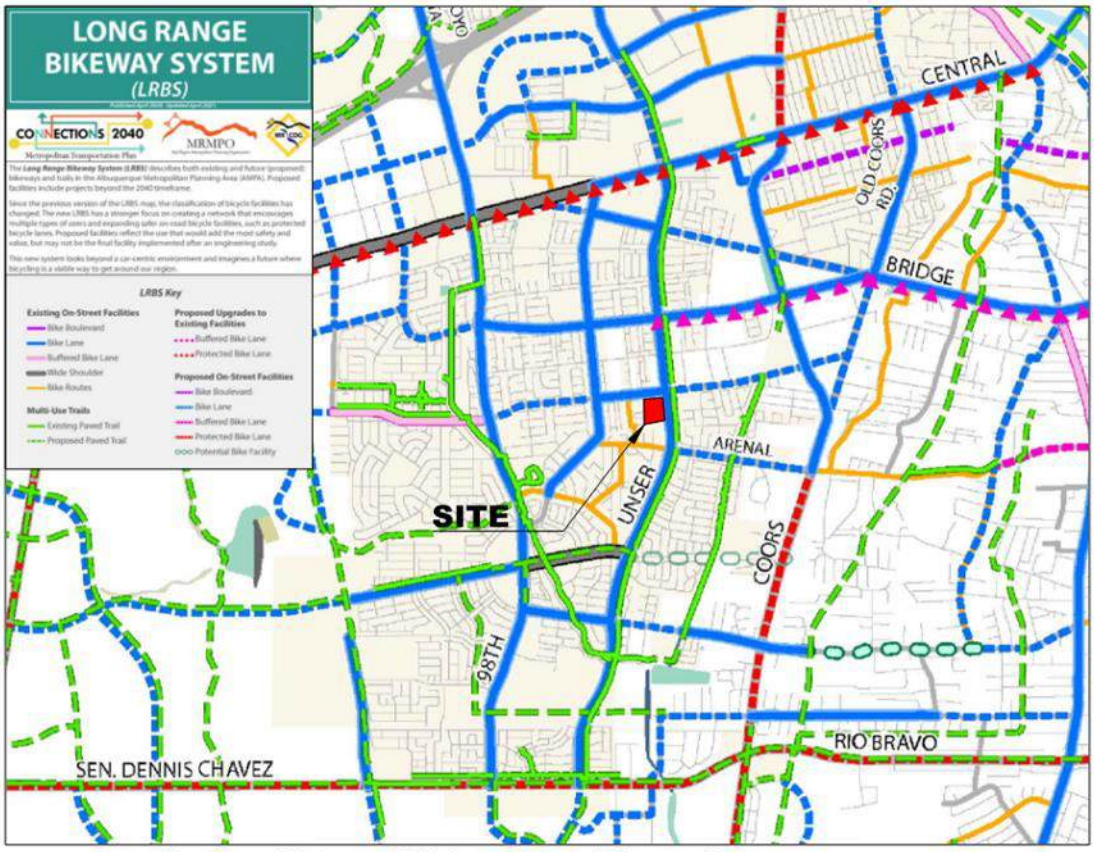
According to the Futures 2040 Long Range Bikeway System Map, San Ygnacio Rd. is the only roadway within the study area that does not have existing bicycle facilities and is not planned for future bicycle infrastructure.

The remaining study area roadways—Unser Blvd., Sage Rd., Coors Blvd., Arenal Rd., and Tower Rd.—are equipped with existing bicycle facilities, but none are planned for additional or upgraded bicycle infrastructure per the Futures 2040 Long Range Bikeway System Map.

In terms of transit service:

- Arenal Rd. and Tower Rd. are served by Regular Route 54.
- Coors Blvd. is served by Regular Route 155.
- No Rapid Ride or additional ABQ RIDE routes operate within the study area.

Portions of the Futures 2040 Long Range Bikeway System Map and the ABQ RIDE Master Bus Route Map, shown below.



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

Figure 5 - Portion of Futures 2040 Long Range Bikeway System

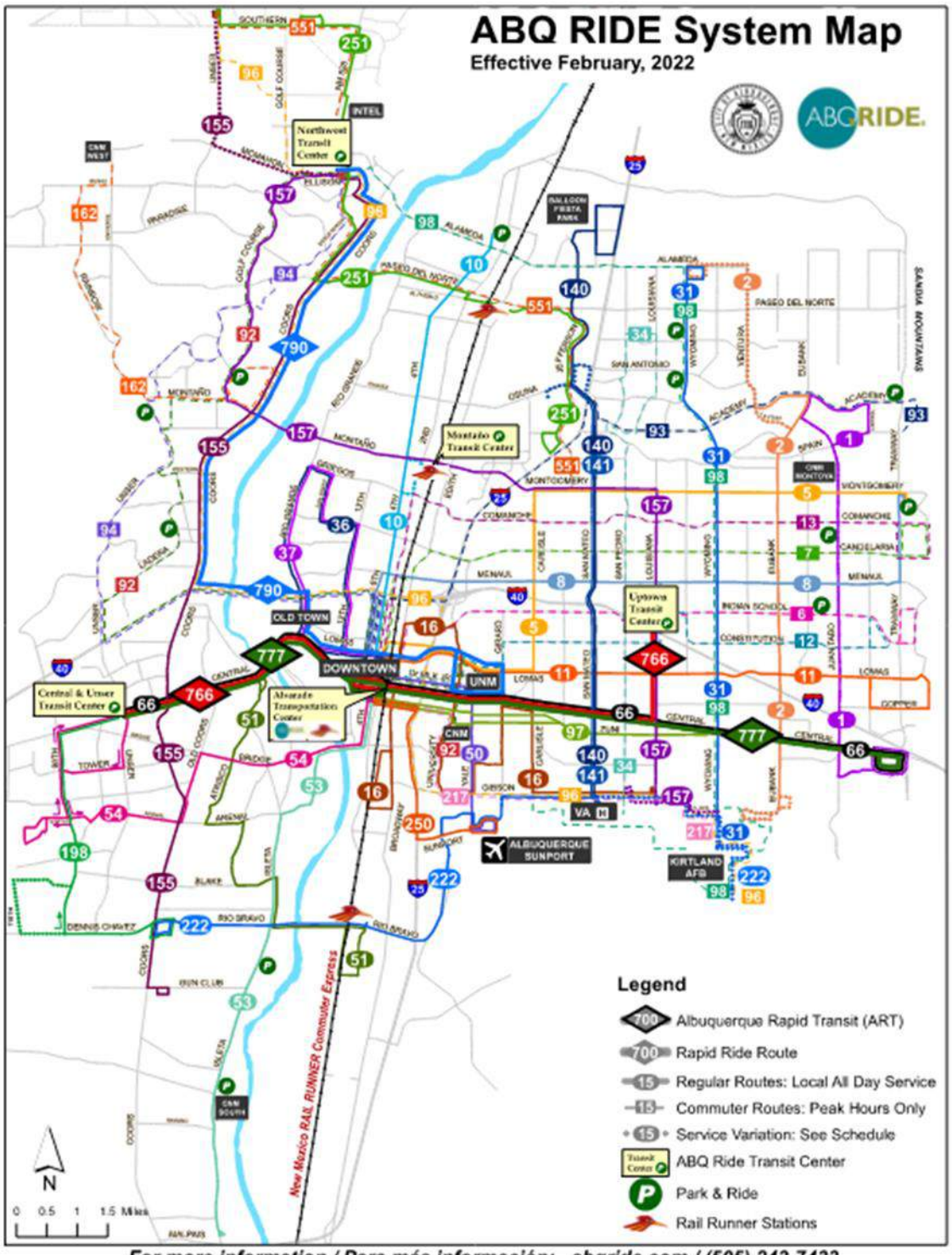


Figure 6 - ABQ Ride System Map

Analysis of Existing Conditions

Existing Traffic Volumes

Since the implementation year is less than one year in the future, an existing conditions analysis was not performed. However, existing traffic volumes (turning movement counts) were collected at the intersections targeted for analysis in this study in April 2022, while school was in session. These counts are provided in Appendix Pages A-141 through A-144. The 2025 No Build condition analyses are assumed to closely approximate existing conditions.

Level of Service (LOS) Criteria

According to the City of Albuquerque Design Process Manual (DPM), Level of Service (LOS) standards are defined by Access Category. Table 7.5.89 outlines the minimum acceptable LOS standards based on Functional Classification, Roadway Type, and the City of Albuquerque's ABC Comprehensive Plan designation (see below).

Table 7 - Design process Manual LOS Criteria

TABLE 7.5.88 **Desired LOS by Location and Corridor Type**

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 classified as a Principal Arterial within an Urban Center; therefore, intersections along the Unser Blvd. corridor should operate at **LOS E or better**. Mitigation measures should be considered for any intersections projected to operate at a LOS worse than E under the No Build conditions within the project area.

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. Traffic growth was determined using MRCOG Traffic Flow Map data from 2009 to 2018 to calculate historical growth rates within the study area. The calculated growth rates at the analyzed intersections range from 1.3% to 4.5% for both the Implementation and Horizon Years. The following annual growth rate percentages were applied at each location:

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 analysis, the highest growth rate observed (4.5%) was applied to the driveway intersections:

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

Refer to Appendix A-9 through A-14 for the Historical Growth Data Table and Rate Graphs.

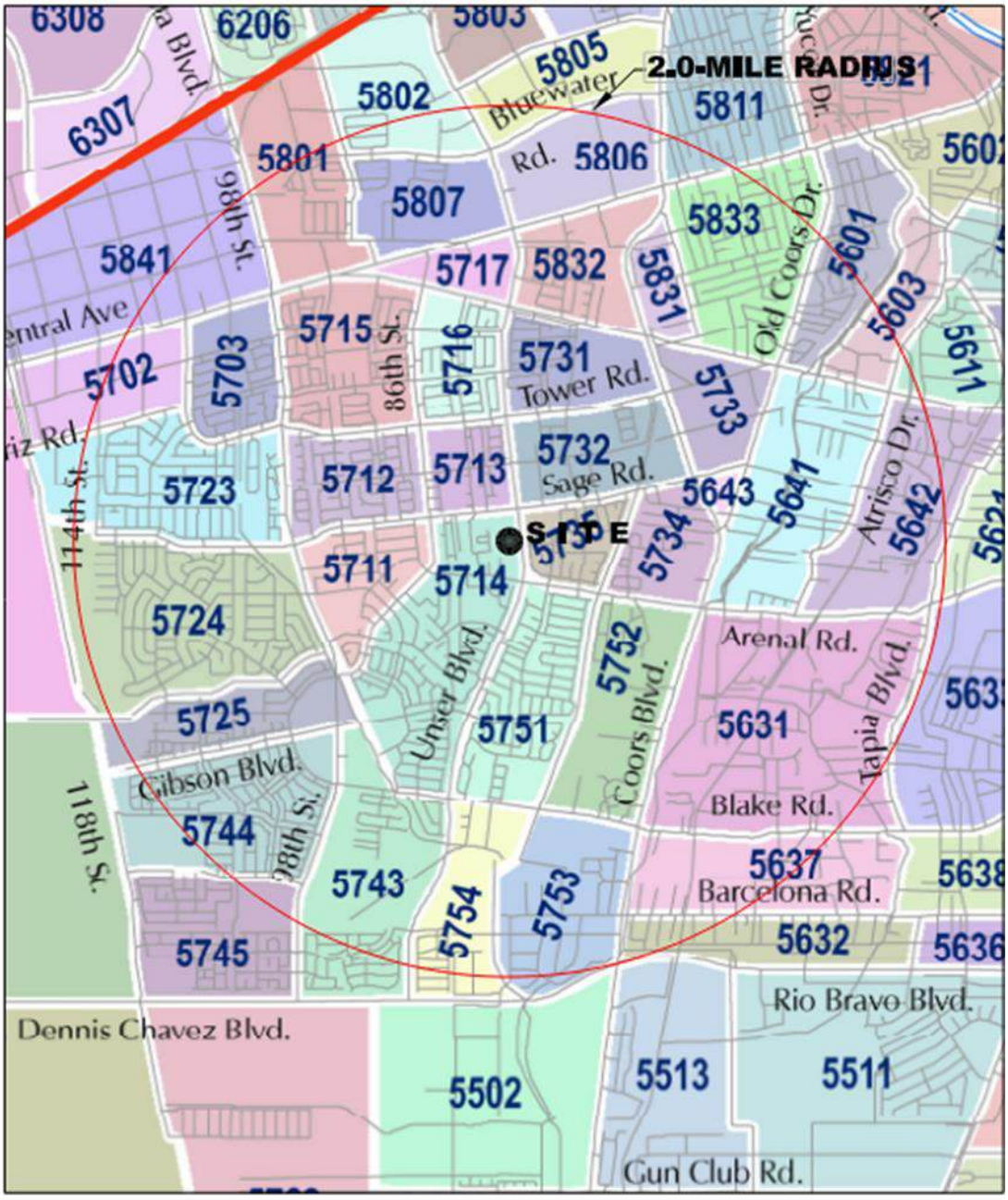
Background Traffic

Background traffic volumes were calculated by applying historical annual growth rates to the existing collected data and incorporating projected traffic volumes from the MAS Charter School and Sage Park Subdivision developments. These adjusted volumes represent the 2025 Implementation Year No Build conditions. See pages 1 through 3 of this report

Trip Distribution and Trip Assignments

Trip assignment percentages for new trips entering and exiting the site were derived from the trip distribution process and logical routing patterns. Both residential and retail commercial trips were distributed based on the Mid-Region Council of Governments (MRCOG) Socioeconomic Data Set (2016–2040).

Retail commercial trips were specifically assigned based on population distribution within a two-mile radius of the project site. The MRCOG DASZ Map below illustrates the Data Analysis Subzones (DASZs) used to determine commercial trip entry and exit patterns.



DATA ANALYSIS SUBZONE (DASZ) MAP

Sage Rd. / Unser Blvd. Development (NW Corner)

Figure 7 - MRCOG DASZ Map

The data table and maps used to calculate the commercial trips distribution percentages can be found in Appendix Pages A-15 through A-23. The corresponding maps are shown below.

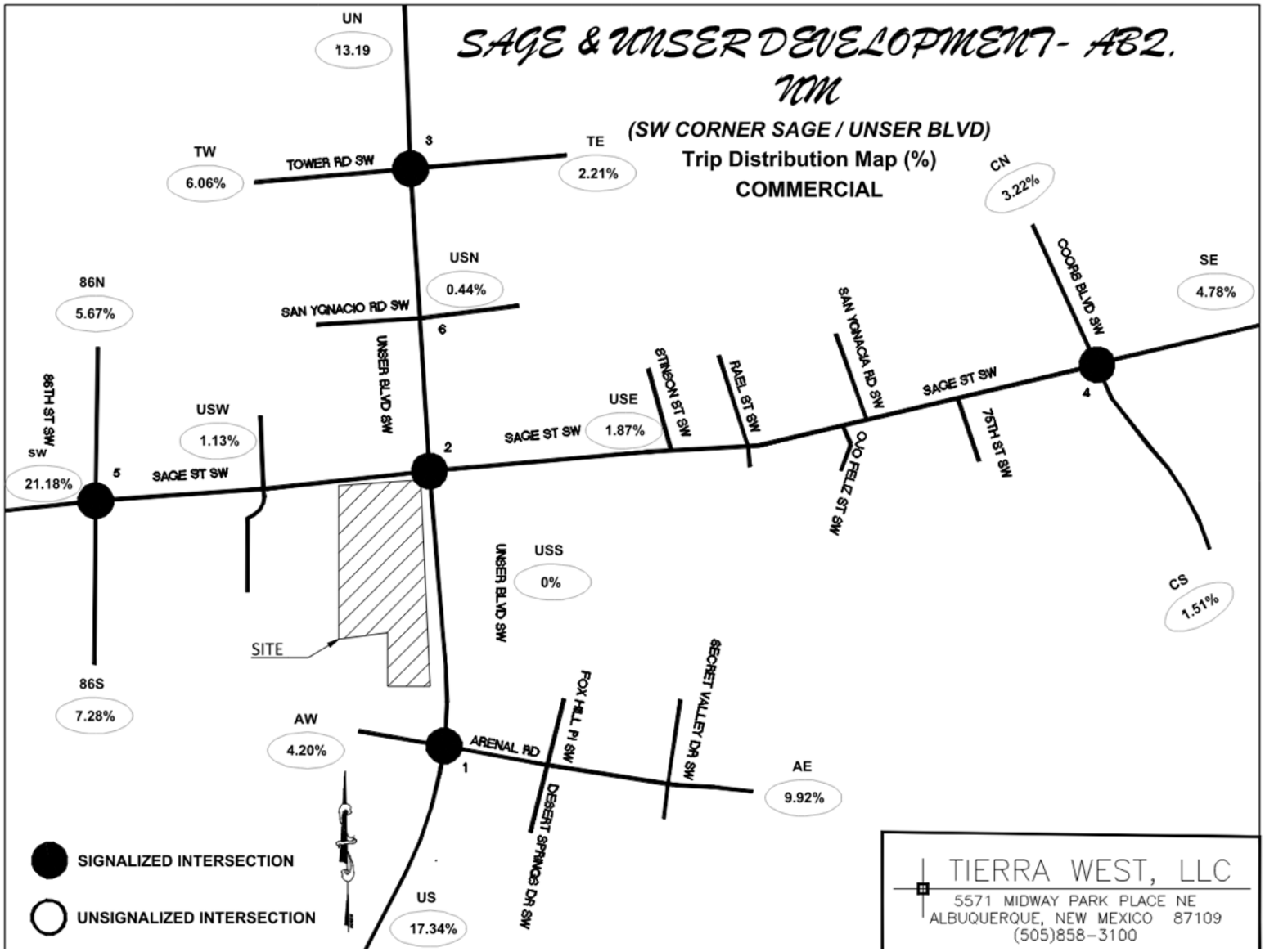


Figure 8 - Commercial Trip Distribution Map

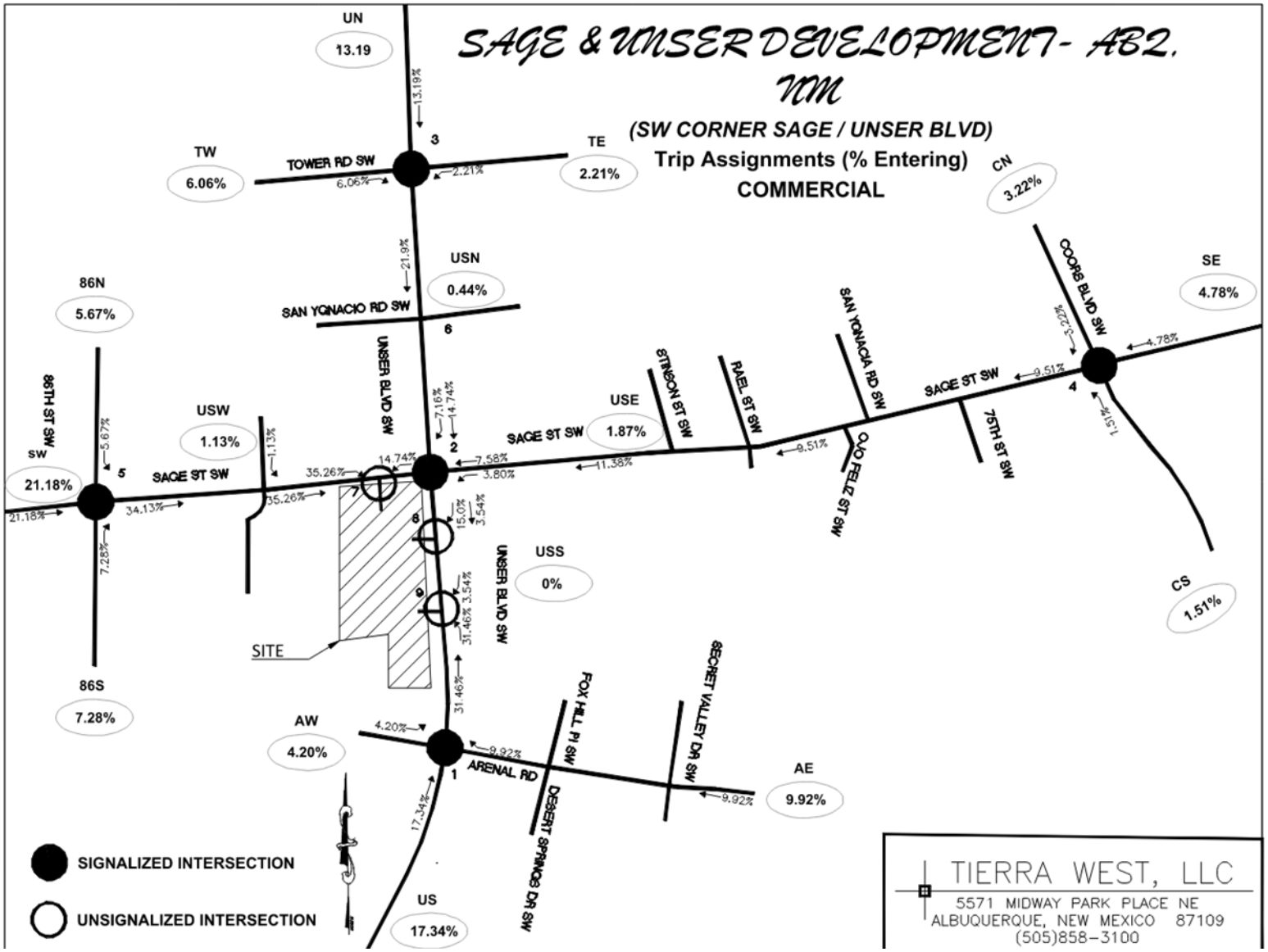


Figure 9 - Commercial Trip Assignments (% Entering)

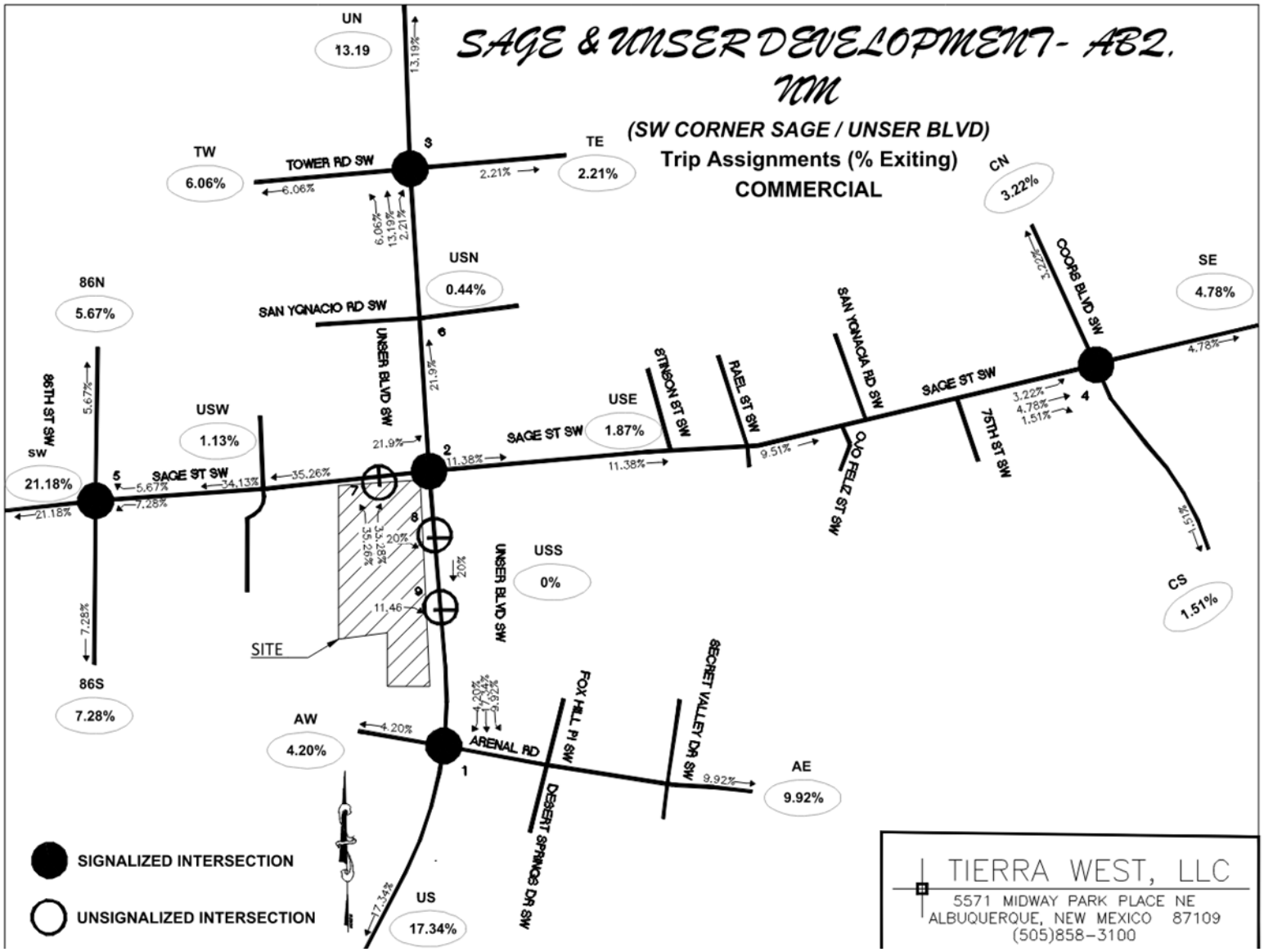


Figure 10 - Commercial Trip Assignments (% Exiting)

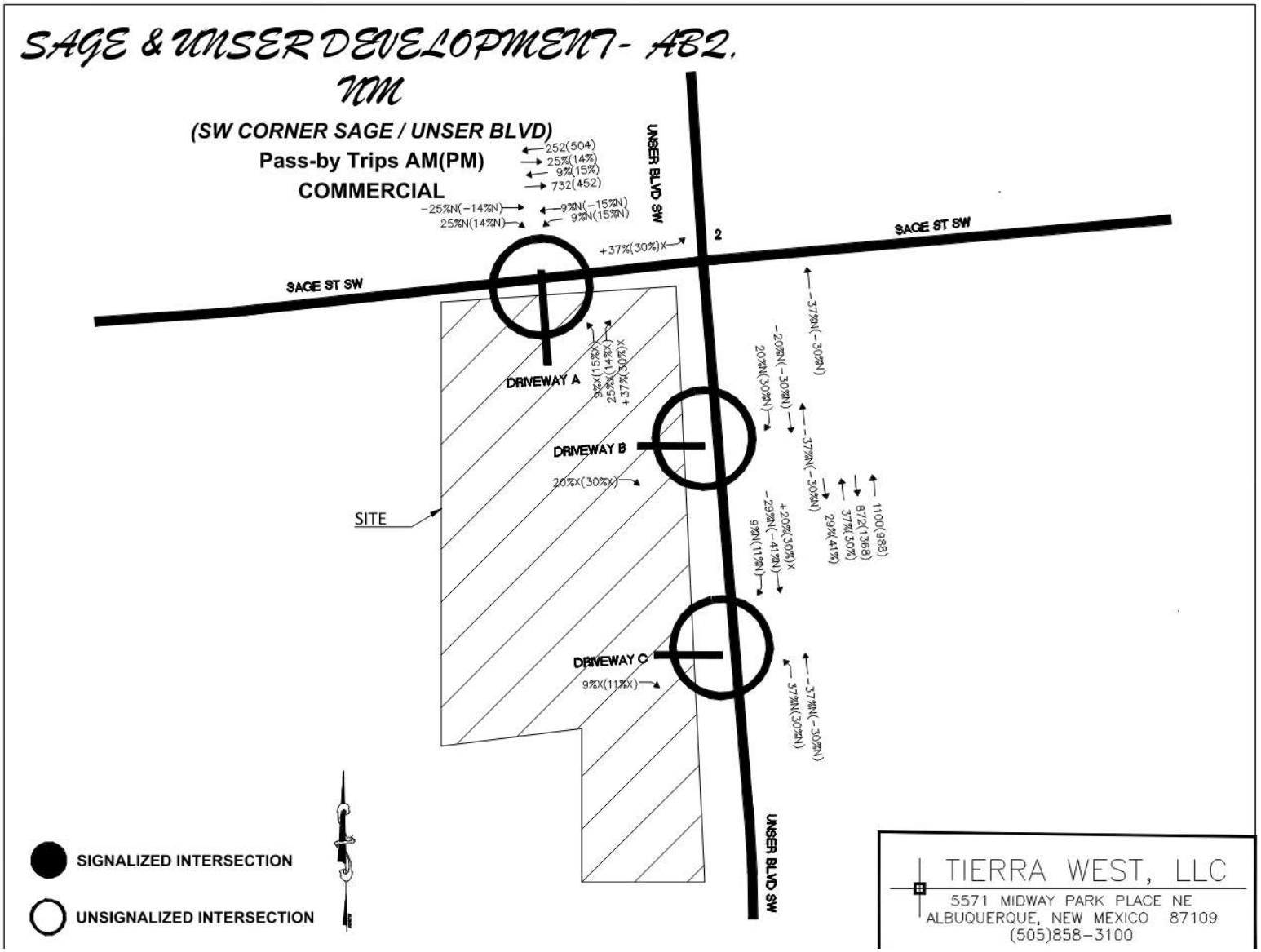


Figure 11 - Commercial Pass-by Trips

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 Map is shown below.

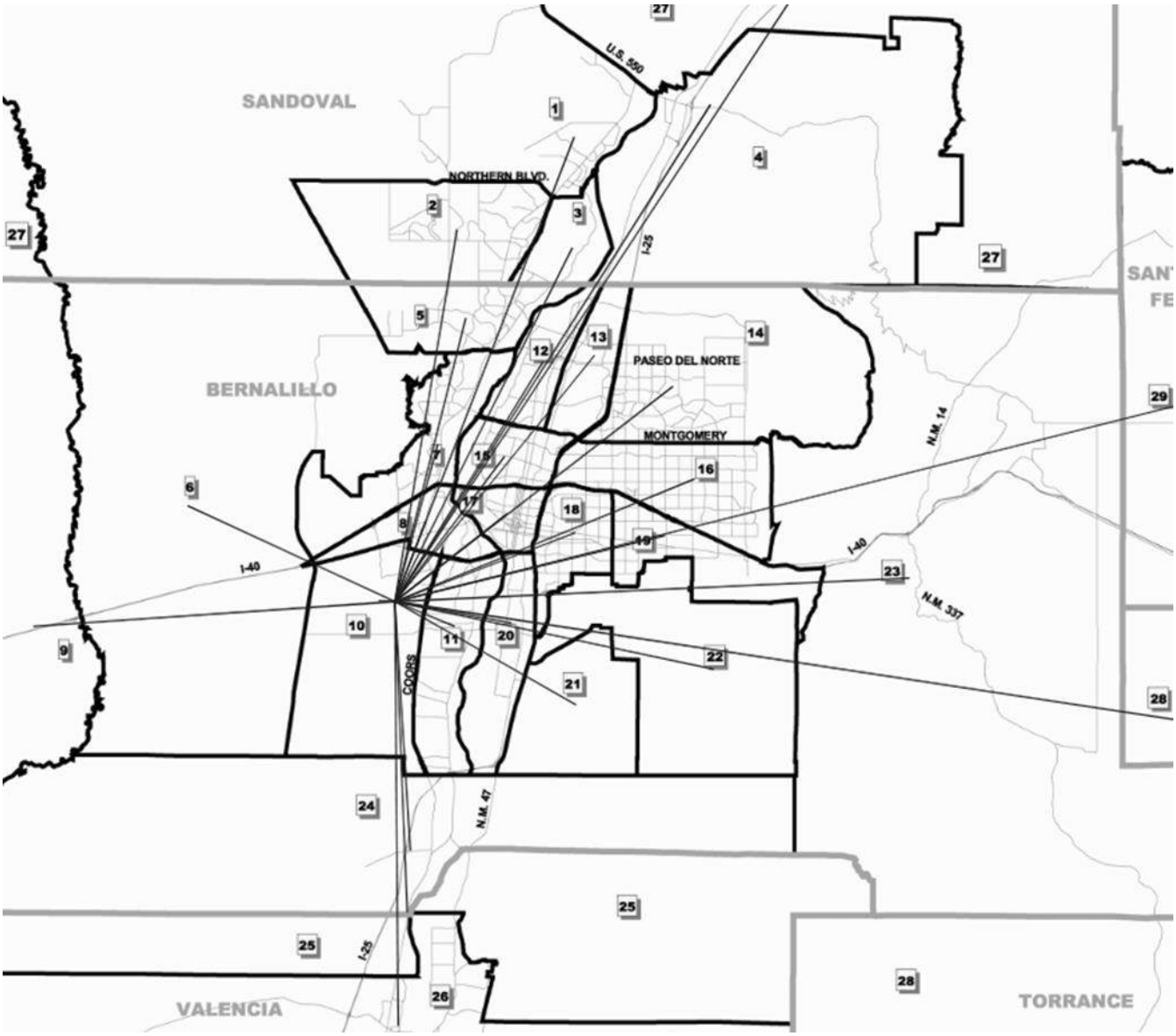


Figure 12 - MRCOG Subarea Map

The data table and maps used to calculate the residential trips distribution percentages can be found in Appendix Pages A-24 through A-32. The corresponding maps are shown below.

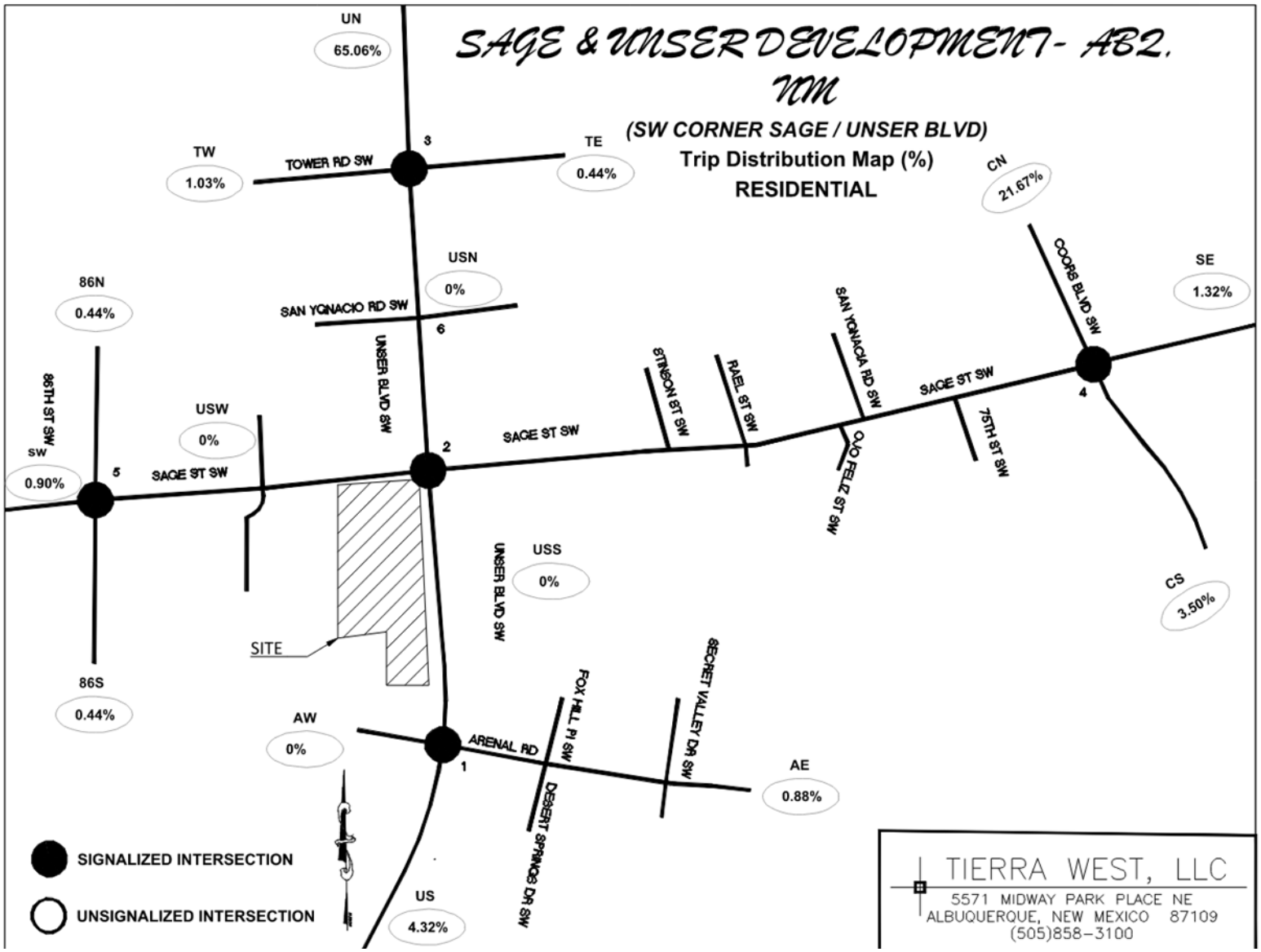


Figure 13 - Residential Trip Distribution Map

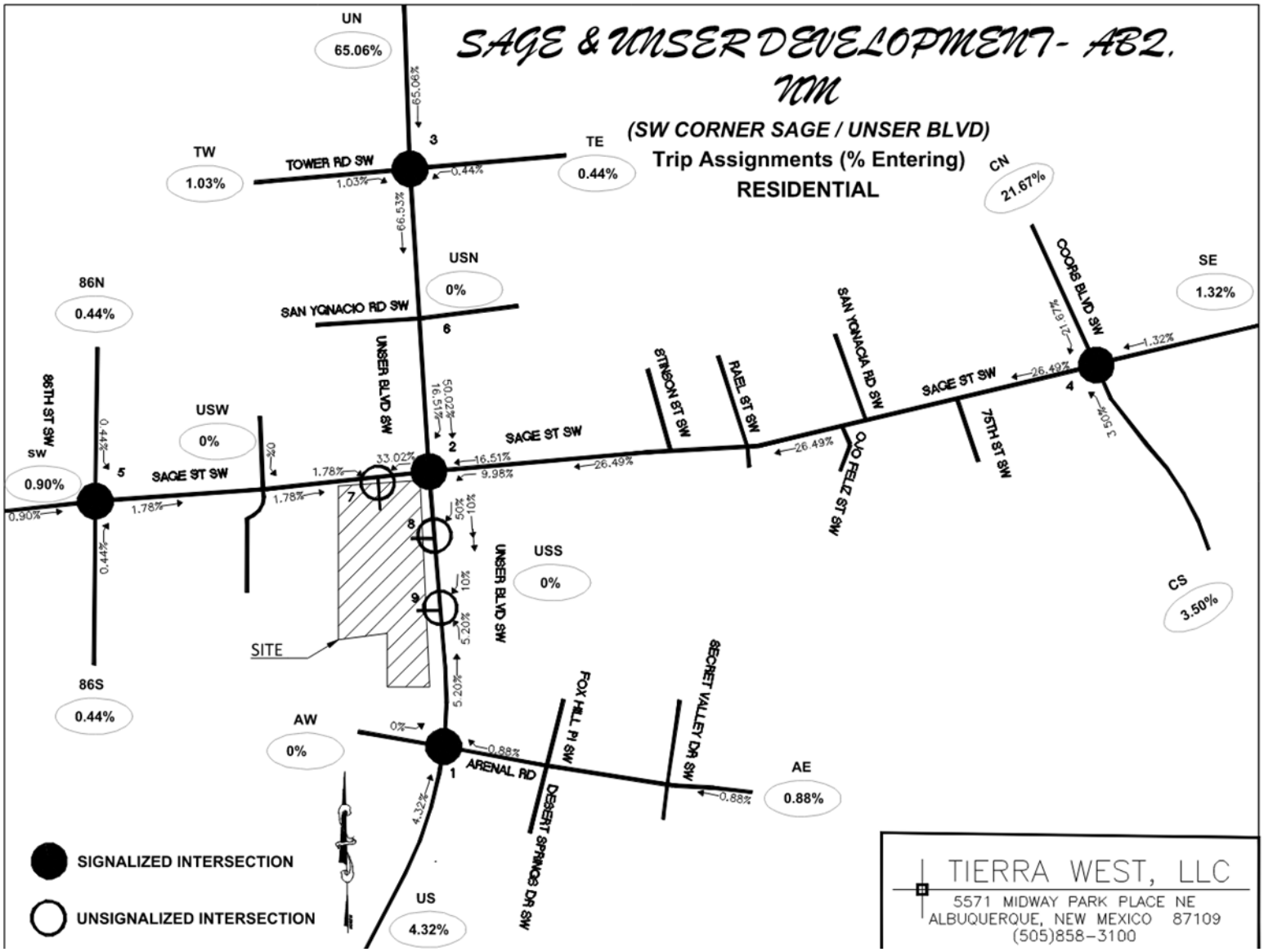


Figure 14 - Residential Trip Assignments (% Entering)

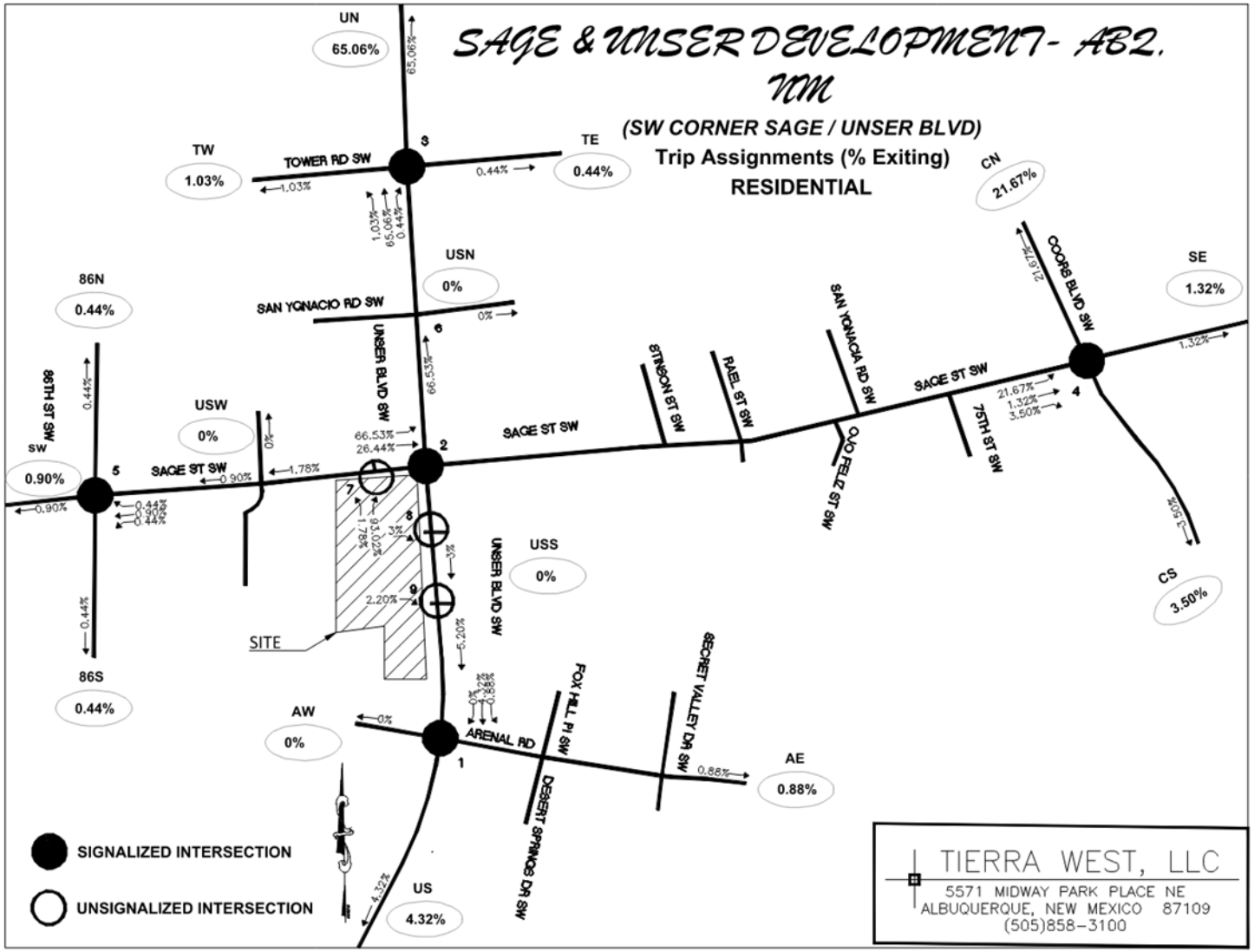


Figure 15 - Residential Trip Assignments (% Exiting)

NO BUILD and Build Traffic Volumes

The 2025 and 2035 AM and PM Peak Hour NO BUILD and BUILD traffic volumes were calculated for each turning movement at all study area intersections in 15-minute increments. Peak hour volumes were derived by multiplying the highest 15-minute volume by four. NO BUILD volumes were developed by applying background traffic growth rates to the existing traffic count data. BUILD volumes were determined by adding the trips generated by the proposed development to the NO BUILD volumes. Refer to Appendix Pages A-33 through A-74 for detailed volume data.

Intersection Analysis

A capacity analysis was conducted for the following NO BUILD and BUILD conditions:

1. Implementation Year – 2025
2. Horizon Year – 2035

Synchro 12 (12.2.4.32) by Trafficware was used for the signalized and unsignalized intersections. The Lanes / Volume Analysis Maps for the unsignalized intersections are below and Appendix Pages A-75 through A-77 and A-110 through A-112.

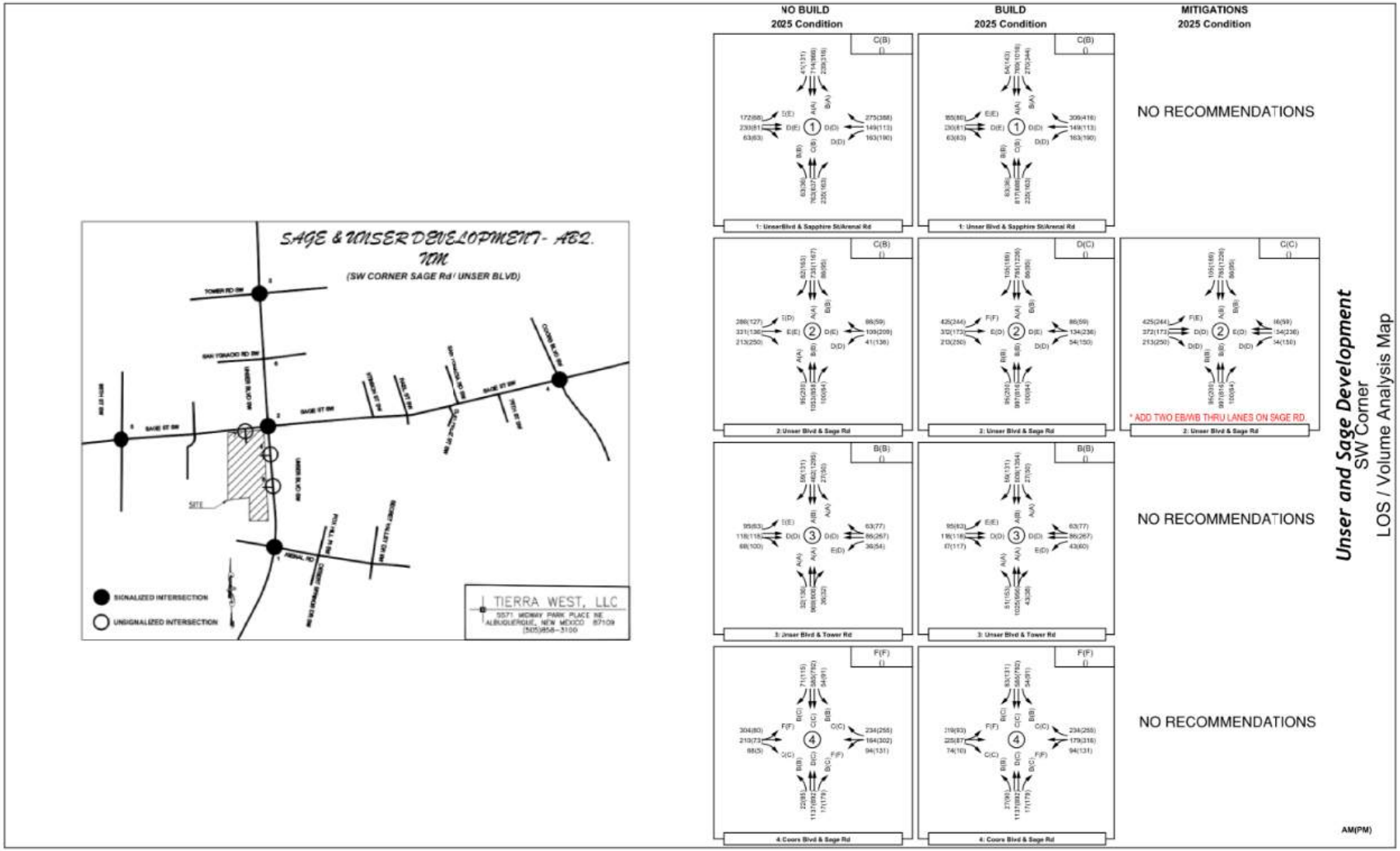


Figure 16 - 2025 Lanes / Volume Analysis Maps: Intersections 1 - 4

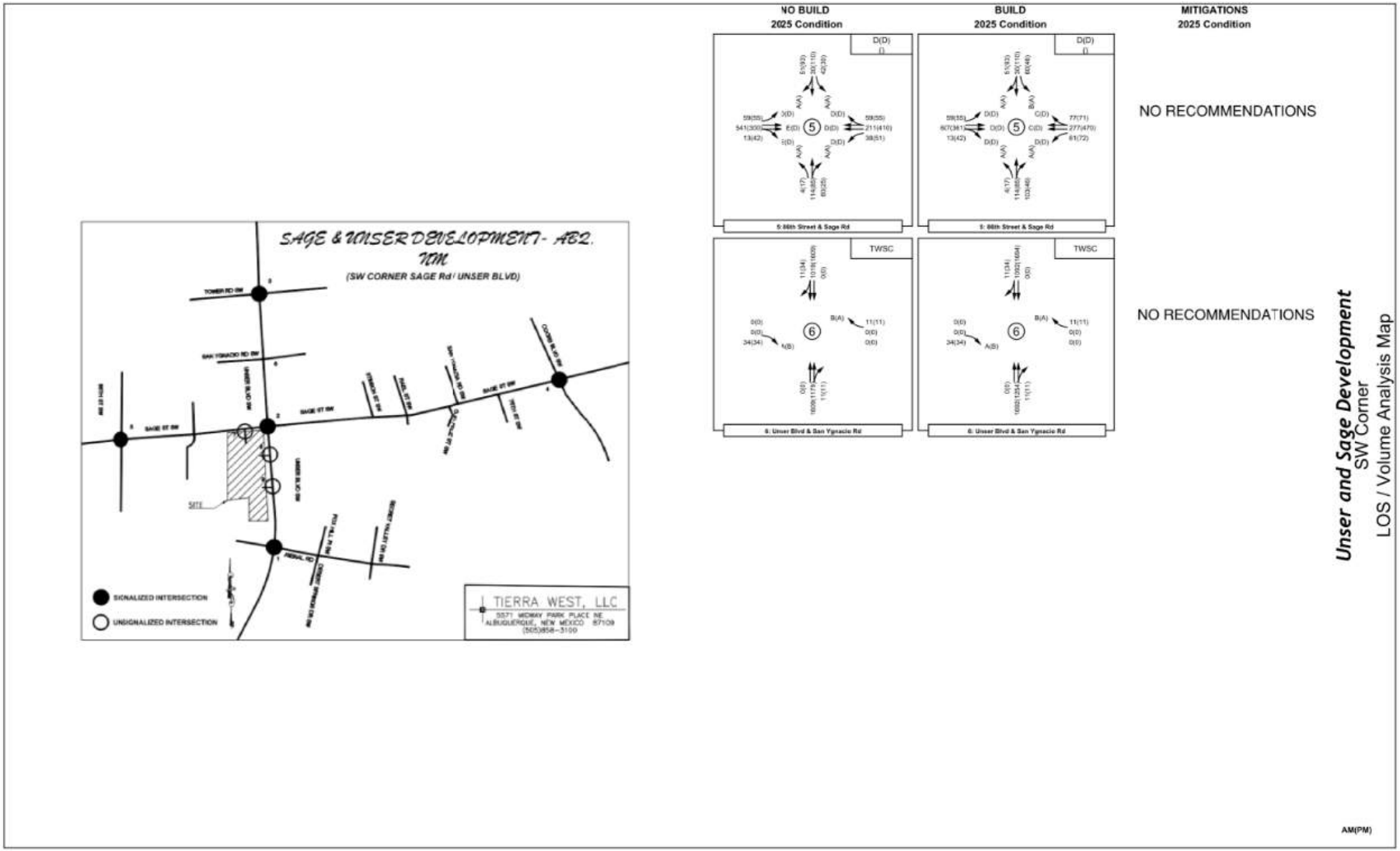


Figure 17 – 2025 Lanes / Volume Analysis Maps: Intersections 5 - 6

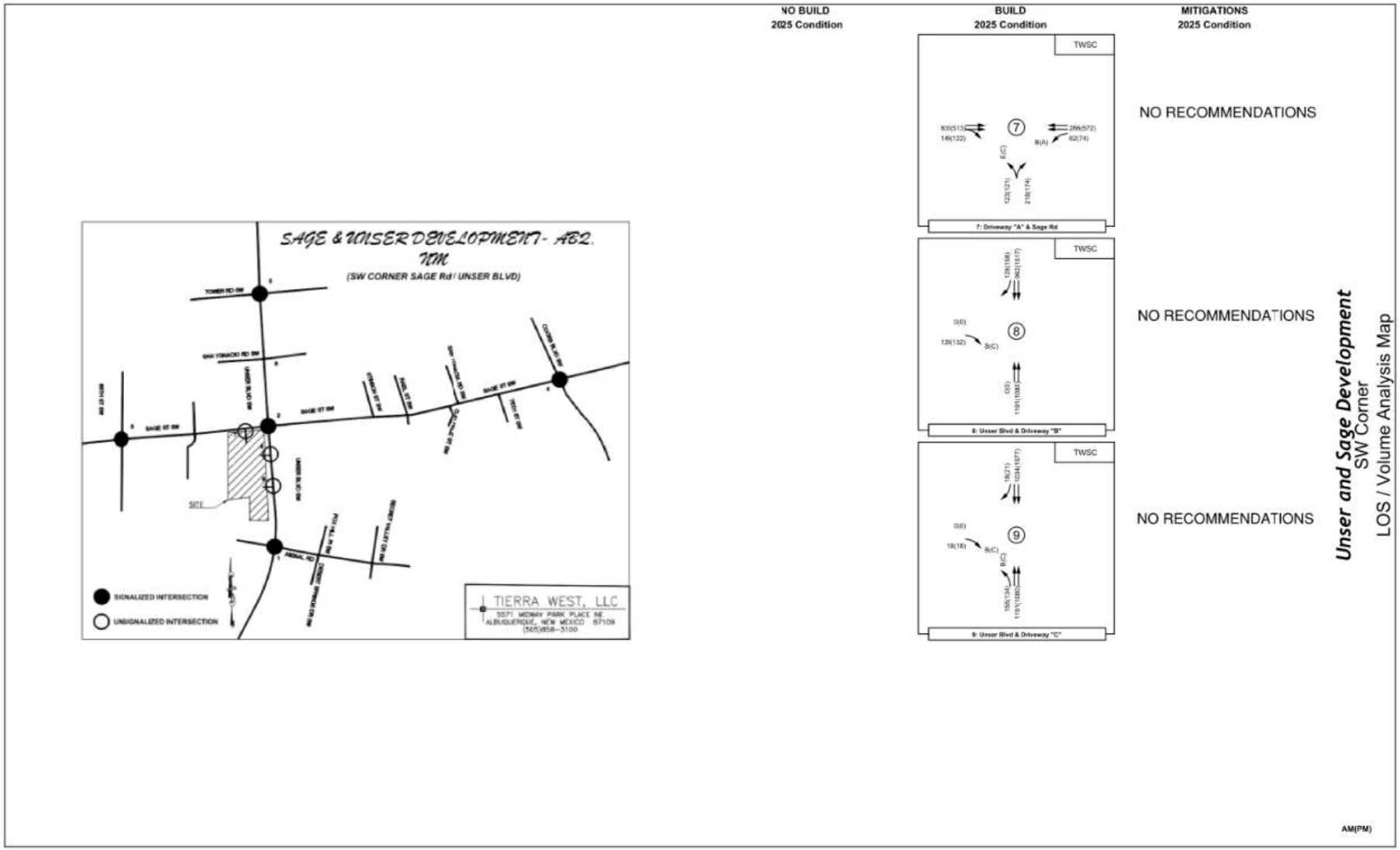


Figure 18 – 2025 Lanes / Volume Analysis Maps: Intersections 7 - 9

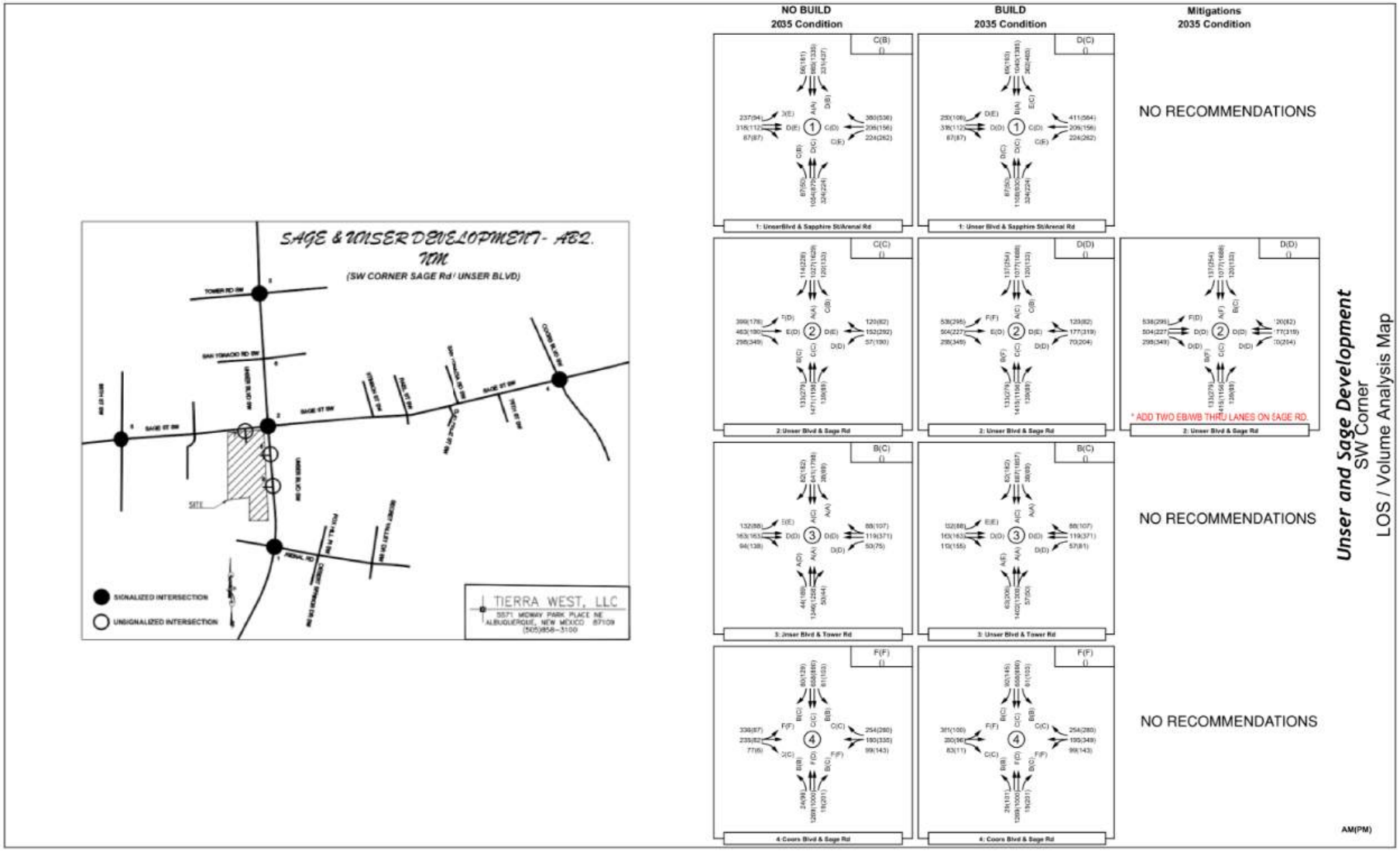


Figure 19 - 2035 Lanes / Volume Analysis Maps: Intersections 1 - 4

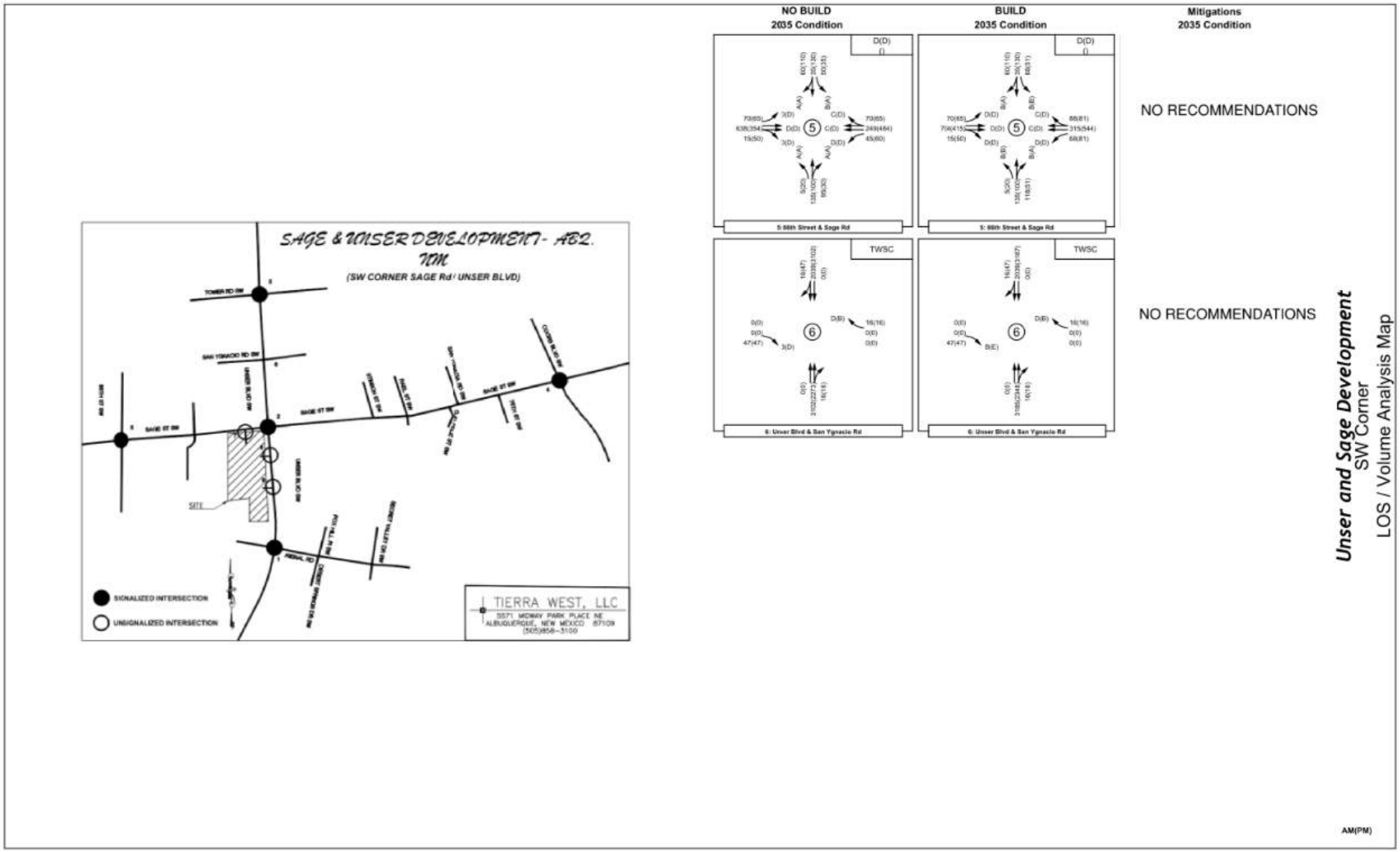


Figure 20 - 2035 Lanes / Volume Analysis Maps: Intersections 5 - 6

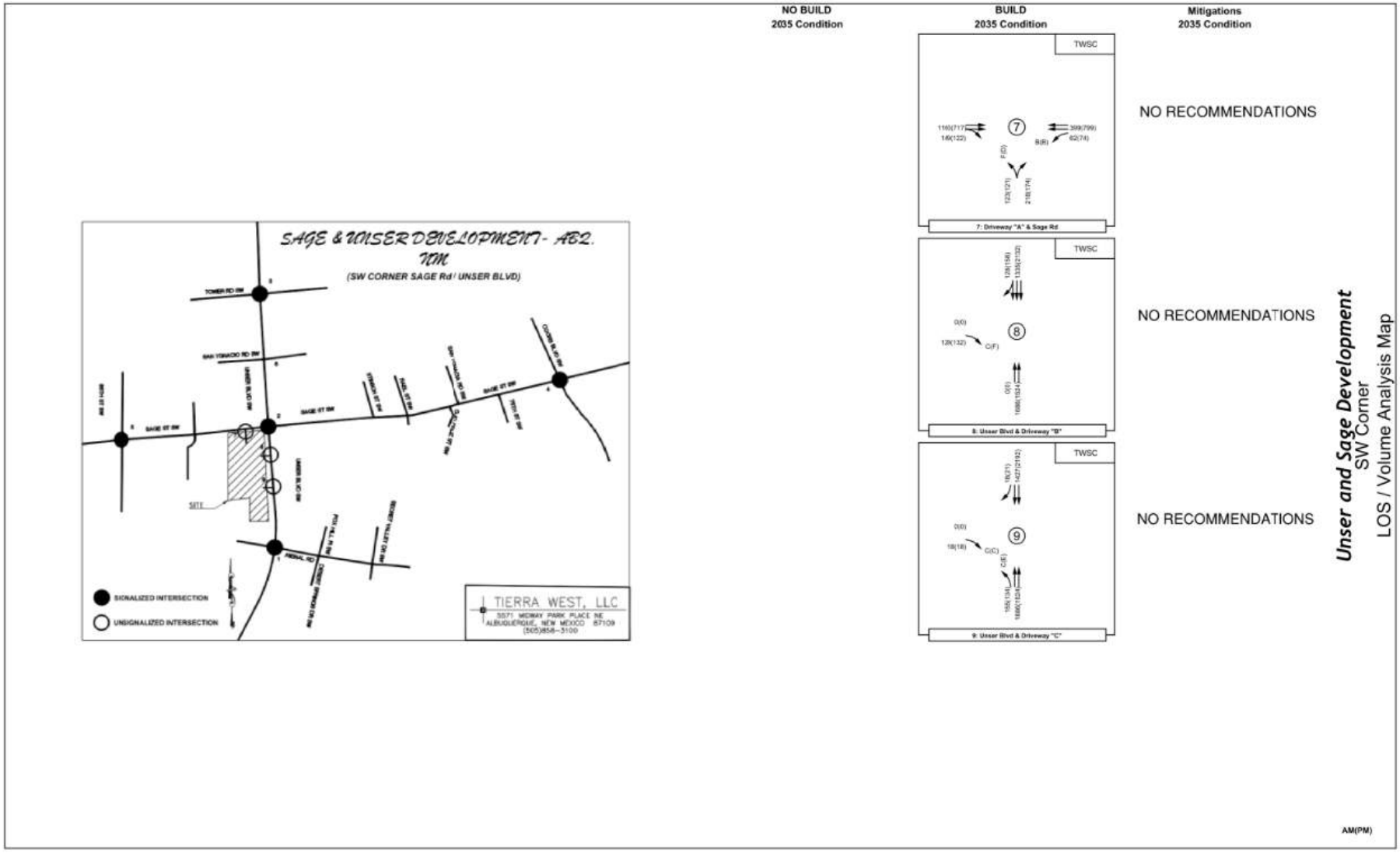


Figure 21 - 2035 Lanes / Volume Analysis Maps: Intersections 7 - 9

Further details can be found in the individual intersection analysis provided in the following sections.

Intersection #1 - Unser Blvd / Arenal Rd. (Signalized)

The results of the 2025 Implementation Year AM Peak Hour and PM Peak Hour analyses for the signalized intersection of Unser Blvd. / Arenal Rd. are summarized in Table 8 and included in Appendix Pages A-78 through A-81. The results of the 2035 Horizon Year AM Peak Hour and PM Peak Hour analyses for the same intersection are summarized in Table 9 and included in Appendix Pages A-113 through A-116.

Table 8 - 2025 Synchro Summary Intersection #1 Unser Blvd. at Arenal Rd.

Signalized

Arenal Rd. / Unser Blvd. 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
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
Intersection LOS	**C - 21.2**											
95th Percentile Queue (ft)	237.5	150.0	0.0	187.5	167.5	0.0	47.5	287.5	0.0	122.5	5.0	0.0
95th Percentile Queue (veh)	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	185	230	63	163	149	306	63	817	235	270	769	54
V/C Ratio	0.68	0.37		0.47	0.28		0.16	0.47		0.60	0.35	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.2	47.8	0.0	38.1	36.0	0.0	19.5	22.9	0.0	14.2	0.5	0.0
Intersection LOS	**C - 21.5**											
95th Percentile Queue (ft)	250.0	147.5	0.0	185.0	165.0	0.0	50.0	322.5	0.0	142.5	5.0	0.0
95th Percentile Queue (veh)	10.0	5.9	0.0	7.4	6.6	0.0	2.0	12.9	0.0	5.7	0.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.32		0.65	0.31		0.09	0.31		0.52	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	52.5	45.3	0.0	12.4	14.0	0.0	8.1	0.4	0.0
Intersection LOS	**B - 15.1**											
95th Percentile Queue (ft)	102.5	57.5	0.0	245.0	142.5	0.0	22.5	205.0	0.0	117.5	5.0	0.0
95th Percentile Queue (veh)	4.1	2.3	0.0	9.8	5.7	0.0	0.9	8.2	0.0	4.7	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	80	81	63	190	113	416	36	688	163	344	1,016	143
V/C Ratio	0.50	0.28		0.62	0.30		0.10	0.34		0.58	0.41	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	60.9	56.6	0.0	50.3	44.2	0.0	13.8	15.8	0.0	9.1	0.5	0.0
Intersection LOS	**B - 15.3**											
95th Percentile Queue (ft)	120.0	57.5	0.0	240.0	140.0	0.0	25.0	232.5	0.0	135.0	7.5	0.0
95th Percentile Queue (veh)	4.8	2.3	0.0	9.6	5.6	0.0	1.0	9.3	0.0	5.4	0.3	0.0

Table 9 - 2035 Synchro Summary Intersection #1 Unser Blvd. at Arenal Rd.

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
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_NO BUILD Volumes	237	318	87	224	206	380	87	1,054	324	331	985	56
V/C Ratio	0.74	0.40		0.58	0.32		0.31	0.76		0.91	0.50	
Level-of-Service	D	D		C	C		C	D		D	A	
Control Delay (Seconds)	54.5	43.1	0.0	34.8	31.2	0.0	31.3	38.1	0.0	38.6	0.8	0.0
Intersection LOS	**C - 28.2**											
95th Percentile Queue (ft)	310.0	192.5	0.0	230.0	207.5	0.0	95.0	525.0	0.0	245.0	10.0	0.0
95th Percentile Queue (veh)	12.4	7.7	0.0	9.2	8.3	0.0	3.8	21.0	0.0	9.8	0.4	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_BUILD Volumes	250	318	87	224	206	411	87	1,108	324	362	1,040	69
V/C Ratio	0.75	0.38		0.56	0.31		0.36	0.91		0.95	0.54	
Level-of-Service	D	D		C	C		D	D		E	B	
Control Delay (Seconds)	54.9	42.0	0.0	33.5	30.3	0.0	37.4	51.9	0.0	65.5	11.9	0.0
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	327.5	192.5	0.0	227.5	205.0	0.0	107.5	632.5	0.0	502.5	230.0	0.0
95th Percentile Queue (veh)	13.1	7.7	0.0	9.1	8.2	0.0	4.3	25.3	0.0	20.1	9.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_NO BUILD 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		0.82	0.55	
Level-of-Service	E	E		E	D		B	C		B	A	
Control Delay (Seconds)	59.9	55.3	0.0	66.6	43.7	0.0	19.8	22.2	0.0	13.0	0.1	0.0
Intersection LOS	**B - 18.8**											
95th Percentile Queue (ft)	140.0	77.5	0.0	165.0	192.5	0.0	42.5	340.0	0.0	125.0	0.0	0.0
95th Percentile Queue (veh)	5.6	3.1	0.0	6.6	7.7	0.0	1.7	13.6	0.0	5.0	0.0	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_BUILD Volumes	106	112	87	262	156	564	50	930	224	465	1,385	193
V/C Ratio	0.57	0.30		0.80	0.36		0.21	0.55		0.88	0.58	
Level-of-Service	E	D		E	D		C	C		C	A	
Control Delay (Seconds)	59.4	54.0	0.0	61.2	42.6	0.0	22.3	25.3	0.0	29.2	1.0	0.0
Intersection LOS	**C - 21.6**											
95th Percentile Queue (ft)	157.5	77.5	0.0	145.0	190.0	0.0	45.0	382.5	0.0	265.0	15.0	0.0
95th Percentile Queue (veh)	6.3	3.1	0.0	5.8	7.6	0.0	1.8	15.3	0.0	10.6	0.6	0.0

Both the Implementation Year and Horizon Year analyses presented in the tables above indicate that the signalized intersection of Unser Blvd. / Arenal Rd. operates at an acceptable LOS under all conditions evaluated in this study. The new trips generated by the proposed Unser and Sage Development are not expected to result in any significant adverse impacts on the operation of this intersection.

Based on the results of the analyses for Unser Blvd. / Arenal Rd., **no recommendations** are proposed for this intersection.

Intersection #2 – Unser Blvd. / Sage Rd. (Signalized)

The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Sage Rd. are summarized in Table 14, as well as attached in Appendix A-82 through A-87. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Sage Rd. are summarized in Table 15, as well as attached in Appendix A-117 through A-122.

Table 10 - 2025 Synchro Summary Intersection #2 Unser Blvd. / Sage Rd.

Signalized

Sage Rd. / Unser Blvd. 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
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Level-of-Service	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	0.5	0.0
Intersection LOS	**C - 23.4**											
95th Percentile Queue (ft)	195.0	387.5	0.0	42.5	105.0	0.0	45.0	330.0	0.0	40.0	5.0	0.0
95th Percentile Queue (veh)	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	1.23	0.90		0.37	0.44		0.19	0.50		0.25	0.39	
Level-of-Service	F	E		D	D		B	B		B	A	
Control Delay (Seconds)	175.9	62.6	0.0	44.3	49.0	0.0	11.0	17.8	0.0	12.8	0.6	0.0
Intersection LOS	**E - 43.2**											
95th Percentile Queue (ft)	662.5	477.5	0.0	50.0	122.5	0.0	50.0	340.0	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	26.5	19.1	0.0	2.0	4.9	0.0	2.0	13.6	0.0	1.8	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	0.98	0.46	0.51	0.27	0.41		0.19	0.50		0.26	0.40	
Level-of-Service	F	D	D	D	E		B	B		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**C - 29.1**											
95th Percentile Queue (ft)	295.0	222.5	245.0	72.5	95.0	0.0	52.5	347.5	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	11.8	8.9	9.8	2.9	3.8	0.0	2.1	13.9	0.0	1.8	0.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD 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		0.45	0.39		0.22	0.56	
Level-of-Service	D	E		D	E		A	B		B	A	
Control Delay (Seconds)	46.1	55.1	0.0	44.8	60.2	0.0	8.7	13.3	0.0	10.1	1.1	0.0
Intersection LOS	**B - 16.2**											
95th Percentile Queue (ft)	160.0	185.0	0.0	160.0	262.5	0.0	92.5	252.5	0.0	45.0	15.0	0.0
95th Percentile Queue (veh)	6.4	7.4	0.0	6.4	10.5	0.0	3.7	10.1	0.0	1.8	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.98	0.60		0.52	0.85		0.48	0.40		0.22	0.62	
Level-of-Service	F	D		D	E		B	B		B	A	
Control Delay (Seconds)	99.9	53.2	0.0	42.5	59.2	0.0	10.3	15.5	0.0	11.8	1.5	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	240.0	230.0	0.0	170.0	292.5	0.0	102.5	265.0	0.0	50.0	17.5	0.0
95th Percentile Queue (veh)	9.6	9.2	0.0	6.8	11.7	0.0	4.1	10.6	0.0	2.0	0.7	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.20	0.28	0.68	0.57	0.37		0.62	0.38		0.21	0.60	
Level-of-Service	D	D	D	D	D		B	B		B	B	
Control Delay (Seconds)	41.8	47.1	47.8	47.5	47.4	0.0	16.0	13.8	0.0	10.9	18.9	0.0
Intersection LOS	**C - 25.7**											
95th Percentile Queue (ft)	57.5	110.0	300.0	72.5	152.5	0.0	95.0	250.0	0.0	47.5	425.0	0.0
95th Percentile Queue (veh)	2.3	4.4	12.0	2.9	6.1	0.0	3.8	10.0	0.0	1.9	17.0	0.0

Table 11 - 2035 Synchro Summary Intersection #2 Unser Blvd. / Sage Rd.

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
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_NO BUILD Volumes	399	463	298	57	152	120	133	1,471	139	120	1,027	114
V/C Ratio	1.01	0.93		0.40	0.39		0.31	0.82		0.61	0.57	
Level-of-Service	F	E		D	D		B	C		C	A	
Control Delay (Seconds)	85.2	60.1	0.0	40.6	44.2	0.0	14.0	29.7	0.0	25.2	1.3	0.0
Intersection LOS	**C - 31.4**											
95th Percentile Queue (ft)	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
95th Percentile Queue (veh)	15.7	21.4	0.0	2.0	5.2	0.0	3.3	24.5	0.0	2.9	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_BUILD Volumes	538	504	298	70	177	120	133	1,415	139	120	1,077	137
V/C Ratio	1.32	0.94		0.47	0.40		0.35	0.83		0.61	0.64	
Level-of-Service	F	E		D	D		B	C		C	A	
Control Delay (Seconds)	205.3	68.9	0.0	38.6	42.0	0.0	15.8	34.0	0.0	26.2	3.5	0.0
Intersection LOS	**D - 52.7**											
95th Percentile Queue (ft)	942.5	657.5	0.0	57.5	147.5	0.0	90.0	662.5	0.0	77.5	52.5	0.0
95th Percentile Queue (veh)	37.7	26.3	0.0	2.3	5.9	0.0	3.6	26.5	0.0	3.1	2.1	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2035_BUILD Volumes	538	504	298	70	177	120	133	1,415	139	120	1,077	137
V/C Ratio	1.33	0.65	0.70	0.35	0.43		0.31	0.73		0.52	0.56	
Level-of-Service	F	D	D	D	D		B	C		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**D - 46.8**											
95th Percentile Queue (ft)	842.5	297.5	342.5	90.0	122.5	0.0	75.0	562.5	0.0	65.0	15.0	0.0
95th Percentile Queue (veh)	33.7	11.9	13.7	3.6	4.9	0.0	3.0	22.5	0.0	2.6	0.6	0.0

PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_NO BUILD 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		0.78	0.63		0.46	0.92	
Level-of-Service	D	D		D	E		C	C		B	A	
Control Delay (Seconds)	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	212.5	235.0	0.0	197.5	342.5	0.0	182.5	440.0	0.0	80.0	110.0	0.0
95th Percentile Queue (veh)	8.5	9.4	0.0	7.9	13.7	0.0	7.3	17.6	0.0	3.2	4.4	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_BUILD Volumes	295	227	349	204	319	82	279	1,156	89	133	1,688	254
V/C Ratio	1.18	0.63		0.65	0.88		1.14	0.63		0.46	0.99	
Level-of-Service	F	D		D	E		F	C		B	C	
Control Delay (Seconds)	160.5	50.0	0.0	40.6	57.2	0.0	141.2	24.0	0.0	18.0	22.5	0.0
Intersection LOS	**D - 44.8**											
95th Percentile Queue (ft)	415.0	280.0	0.0	210.0	370.0	0.0	555.0	455.0	0.0	82.5	245.0	0.0
95th Percentile Queue (veh)	16.6	11.2	0.0	8.4	14.8	0.0	22.2	18.2	0.0	3.3	9.8	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2035_BUILD Volumes	295	227	349	204	319	82	279	1,156	89	133	1,688	254
V/C Ratio	0.78	0.28	0.69	0.56	0.40		1.26	0.67		0.49	1.06	
Level-of-Service	D	D	D	D	D		F	C		C	F	
Control Delay (Seconds)	49.6	41.9	41.2	35.6	43.2	0.0	191.7	27.8	0.0	20.6	48.3	0.0
Intersection LOS	**D - 49.3**											
95th Percentile Queue (ft)	182.5	137.5	377.5	217.5	195.0	0.0	622.5	492.5	0.0	90.0	457.5	0.0
95th Percentile Queue (veh)	7.3	5.5	15.1	8.7	7.8	0.0	24.9	19.7	0.0	3.6	18.3	0.0

During the Implementation Year AM Peak Hour, the eastbound left-turn movement at the intersection experiences a degradation from LOS “E” to LOS “F” under the Build condition. Even with mitigated lane geometry and adjusted signal operations, the LOS for this movement remains

at LOS “F”. The eastbound through movement, which currently operates at LOS E, remains unchanged under Build conditions but improves to LOS D with the implementation of mitigation measures.

During the PM Peak Hour, the eastbound through lane degrades from LOS “D” to LOS “F” under Build conditions. Based on the additional traffic volumes generated by the proposed development, mitigation measures were evaluated. These include: (1) an additional eastbound and westbound through lane, (2) adjustments to signal timing, and (3) removal of the eastbound free-right turn. With these mitigations in place, delay during the PM Peak Hour is improved by approximately 2.5 seconds under Build conditions.

Despite these targeted improvements, the overall intersection delay during both AM and PM peak periods remains at LOS “D”, which is considered acceptable per the City of Albuquerque Design Process Manual (DPM). However, the new trips generated by the Unser and Sage Development are projected to have a significant adverse impact on this intersection.

Therefore, it is **recommended that a second eastbound and a second westbound through lane be constructed** on Sage Rd. through the intersection to increase capacity and mitigate the development’s impact. It is also **recommended that the existing free-right turn be removed and replaced with a signalized right-turn lane, along with corresponding adjustments to the signal timing**.

Intersection #3 – Unser Blvd. / Tower Rd. (Signalized)

The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Tower Rd. are summarized in Table 12, as well as attached in Appendix A-88 through A-91. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Tower Rd. are summarized in Table 13, as well as attached in Appendix A-123 through A-126.

Table 12 - 2025 Synchro Summary Intersection #3 Unser Blvd. / Tower Rd.

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
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
Intersection LOS	**B - 11.7**											
95th Percentile Queue (ft)	140.0	80.0	0.0	50.0	57.5	0.0	7.5	7.5	0.0	7.5	72.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	95	118	87	43	86	63	51	1,025	43	27	508	59
V/C Ratio	0.54	0.29		0.27	0.21		0.07	0.39		0.06	0.19	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	57.0	52.5	0.0	3.9	0.4	0.0	4.0	5.3	0.0
Intersection LOS	**B - 11.4**											
95th Percentile Queue (ft)	140.0	80.0	0.0	60.0	57.5	0.0	12.5	7.5	0.0	7.5	82.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.4	2.3	0.0	0.5	0.3	0.0	0.3	3.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.45	0.23		0.27	0.52		0.40	0.36		0.10	0.53	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.4	51.7	0.0	8.1	0.4	0.0	5.7	10.7	0.0
Intersection LOS	**B - 14.5**											
95th Percentile Queue (ft)	92.5	77.5	0.0	75.0	182.5	0.0	42.5	7.5	0.0	17.5	325.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.0	7.3	0.0	1.7	0.3	0.0	0.7	13.0	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	63	118	117	60	267	77	153	956	38	50	1,354	131
V/C Ratio	0.45	0.23		0.30	0.52		0.46	0.38		0.10	0.56	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.7	51.7	0.0	9.1	0.4	0.0	5.8	11.3	0.0
Intersection LOS	**B - 14.6**											
95th Percentile Queue (ft)	92.5	77.5	0.0	82.5	182.5	0.0	47.5	7.5	0.0	17.5	350.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.3	7.3	0.0	1.9	0.3	0.0	0.7	14.0	0.0

Table 13 - 2035 Synchro Summary Intersection #3 Unser Blvd. / Tower Rd.

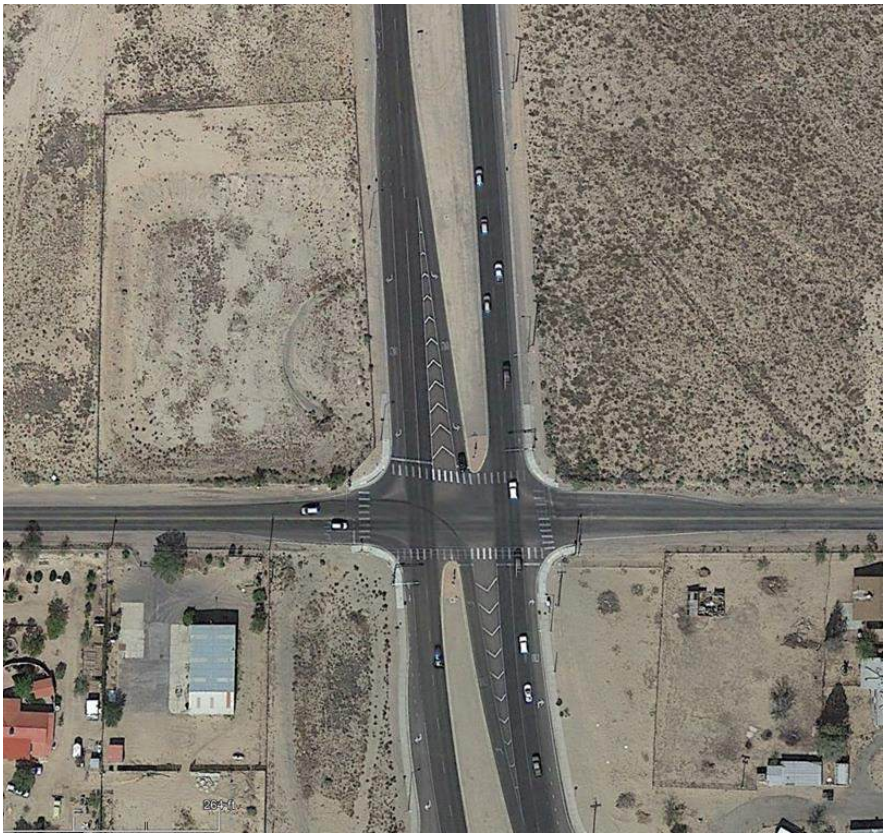
Signalized

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
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_NO BUILD Volumes	132	163	94	50	119	88	44	1,346	50	38	641	82
V/C Ratio	0.62	0.30		0.26	0.22		0.07	0.54		0.11	0.26	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	56.9	49.1	0.0	53.7	48.4	0.0	5.5	2.3	0.0	5.4	7.3	0.0
Intersection LOS	**B - 12.7**											
95th Percentile Queue (ft)	192.5	105.0	0.0	67.5	77.5	0.0	15.0	65.0	0.0	12.5	135.0	0.0
95th Percentile Queue (veh)	7.7	4.2	0.0	2.7	3.1	0.0	0.6	2.6	0.0	0.5	5.4	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_BUILD Volumes	132	163	113	57	119	88	63	1,402	57	38	687	82
V/C Ratio	0.62	0.30		0.30	0.22		0.11	0.56		0.11	0.28	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	56.9	49.1	0.0	54.1	48.4	0.0	5.6	2.4	0.0	5.6	7.7	0.0
Intersection LOS	**B - 12.6**											
95th Percentile Queue (ft)	192.5	105.0	0.0	77.5	77.5	0.0	20.0	70.0	0.0	12.5	150.0	0.0
95th Percentile Queue (veh)	7.7	4.2	0.0	3.1	3.1	0.0	0.8	2.8	0.0	0.5	6.0	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_NO BUILD Volumes	88	163	138	75	371	107	189	1,258	44	69	1,798	182
V/C Ratio	0.54	0.23		0.30	0.52		0.89	0.55		0.20	0.82	
Level-of-Service	E	D		D	D		D	A		A	C	
Control Delay (Seconds)	57.9	43.7	0.0	49.0	46.7	0.0	46.1	5.0	0.0	8.9	22.7	0.0
Intersection LOS	**C - 22.4**											
95th Percentile Queue (ft)	127.5	100.0	0.0	97.5	230.0	0.0	205.0	137.5	0.0	30.0	687.5	0.0
95th Percentile Queue (veh)	5.1	4.0	0.0	3.9	9.2	0.0	8.2	5.5	0.0	1.2	27.5	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_BUILD Volumes	88	163	155	81	371	107	206	1,308	50	69	1,857	182
V/C Ratio	0.54	0.23		0.32	0.52		0.90	0.57		0.21	0.87	
Level-of-Service	E	D		D	D		E	A		A	C	
Control Delay (Seconds)	57.9	43.7	0.0	49.3	46.7	0.0	61.1	5.2	0.0	9.8	27.5	0.0
Intersection LOS	**C - 25.3**											
95th Percentile Queue (ft)	127.5	100.0	0.0	107.5	230.0	0.0	315.0	145.0	0.0	32.5	782.5	0.0
95th Percentile Queue (veh)	5.1	4.0	0.0	4.3	9.2	0.0	12.6	5.8	0.0	1.3	31.3	0.0

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the signalized intersection of Unser Blvd. / Tower Rd. is operating at an acceptable LOS under all conditions evaluated in this study. The new trips generated by the Unser and Sage Development do not present any significant adverse impact to this signalized intersection.

Based on the results of the analyses for Unser Blvd. / Tower Rd., **no recommendations** are proposed for this intersection.

Intersection #4 – Coors Blvd / Sage Rd. (Signalized)



The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Coors Blvd. / Sage Rd. are summarized in Table 14, as well as attached in Appendix A-92 through A-95. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Coors Blvd. / Sage Rd. are summarized in Table 15, as well as attached in Appendix A-127 through A-130.

Table 14 - 2025 Synchro Summary Intersection #4 Coors Blvd. / Sage Rd.

Signalized

Sage Rd. / Coors Blvd. 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
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	304	210	68	94	164	234	22	1,137	17	54	585	71
V/C Ratio	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
Intersection LOS	**F - 610.7**											
95th Percentile Queue (ft)	2,432.5	0.0	42.5	862.5	0.0	167.5	10.0	480.0	10.0	22.5	182.5	40.0
95th Percentile Queue (veh)	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	319	225	74	94	179	234	27	1,137	17	54	585	83
V/C Ratio	8.27	0.00	0.15	2.03	0.00	0.46	0.06	0.95	0.03	0.17	0.44	0.14
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,345.8	0.0	21.3	517.6	0.0	24.2	15.2	45.4	19.5	17.8	21.1	18.2
Intersection LOS	**F - 672.4**											
95th Percentile Queue (ft)	2,580.0	0.0	47.5	927.5	0.0	167.5	12.5	480.0	10.0	25.0	187.5	47.5
95th Percentile Queue (veh)	103.2	0.0	1.9	37.1	0.0	6.7	0.5	19.2	0.4	1.0	7.5	1.9
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	80	73	5	131	302	255	85	892	179	91	792	115
V/C Ratio	1.54	0.00	0.01	5.11	0.00	0.52	0.20	0.77	0.35	0.23	0.68	0.22
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	319.6	0.0	21.4	1,910.2	0.0	26.2	15.0	32.1	24.7	15.8	29.1	22.7
Intersection LOS	**F - 314.7**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	93	87	10	131	316	255	90	892	179	91	792	131
V/C Ratio	1.79	0.00	0.02	5.30	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	428.6	0.0	21.5	1,995.2	0.0	26.2	15.0	32.1	24.7	15.8	29.4	23.3
Intersection LOS	**F - 338.5**											
95th Percentile Queue (ft)	592.5	0.0	7.5	2,025.0	0.0	195.0	40.0	337.5	132.5	40.0	290.0	92.5
95th Percentile Queue (veh)	23.7	0.0	0.3	81.0	0.0	7.8	1.6	13.5	5.3	1.6	11.6	3.7

Table 15 – 2035 Synchro Summary Intersection #4 Coors Blvd. / Sage Rd.

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
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	336	235	77	99	180	254	24	1,269	19	61	658	80
V/C Ratio	8.74	0.00	0.15	2.22	0.00	0.51	0.06	1.07	0.04	0.19	0.48	0.13
Level-of-Service	F		C	F		C	B	F	B	B	C	B
Control Delay (Seconds)	3,556.0	0.0	21.7	603.0	0.0	25.1	15.8	77.6	19.9	17.7	21.2	17.6
Intersection LOS	**F - 705.5**											
95th Percentile Queue (ft)	2,712.5	0.0	50.0	1,002.5	0.0	187.5	12.5	690.0	12.5	27.5	210.0	45.0
95th Percentile Queue (veh)	108.5	0.0	2.0	40.1	0.0	7.5	0.5	27.6	0.5	1.1	8.4	1.8
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	351	250	83	99	195	254	29	1,269	19	61	658	92
V/C Ratio	9.22	0.00	0.17	2.35	0.00	0.51	0.07	1.07	0.04	0.19	0.49	0.15
Level-of-Service	F		C	F		C	B	F	B	B	C	B
Control Delay (Seconds)	3,774.0	0.0	21.7	662.0	0.0	25.1	15.4	77.6	19.9	17.9	22.0	18.5
Intersection LOS	**F - 770.1**											
95th Percentile Queue (ft)	2,857.5	0.0	55.0	1,085.0	0.0	187.5	15.0	690.0	12.5	27.5	212.5	55.0
95th Percentile Queue (veh)	114.3	0.0	2.2	43.4	0.0	7.5	0.6	27.6	0.5	1.1	8.5	2.2
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	87	82	6	143	335	280	96	1,000	201	103	890	129
V/C Ratio	1.69	0.00	0.01	6.41	0.00	0.57	0.24	0.87	0.39	0.27	0.77	0.25
Level-of-Service	F		C	F		C	B	D	C	B	C	C
Control Delay (Seconds)	383.7	0.0	21.6	2,501.2	0.0	27.5	15.8	37.4	25.7	17.1	32.0	23.3
Intersection LOS	**F - 401.4**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	100	96	11	143	349	280	101	1,000	201	103	890	145
V/C Ratio	1.95	0.00	0.02	6.63	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Level-of-Service	F		C	F		C	B	D	C	B	C	C
Control Delay (Seconds)	495.2	0.0	21.7	2,599.4	0.0	27.5	15.9	37.4	25.7	17.1	32.3	23.9
Intersection LOS	**F - 427.6**											
95th Percentile Queue (ft)	677.5	0.0	7.5	2,285.0	0.0	217.5	45.0	400.0	152.5	47.5	337.5	105.0
95th Percentile Queue (veh)	27.1	0.0	0.3	91.4	0.0	8.7	1.8	16.0	6.1	1.9	13.5	4.2

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the signalized intersection of Coors Blvd. / Sage Rd. is operating under stressed conditions. The intersection currently operates at LOS “F” under the No Build scenario. While this intersection carries significant traffic from various surrounding networks, it receives minimal traffic from the Unser and Sage Development.

The primary issue with the intersection's operation lies in its design. The east-west approach (Sage Rd.) is served by a single signal phase that accommodates left-turn, through, and right-turn movements. Ideally, the signal phasing should be modified to a permitted/protected

configuration to better serve eastbound and westbound left-turn movements. However, the existing geometric design and construction of the intersection do not support such a modification.

Implementing the necessary changes would require substantial geometric redesign and reconstruction, which are beyond the scope of the current development. Therefore, **no recommendations** are made for this intersection in relation to the proposed development.

Intersection #5 – 86th St. / Sage Rd (Signalized)

The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of 86th St. / Sage Rd. are summarized in Table 16, as well as attached in Appendix A-96 through A-99. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of 86th St. / Sage Rd. are summarized in Table 17, as well as attached in Appendix A-131 through A-134.

Table 16 – 2025 Synchro Summary Intersection #5 86th St. / Sage Rd.

Signalized

86th St. / Sage Rd. 2025_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Level-of-Service	D	E	E	D	D	D	A		A	A		A
Control Delay (Seconds)	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	70.0	342.5	355.0	45.0	137.5	140.0	2.5	0.0	90.0	20.0	0.0	35.0
95th Percentile Queue (veh)	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	59	607	13	61	277	77	4	114	103	60	30	51
V/C Ratio	0.23	0.82	0.82	0.38	0.47	0.49	0.00	0.00	0.19	0.08	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	39.1	53.6	53.5	40.1	33.5	33.7	9.0	0.0	9.7	11.4	0.0	8.7
Intersection LOS	**D - 36.7**											
95th Percentile Queue (ft)	67.5	372.5	385.0	67.5	165.0	165.0	2.5	0.0	115.0	35.0	0.0	40.0
95th Percentile Queue (veh)	2.7	14.9	15.4	2.7	6.6	6.6	0.1	0.0	4.6	1.4	0.0	1.6
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.59	0.60	0.27	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
Control Delay (Seconds)	46.0	52.5	52.6	43.3	47.3	47.6	7.8	0.0	6.5	7.0	0.0	7.0
Intersection LOS	**D - 37.1**											
95th Percentile Queue (ft)	70.0	225.0	230.0	60.0	242.5	247.5	7.5	0.0	45.0	12.5	0.0	87.5
95th Percentile Queue (veh)	2.8	9.0	9.2	2.4	9.7	9.9	0.3	0.0	1.8	0.5	0.0	3.5
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	55	361	42	72	470	71	17	85	46	46	110	93
V/C Ratio	0.36	0.58	0.59	0.33	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	44.7	52.6	52.7	41.4	45.2	45.6	9.0	0.0	7.6	8.4	0.0	8.1
Intersection LOS	**D - 37.0**											
95th Percentile Queue (ft)	67.5	257.5	262.5	82.5	282.5	287.5	7.5	0.0	60.0	22.5	0.0	95.0
95th Percentile Queue (veh)	2.7	10.3	10.5	3.3	11.3	11.5	0.3	0.0	2.4	0.9	0.0	3.8

Table 17 - 2055 Synchro Summary Intersection #5 86th St. / Sage Rd.

Sage Rd.

86th St. / Sage Rd. 2035_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	70	638	15	45	249	70	5	135	95	50	35	60
V/C Ratio	0.25	0.82	0.82	0.32	0.44	0.45	0.01	0.00	0.20	0.07	0.00	0.09
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	38.9	52.8	52.7	40.9	33.8	34.0	9.2	0.0	9.8	11.5	0.0	8.8
Intersection LOS	**D - 36.5**											
95th Percentile Queue (ft)	80.0	387.5	402.5	52.5	150.0	150.0	2.5	0.0	125.0	30.0	0.0	47.5
95th Percentile Queue (veh)	3.2	15.5	16.1	2.1	6.0	6.0	0.1	0.0	5.0	1.2	0.0	1.9
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	70	704	15	68	315	88	5	135	118	68	35	60
V/C Ratio	0.25	0.83	0.83	0.41	0.48	0.49	0.01	0.00	0.24	0.10	0.00	0.09
Level-of-Service	D	D	D	D	C	C	B		B	B		B
Control Delay (Seconds)	36.1	51.3	51.1	37.8	29.5	29.7	11.0	0.0	11.9	14.5	0.0	10.5
Intersection LOS	**D - 35.0**											
95th Percentile Queue (ft)	77.5	417.5	432.5	72.5	170.0	170.0	2.5	0.0	155.0	47.5	0.0	52.5
95th Percentile Queue (veh)	3.1	16.7	17.3	2.9	6.8	6.8	0.1	0.0	6.2	1.9	0.0	2.1
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	65	354	50	60	484	65	20	100	30	35	130	110
V/C Ratio	0.40	0.60	0.61	0.30	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	A		A	A		A
Control Delay (Seconds)	43.6	50.3	50.4	40.4	43.4	43.7	9.9	0.0	7.9	8.6	0.0	8.7
Intersection LOS	**D - 35.3**											
95th Percentile Queue (ft)	77.5	252.5	257.5	67.5	262.5	267.5	10.0	0.0	60.0	17.5	0.0	120.0
95th Percentile Queue (veh)	3.1	10.1	10.3	2.7	10.5	10.7	0.4	0.0	2.4	0.7	0.0	4.8
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	65	415	50	81	544	81	20	100	51	51	130	110
V/C Ratio	0.40	0.66	0.66	0.38	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.21
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	42.4	50.2	50.3	38.8	42.0	42.2	11.2	0.0	9.1	10.3	0.0	9.9
Intersection LOS	**D - 35.4**											
95th Percentile Queue (ft)	77.5	285.0	290.0	90.0	307.5	312.5	12.5	0.0	77.5	27.5	0.0	130.0
95th Percentile Queue (veh)	3.1	11.4	11.6	3.6	12.3	12.5	0.5	0.0	3.1	1.1	0.0	5.2

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the signalized intersection of 86th St. / Sage Rd. is operating at an acceptable LOS under all conditions evaluated in this study. The new trips generated by the Unser and Sage Development do not present any significant adverse impact to this intersection.

Based on the results of the analyses for 86th St. / Sage Rd., **no recommendations** are proposed for this intersection

Intersection #6 - Unser Blvd. / San Ygnacio Rd. (Unsignalized)

The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / San Ygnacio Rd. are summarized in Table 18, as well as attached in Appendix A-100 through A-103. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / San Ygnacio Rd. are summarized in Table 19, as well as attached in A-135 through A-138.

Table 18 - 2025 Synchro Summary Intersection #6 Unser Blvd. / San Ygnacio Rd.

Unsignalized

San Ygnacio Rd. / Unser Blvd. 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
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.7			10.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,692	11	0	1,092	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.9			11.1						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.1			9.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,254	11	0	1,694	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.3			10.0						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						

Table 19 - 2035 Synchro Summary Intersection #6 Unser Blvd. / San Ygnacio Rd.

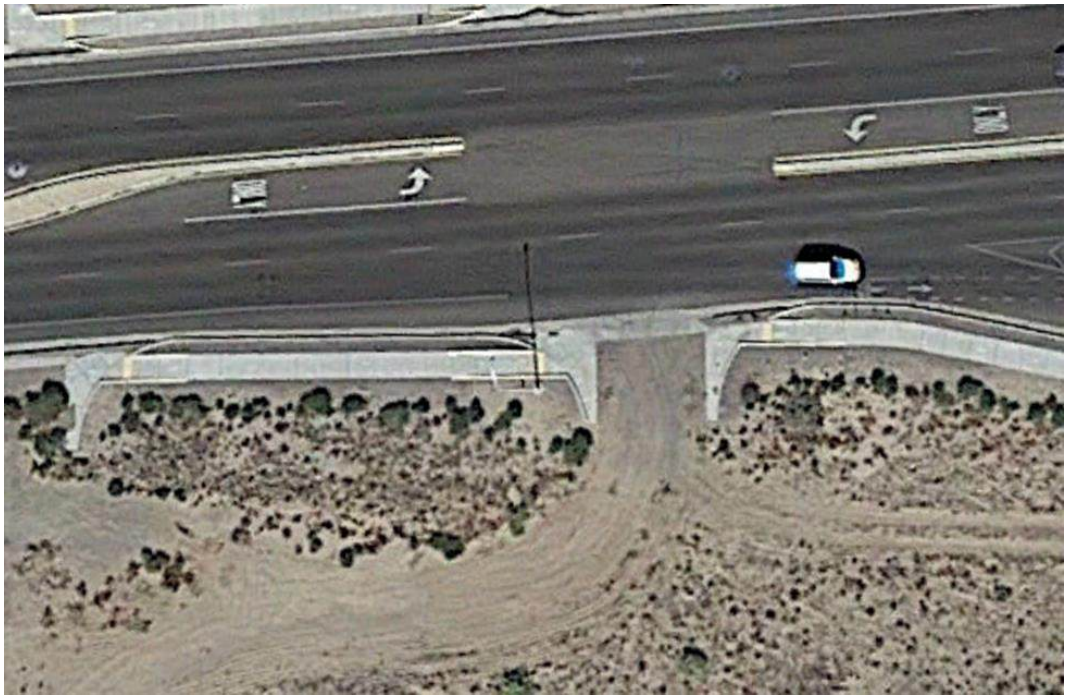
Unsignalized

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
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	47	0	0	16	0	3,102	16	0	2,039	16
V/C Ratio			0.09			0.08						
Level-of-Service			B			D						
Control Delay (Seconds)			12.9			25.3						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			7.5			13.8						
95th Percentile Queue (veh)			0.3			0.3						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	47	0	0	16	0	3,185	16	0	2,039	16
V/C Ratio			0.09			0.10						
Level-of-Service			B			D						
Control Delay (Seconds)			12.9			29.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			7.5			7.5						
95th Percentile Queue (veh)			0.3			0.3						
PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	47	0	0	16	0	2,273	16	0	3,102	47
V/C Ratio			0.24			0.04						
Level-of-Service			D			B						
Control Delay (Seconds)			29.5			13.8						
Intersection LOS	**TWSC / A - 0.3**											
95th Percentile Queue (ft)			22.5			2.5						
95th Percentile Queue (veh)			0.9			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	47	0	0	16	0	2,348	16	0	3,187	47
V/C Ratio			0.29			0.04						
Level-of-Service			E			B						
Control Delay (Seconds)			36.5			14.2						
Intersection LOS	**TWSC / A - 0.3**											
95th Percentile Queue (ft)			30.0			2.5						
95th Percentile Queue (veh)			1.2			0.1						

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the unsignalized intersection of Unser Blvd. / San Ygnacio Rd. is operating at an acceptable LOS under all 2025 conditions evaluated in this study. The new trips generated by the Unser Blvd. / Sage Rd. Development do not present any significant adverse impact to this intersection.

However, Table 19 shows a LOS “E” for the Horizon Year PM Peak Hour eastbound right-turn movement during the PM Peak Period Hour analysis. Since the proposed development does not contribute to this non desirable movement, **no recommendations** are made for the Unser Blvd. and San Ygnacio Rd. intersection.

Intersection #7 – Sage Rd. / Driveway "A" (Unsignalized)



The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Sage Rd. / Driveway "A" are summarized in Table 20, as well as attached in Appendix A-104 & A-105. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the unsignalized intersection of Sage Rd. / Driveway "A" are summarized in Table 21, as well as attached in Appendix A-139 & A-140.

Table 20 - 2025 Synchro Summary Intersection #7 Sage Rd. / Driveway "A"

Unsignalized

Sage Rd. / Driveway "A" 2025_Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
Proposed Lane Geometry	1	2>	0	1	2			<1>	
AM Peak Hour									
2025_BUILD Volumes		830	149	62	286		123		218
V/C Ratio				0.07			0.50		
Level-of-Service				A			C		
Control Delay (Seconds)				9.4			15.6		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.2			2.8		
Mitigage Lane Geometry		2	1	1	2			<1>	
2025_MITIGATIONS Volumes		830	149	62	286		123		218
V/C Ratio				0.10			0.52		
Level-of-Service				B			C		
Control Delay (Seconds)				11.2			16.1		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.3			3.0		
PM Peak Hour									
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.07			0.04		
Level-of-Service				A			B		
Control Delay (Seconds)				8.5			12.5		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.2			1.8		
Mitigage Lane Geometry		2	1	1	2			<1>	
2025_MITIGATIONS Volumes		513	122	74	572		121		174
V/C Ratio				0.10			0.40		
Level-of-Service				B			B		
Control Delay (Seconds)				10.2			13.1		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.3			1.9		

Table 21 - 2035 Synchro Summary Intersection #7 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	1	2>	0	1	2			<1>	
AM Peak Hour									
2035_BUILD Volumes		1,160	149	62	399		123		218
V/C Ratio				0.09			0.61		
Level-of-Service				B			C		
Control Delay (Seconds)				10.7			21.0		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.3			4.1		
Mitigage Lane Geometry		2	1	1	2			<1>	
2035_MITIGATIONS Volumes		1,160	149	62	399		123		218
V/C Ratio				0.12			0.59		
Level-of-Service				B			C		
Control Delay (Seconds)				12.7			19.9		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.4			3.8		
PM Peak Hour									
2035_BUILD Volumes		717	122	74	799		121		174
V/C Ratio				0.08			0.42		
Level-of-Service				A			B		
Control Delay (Seconds)				9.0			13.8		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.2			2.1		
Mitigage Lane Geometry		2	1	1	2			<1>	
2035_MITIGATIONS Volumes		717	122	74	799		121		174
V/C Ratio				0.10			0.43		
Level-of-Service				B			B		
Control Delay (Seconds)				10.6			14.0		
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)				0.3			2.1		

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the unsignalized intersection of Unser Blvd. and Driveway "A" is operating at an acceptable LOS under 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 entering lane and one exiting lane.

Driveway "A" may be widened within the constraints of the City of Albuquerque Development Process Manual (COA DPM); however, its design 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 required length specified by the COA, to the extent feasible**.

It is also **recommended that the Service Tower driveway located west of Driveway "A" be converted to a residential-type drive pad due to its very low volume of traffic**. Additionally, the existing westbound left-turn lane on Sage Rd. at Driveway "A" should be maintained.

Intersection #8 – Unser Blvd. / Driveway "B" (Unsignalized)

The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Driveway "B" are summarized in Table 22, as well as attached in Appendix A-106 & A-107. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Driveway "B" are summarized in Table 23, as well as attached in Appendix A-141 & A-142.

Table 22 - 2025 Synchro Summary Intersection #8 Unser Blvd. / Driveway "B"

Unsignalized

Driveway "B" / Unser Blvd. 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		129	0	1,191			962	128
V/C Ratio			0.16						
Level-of-Service			B						
Control Delay (Seconds)			10.2						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.6						
Mitigage Lane Geometry	0		1	0	2			2	1
2025_MITIGATIONS Volumes	0		129	0	1,191			962	128
V/C Ratio			0.17						
Level-of-Service			B						
Control Delay (Seconds)			10.5						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.6						
PM Peak Hour									
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.20						
Level-of-Service			B						
Control Delay (Seconds)			11.8						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.7						
Mitigage Lane Geometry	0		1	0	2			2	1
2025_MITIGATIONS Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.19						
Level-of-Service			B						
Control Delay (Seconds)			11.5						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.7						

Table 23 - 2035 Synchro Summary Intersection #8 Unser Blvd. / Driveway "B"

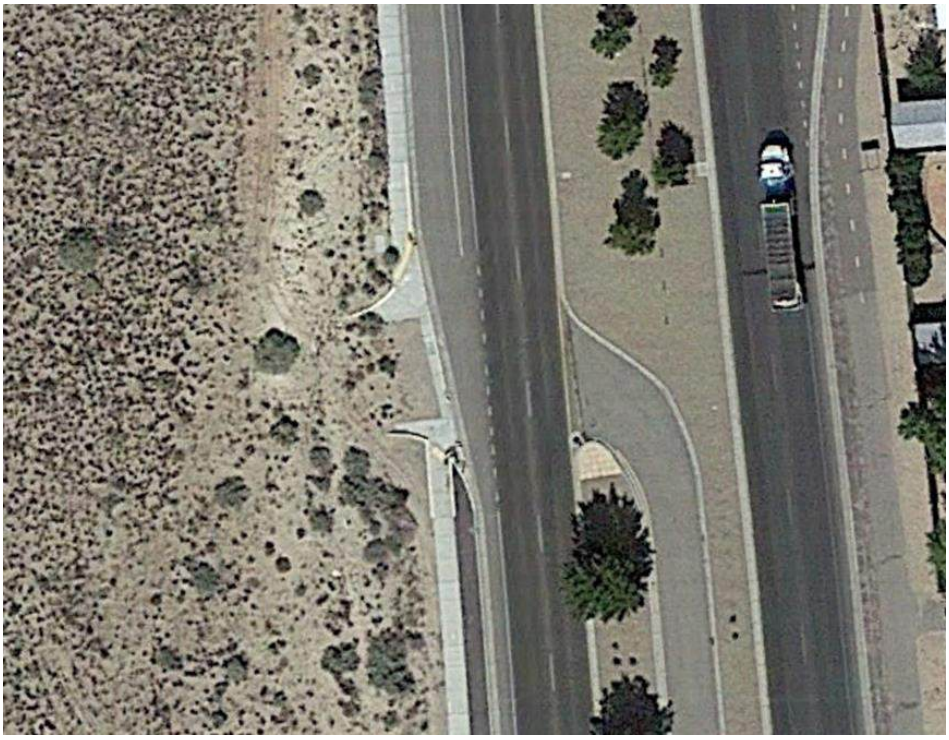
Unsignalized

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		129	0	1,686			1,335	128
V/C Ratio			0.18						
Level-of-Service			B						
Control Delay (Seconds)			11.2						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.7						
Mitigage Lane Geometry	0		1	0	2			2	1
2035_MITIGATIONS Volumes	0		129	0	1,686			1,335	128
V/C Ratio			0.18						
Level-of-Service			B						
Control Delay (Seconds)			11.2						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.7						
PM Peak Hour									
2035_BUILD Volumes	0		132	0	1,524			2,132	158
V/C Ratio			0.22						
Level-of-Service			B						
Control Delay (Seconds)			12.9						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.9						
Mitigage Lane Geometry	0		1	0	2			2	1
2035_MITIGATIONS Volumes	0		132	0	1,524			2,132	158
V/C Ratio			0.22						
Level-of-Service			B						
Control Delay (Seconds)			12.9						
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.9						

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the unsignalized intersection of Unser Blvd. / Driveway "B" is operating at an acceptable LOS under all conditions evaluated in this study. The proposed Driveway "B" **should be designed and constructed as a right-in/right-out-only unsignalized intersection with one entering lane and one exiting lane**. To address safety concerns, **the eastbound right curb return should extend to the east side of the southbound deceleration lane**. Driveway "B" should be constructed in compliance with the requirements of the City of Albuquerque Development Process Manual (COA DPM).

A southbound right-turn deceleration lane on Unser Blvd. at Driveway "B" is warranted and should be designed and constructed accordingly. To construct this lane to its full required length, the signalized intersection of Unser Blvd. and Sage Rd. will need to be reconfigured by eliminating the existing eastbound-to-southbound free right-turn movement and converting it to a standard signalized right-turn movement.

Intersection #9 – Unser Blvd. / Driveway "C" (Unsignalized)



The results of the 2025 Implementation Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Driveway "C" are summarized in Table 24, as well as attached in Appendix A-108 & A-109. The results of the 2035 Horizon Year for the AM Peak Hour and PM Peak Hour analysis of the signalized intersection of Unser Blvd. / Driveway "C" are summarized in Table 25, as well as attached in Appendix A-143 & A-144.

Table 24 - 2025 Synchro Summary Intersection #9 Unser Blvd. / Driveway "C"

Unsignalized

Driveway "C" / Unser Blvd. 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		18	155	1,191			1,034	18
V/C Ratio			0.02	0.18					
Level-of-Service			A	B					
Control Delay (Seconds)			9.6	10.0					
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.1	0.6					
Mitigage Lane Geometry	0		1	1	2			2	1
2025_MITIGATIONS Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.02	0.18					
Level-of-Service			A	B					
Control Delay (Seconds)			9.6	10.0					
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.1	0.6					
PM Peak Hour									
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.03	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			10.7	13.5					
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.1	0.9					
Mitigage Lane Geometry	0		1	1	2			2	1
2025_MITIGATIONS Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.03	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			10.7	13.5					
Intersection LOS	**TWSC**								
95th Percentile Queue (veh)			0.1	0.9					

Table 25 -2035 Synchro Summary Intersection #9 Unser Blvd. / Driveway "C"

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									
Intersection LOS									
95th Percentile Queue (veh)									
2035_BUILD Volumes	0		18	155	1,686			1,427	18
V/C Ratio			0.03	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			10.4	12.2					
Intersection LOS					**TWSC**				
95th Percentile Queue (veh)			0.1	0.9					
Mitigage Lane Geometry	0		1	1	2			2	1
2035_MITIGATIONS Volumes	0		33	101	1,712			1,402	17
V/C Ratio			0.03	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			10.4	12.2					
Intersection LOS					**TWSC**				
95th Percentile Queue (veh)			0.1	0.9					
PM Peak Hour									
2035_BUILD Volumes	0		18	134	1,524			2,192	21
V/C Ratio			0.04	0.53					
Level-of-Service			B	D					
Control Delay (Seconds)			13.0	34.1					
Intersection LOS					**TWSC**				
95th Percentile Queue (veh)			0.1	2.8					
Mitigage Lane Geometry	0		1	1	2			2	1
2035_MITIGATIONS Volumes	0		18	134	1,524			2,192	21
V/C Ratio			0.04	0.53					
Level-of-Service			B	D					
Control Delay (Seconds)			13.0	34.1					
Intersection LOS					**TWSC**				
95th Percentile Queue (veh)			0.1	2.8					

Both the Implementation Year and Horizon Year analyses in the above tables indicate that the signalized intersection of Unser Blvd. / Driveway "C" is operating at an acceptable LOS under all conditions evaluated in this study. Driveway "C" is an existing, approved right-in, right-out, left-in-only intersection. It should be maintained in this configuration as an unsignalized intersection, with a minimum of one entering lane and one exiting lane.

The existing southbound right-turn deceleration lane on Unser Blvd. at Driveway "C" is warranted and, therefore, should be maintained. However, due to the proposed mitigation for Driveway "B," the deceleration lane for Driveway "C" is **proposed to be reconfigured with approximately 375 feet (including taper)**

Crash Analysis

Crash data for the study area was collected for the years 2015 through 2019 from the New Mexico Department of Transportation's (NMDOT) statewide database. The data focuses on the intersection of Unser Blvd. and Sage Rd. Based on the low number of crashes reported during this five-year period, the analysis concludes that there are no significant safety concerns in the study area. Table 26, shown below, provides a summary of crashes by year and crash type.

Table 26 - Unser and Sage Development Crash Analysis Summary

Crash Analysis

Unser and Sage Development

Unser Blvd. / Sage Rd - Albuquerque, NM

Intersection: 1. Unser Blvd. / Sage Rd.
Date: 4/19/2023

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2015		1	2	6	4	1	0	0	2	7	23
2016		0	2	7	0	2	1	1	6	2	21
2017		0	0	6	2	2	7	0	3	5	25
2018		0	1	4	2	3	2	0	4	3	19
2019		0	1	3	2	3	4	0	1	4	18
Total		1	6	26	10	11	14	1	16	21	106
		1%	6%	25%	9%	10%	13%	1%	15%	20%	100%

Average Crashes per Million Entering Vechicles = 1.9

ɔased on existing (2022) PM Peak Hour Volume x 10 hours x 365 days per year = 11,139,800 veh/year

Determination of Warrants for Deceleration Lanes

The warrants for deceleration lanes at Driveways “A,” “B,” and “C” were evaluated in accordance with the City of Albuquerque Development Process Manual (DPM) criteria. Table 27 defines the COA’s warrant thresholds for right-turn and left-turn lanes at existing and proposed driveways.

Table 27 - Deceleration Lane Warrant Analysis Summary

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)

Driveway “A” – Deceleration Lane Warrant Summary

According to Table 27, the following applies to Driveway “A”:

- A westbound left-turn lane on Sage Rd. at Driveway “A” is warranted at a design speed of 35 MPH. However, a westbound left-turn lane currently exists and is approximately 125 feet long (including transition).
    - **No additional recommendation is made**.

- An eastbound right-turn deceleration lane is also warranted per COA DPM criteria and has been incorporated into the site plan at an approximate length of **240 feet (including transition)**.

Driveway "B" – Deceleration Lane Warrant Summary

According to Table 27, the following applies to Driveway "B":

- A southbound right-turn deceleration lane on Unser Blvd. at Driveway "B" is warranted at a design speed of 40 MPH. This lane is shown on the site plan with a length of approximately 300 feet, including transition.

- Since Driveway "B" is proposed as a right-in/right-out-only access, a northbound left-turn lane is not required.
    - **No recommendation is made**.

Driveway "C" – Deceleration Lane Warrant Summary

According to Table 27, the following applies to Driveway "C":

- A northbound left-turn deceleration lane on Unser Blvd. at Driveway "C" is warranted with a required length of 250 feet (including taper). A deceleration lane currently exists and is approximately 425 feet long (including transition).
    - **No additional recommendation is made**.

- A southbound right-turn lane is not warranted based on the same criteria with a design speed of 40 MPH. However, a southbound right-turn lane exists and is approximately 425 feet in length (including transition).
    - **No recommendation is made**.

Driveway Access Evaluation Summary

Driveway "A" is an **existing access point**.

Driveway "B" has not yet been constructed but was **approved in December 2023 under Case No. R-23-01-TCC** as a right-in/right-out unsignalized driveway, located on the west side of Unser Blvd., approximately 350 feet south of the Unser Blvd. / Sage Rd. intersection (centerline to centerline).

Driveway "C" is also an existing access point and was **approved in February 2008 under Case No. R-08-01-TCC** as a right-in/right-out with a left-in only unsignalized driveway, located on the west side of Unser Blvd., approximately 815 feet south of the Unser Blvd. / Sage Rd. intersection (centerline to centerline).

All approvals referenced above were granted by the Transportation Coordinating Committee of the Metropolitan Transportation Board of the Mid-Region Council of Governments of New Mexico.

Summary of Impacts and Recommendations

Summary of Impacts

The Unser and Sage Development presents four key areas of concern to adjacent transportation system, which are outlined below:

First Concern:

The analysis indicates that the overall signalized intersection of Unser Blvd. and Sage Rd. is projected to experience an increase of 19.4 seconds in delay during the 2025 AM Peak Hour Build condition compared to the No Build condition. This increase is attributed to additional traffic generated by the proposed development, resulting in a degraded LOS "E" at the intersection.

The existing intersection geometry includes one eastbound and one westbound through lane on Sage Rd., as currently striped. However, the available pavement width can accommodate an additional through lane in each direction. Therefore, it is proposed to re-stripe the existing pavement to provide two eastbound and two westbound through lanes. Additional improvements at the southwest corner of the intersection include the removal of the channelized free-flow right-turn lane and modification of traffic signal timing and phasing. These improvements are illustrated in Figure 22 shown below.

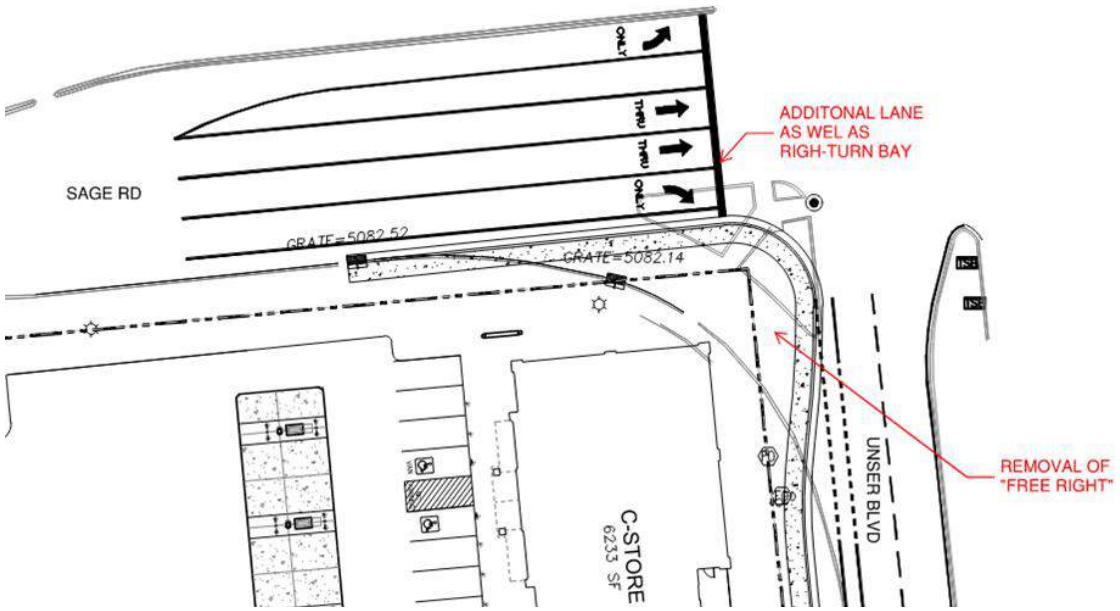


Figure 22 - Unser Blvd / Sage Rd. Geometry Mitigation Exhibit

These proposed mitigations are expected to improve the intersection's LOS from the substandard LOS "E" to LOS "C," which matches the No Build condition.

Second Concern:

In accordance with the City of Albuquerque DPM Table 7.7.67, an eastbound right-turn deceleration lane into the existing Driveway “A” is warranted. However, with the existing Service Tower driveway in place, there is only approximately 154 feet from centerline to centerline between the Service Tower and Driveway “A”

The Service Tower driveway experiences minimal usage, with an estimated frequency of one trip per month. To reflect this low volume, it is proposed to convert the existing driveway into a drive pad. This change facilitates additional deceleration lane length for Driveway “A.” of 240 feet (including taper). These improvements are illustrated on Figure 23 shown below.

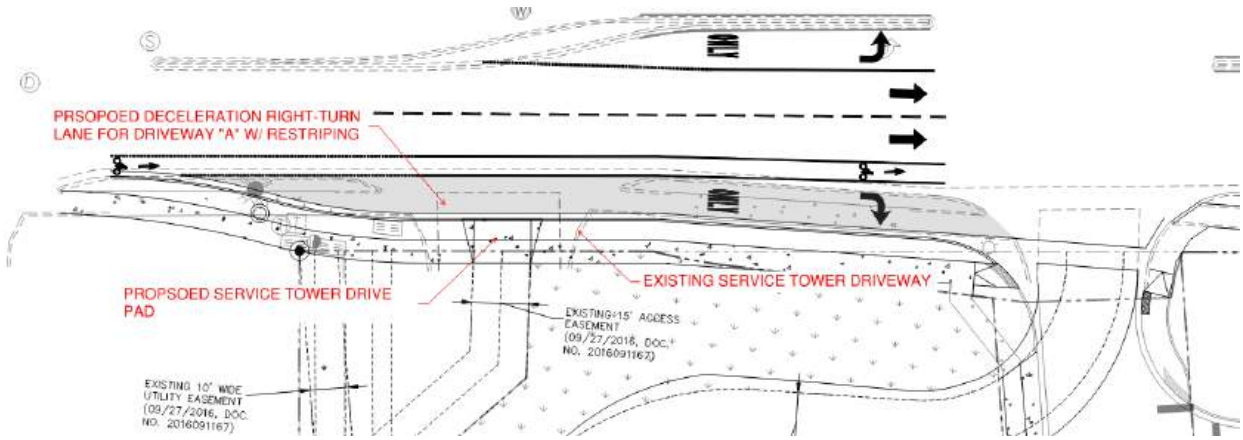


Figure 23 - Driveway "A" and Service Tower Driveway Mitigation

Third Concern:

Per DPM Tables 7.7.67 and 7.4.68, a southbound right-turn deceleration lane is warranted on Unser Blvd. at Driveway “B.” The proposed deceleration lane provides approximately 260 feet (including taper). However, to address safety, the eastbound right-turn curb return should be extended to the eastern limit of the southbound deceleration lane. These improvements are illustrated on Figure 24 shown below.

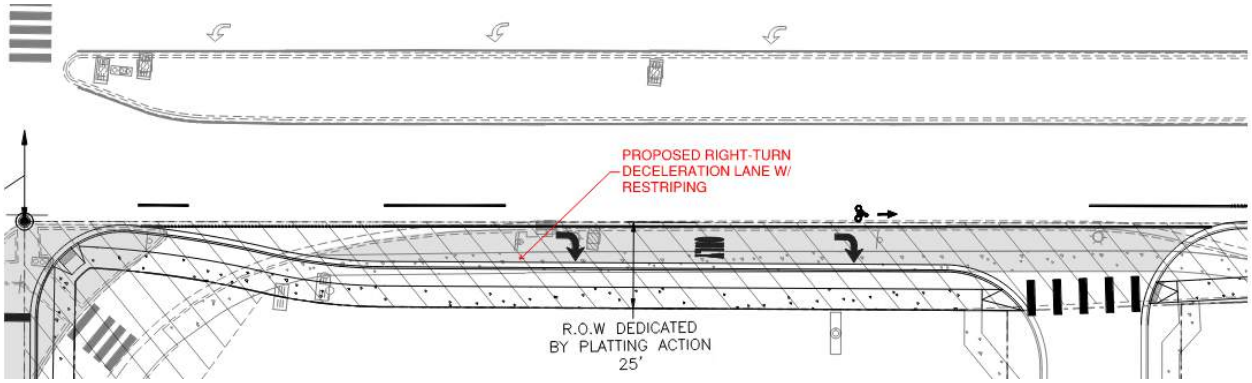


Figure 24 - Driveway "B" Mitigation

Fourth Concern:

According to DPM Table 7.4.68, Driveway “C” warrants a northbound left-turn deceleration lane on Unser Blvd. This lane currently exists and provides 400 feet of storage.

Driveway “C” does not warrant a southbound left-turn deceleration lane; however, the lane currently exists. Due to the proposed mitigation for Driveway “B,” the southbound left-turn deceleration lane for Driveway “C” is proposed to be reconfigured to provide approximately 375 feet of length (including taper). These improvements are illustrated in Figure 25 below.

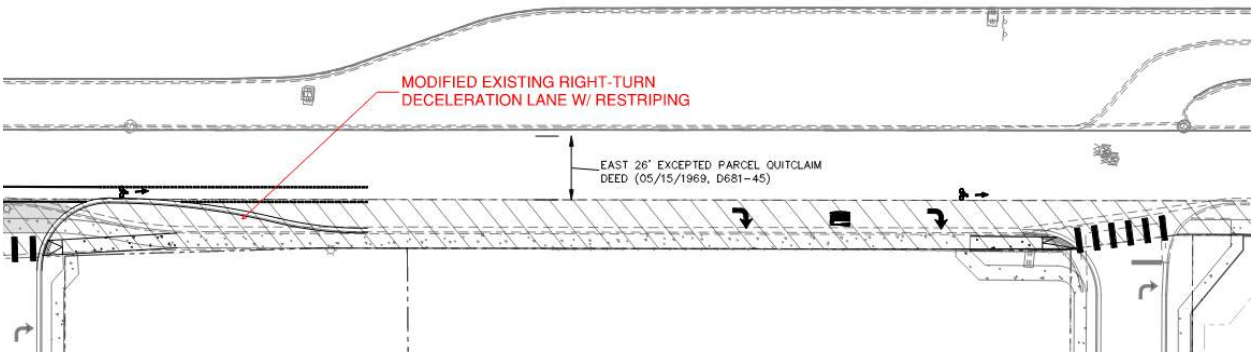


Figure 25 - Driveway "C" Mitigation

Recommendations

Based on the analysis provided in this Traffic Impact Study, the following recommendations are made:

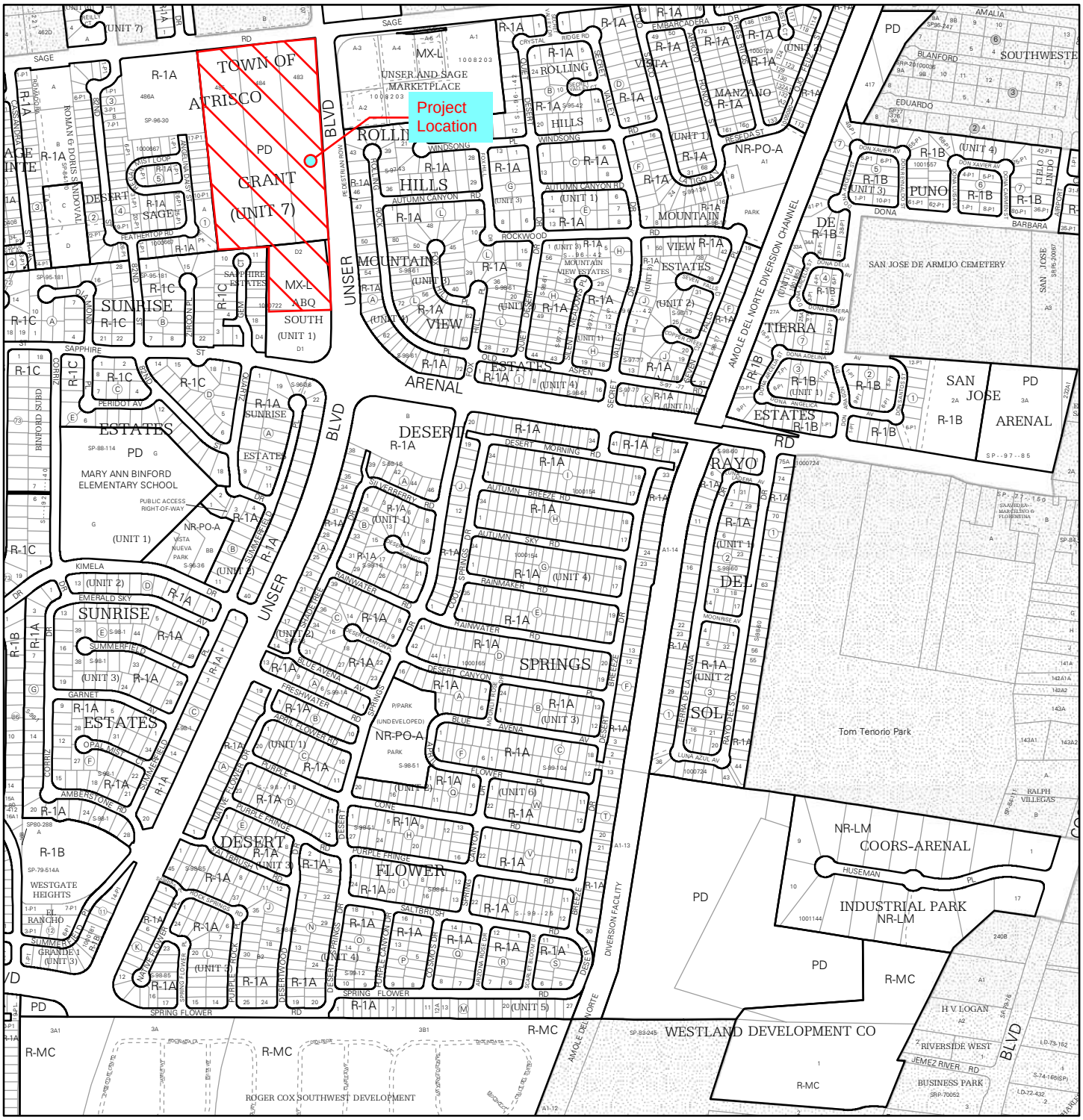
- General
  - Construction of the Unser and Sage Development and landscaping **shall maintain adequate sight distances** at all access points.
- Unser Blvd. / Sage Blvd.
  - **Optimize signal timing splits** for both the Implementation Year (2025) and the Horizon Year (2035) to improve overall intersection operations and minimize delay.
  - **Adding an additional eastbound and westbound through lane before and after the signalized intersection.** Restriping and additional geometry adjustments are feasible, as there is sufficient width for these lanes from Driveway "A" access point to Abeyta Rd.
  - The channelized free-flow right-turn lane at the southwest corner of intersection should be **removed and replaced with an signalized eastbound right-turn lane at the intersection**. This eastbound right-turn movement will maintain the existing turn-bay storage length of 280 feet.
- Sage Rd. / Driveway "A"
  - It should continue to operate as a full-access driveway with existing width. However, a **new eastbound right-turn deceleration lane is warranted for right-turn access into the development site, with a storage plus transition length of 220 feet**.
  - **Remove and replace the existing Service Tower driveway with a residential type of drive pad**. Proposed drive pad shall be constructed at the centerline of existing driveway to maintain access to the existing 15' private access and utility easement.
- Unser Blvd. / Driveway "B"
  - **A southbound right-turn deceleration lane is warranted to provide southbound right-in to access the development site**. The total storage and transition length will be approximately 260 feet (including taper). To improve safety, the **eastbound right curb return at Sage / Unser should be extended to the east side of the southbound deceleration lane**.

- Unser Blvd. / Driveway "C"
  - Maintain existing right-in/right-out with a left-in only unsignalized driveway.
  - **Reconfigure existing southbound right-turn deceleration lane to be approximately 375 feet (including taper).**

Appendix

Traffic Impact Study Scope	*A-150 through A-152*
Mitigation Exhibits	*A-153*
Pavement Exhibit	*A-154*
Proposed Infrastructure List	*A-155 through A-157*


Unser Blvd. and Sage Rd. Development
Vicinity Map
Legend
Intersections
Site Location
86th St. SW
San Ygnacio Rd. SW
Sage Rd. SW
Arenal Rd. SW
Unser Blvd. SW
SITE
SanYgnacioRdSW_UnserBlvdSW
SageRdSW_UnserBlvdSW
SageRdSW_86thStSW
ArenalRdSW_UnserBlvdSW
SageRdSW_SR45/CoorsBlvd
Google Earth
3000 ft
N
A - 1



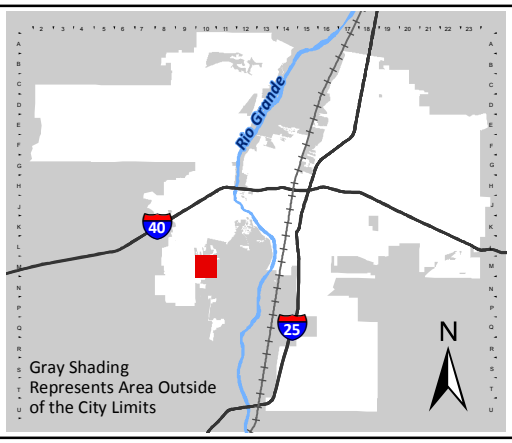
For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

IDO Zone Atlas
May 2018

Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

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



Zone Atlas Page:

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

Feet: 0 250 500 1,000

ENGINEER'S SEAL	SAGE AND UNSER DEVELOPMENT ALBUQUERQUE, NM	DRAWN BY MR
	SITE PLAN EXHIBIT	DATE 1/30/2025
		DRAWING
	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	SHEET #
RONALD R. BOHANNAN P.E. #7868		JOB # 2024029

Unser Blvd SW and Sage Rd SW 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 5.5-10K (945)	24	8,298	379	379	323	323
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		**10,587**	**473**	**485**	**461**	**442**
Retail Commercial Trips		**10,081**	**466**	**462**	**428**	**422**
Pass-By Trips	33%		*-154*	*-152*	*-141*	*-139*
Total New Primary Trips			**312**	**310**	**287**	**283**
Total New Residential Trips			**7**	**23**	**33**	**20**

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

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Multifamily Housing (Low-Rise)	***75.00***	506	7	23	33	20
	Dwelling Units					

ITE Trip Generation Equations:

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

T = ***6.74*** **(X) +** ***0***

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

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

T = ***0.4*** **(X) +** ***0***

24% Enter, ***76%*** Exit

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

T = ***0.43*** **(X) +** ***20.55***

63% Enter, ***37%*** Exit

Comments:

Tract No.

Based on ITE Trip Generation Manual - 11th Edition

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

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Convenience Store / Gas Station - GFA 5.5-10K (945)	*24*	8,298	379	379	323	323
	Fueling Positions					

ITE Trip Generation Equations:

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

T = ***345.75*** **(X) +** ***0***
50% Enter, ***50%*** Exit

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

T = ***31.6*** **(X) +** ***0***
50% Enter, ***50%*** Exit

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

T = ***26.9*** **(X) +** ***0***
50% Enter, ***50%*** Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 11th Edition

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

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Fast Food Restaurant w/ Drive-Thru Window (934)	***3.82***	1,783	87	83	66	60
	1,000 S.F.					

ITE Trip Generation Equations:

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

T = ***467.48*** **(X) +** ***0***
50% Enter, ***50%*** Exit

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

T = ***44.61*** **(X) +** ***0***
51% Enter, ***49%*** Exit

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

T = ***33.03*** **(X) +** ***0***
52% Enter, ***48%*** Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 11th Edition

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

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Automated Car Wash (948)	***1.00***	-	-	-	39	39
	Car Wash Tunnels					

ITE Trip Generation Equations:

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

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

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

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

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

T = ***77.5*** **(X) +** ***0***
50% Enter, ***50%*** Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 11th Edition

Historic Growth Data Table

Unser and Sage Development

(Unser and Sage)

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

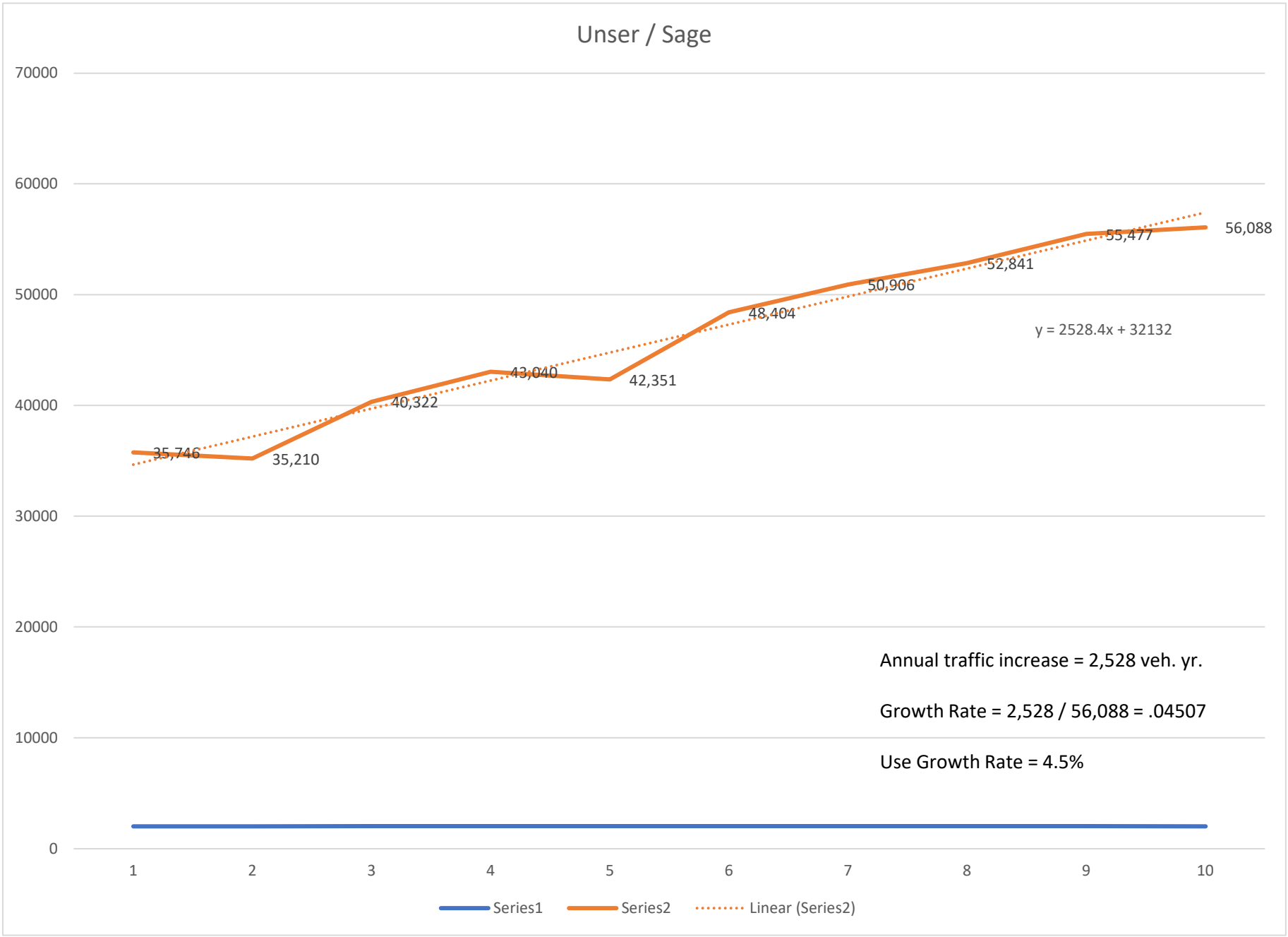
COG ID	Location											
Intersection #1:	**ARENAL / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26584	ARENAL	EAST OF UNSER	WEST OF COORS	10,270	10,116	9,565	9,402	9,252	10,331	10,589	10,991	12,163	12,689
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**

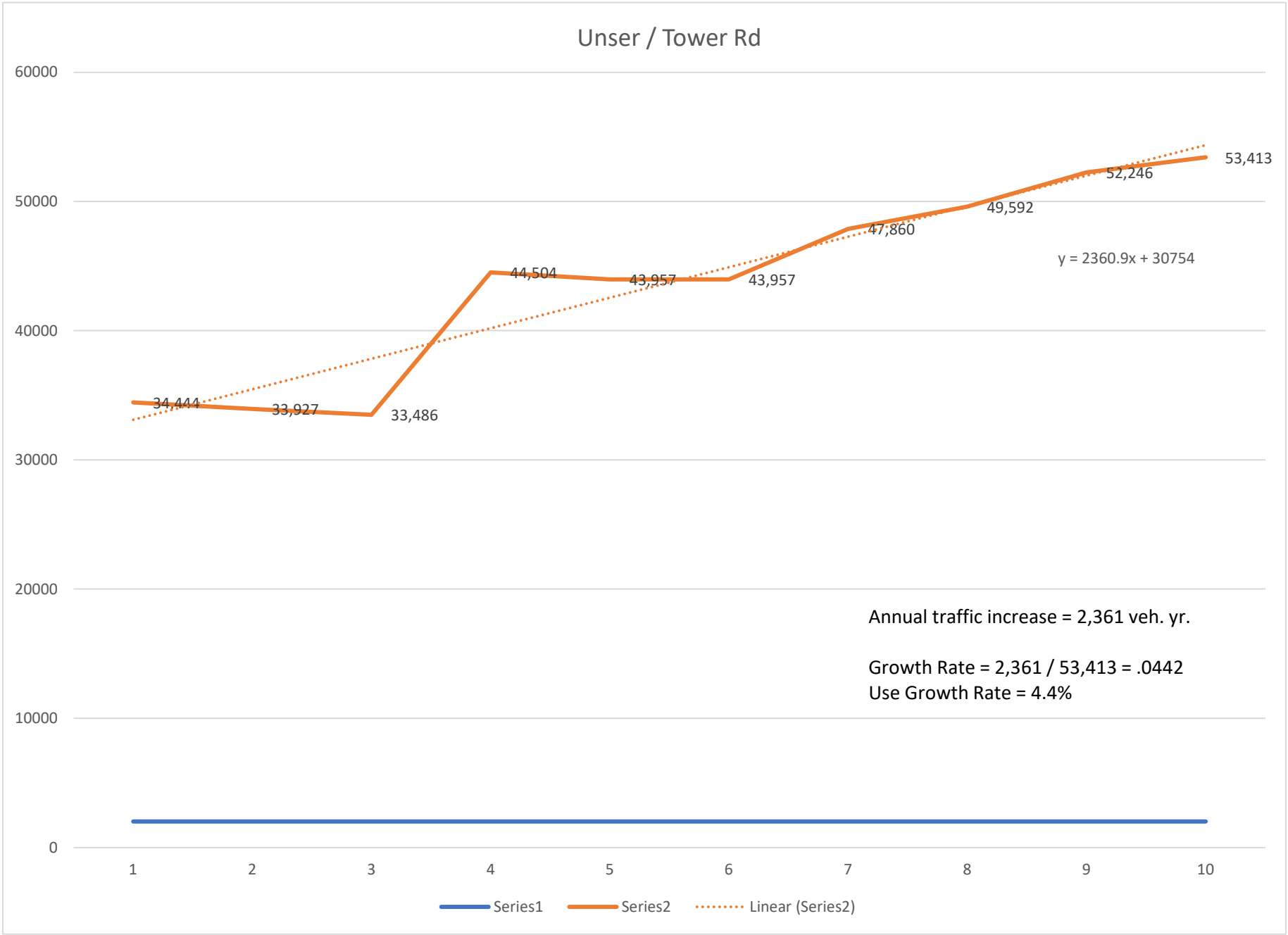
COG ID	Location											
Intersection #2:	**SAGE / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26528	SAGE	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**

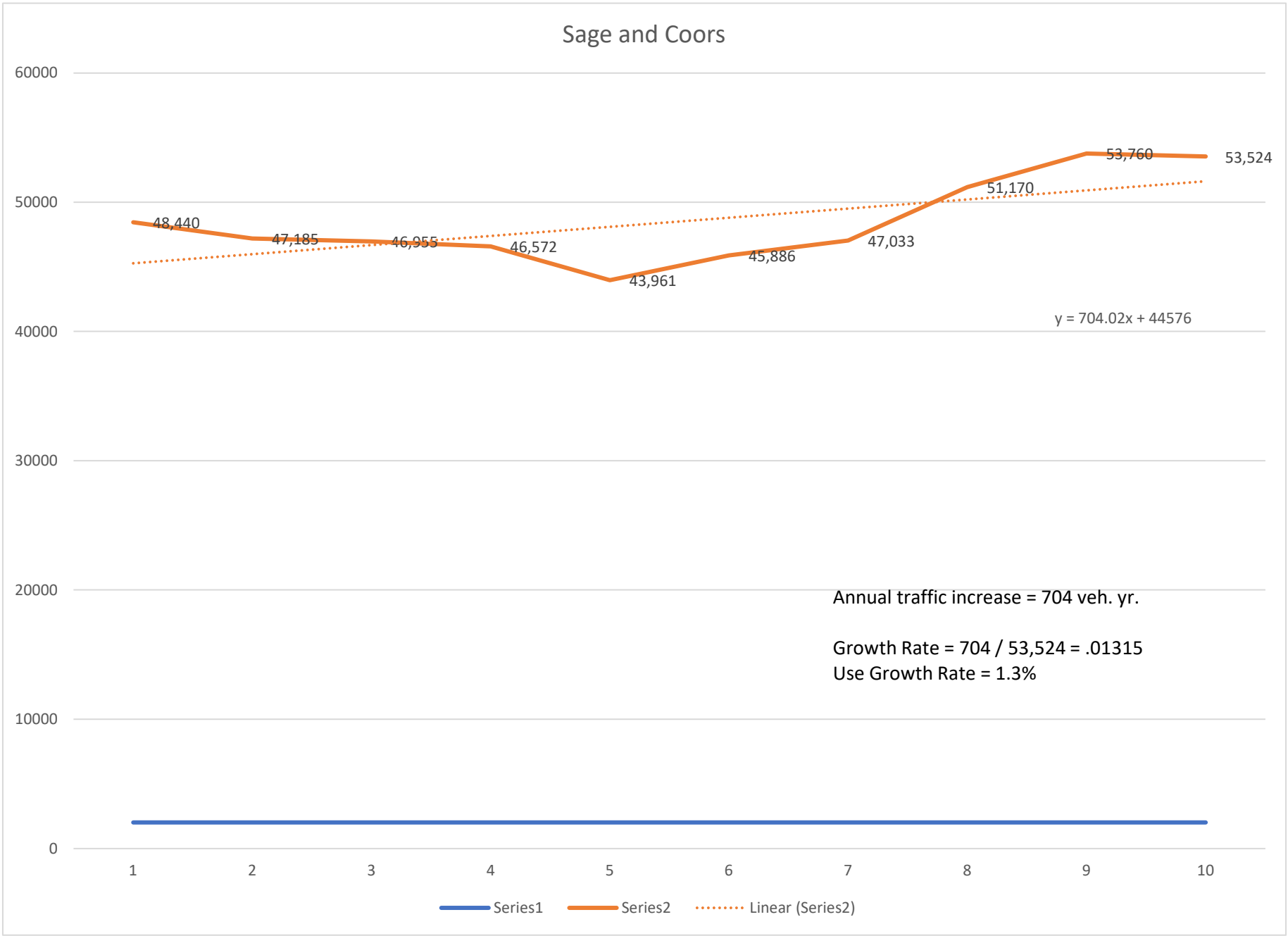
COG ID	Location											
Intersection #3:	**TOWER / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
24669	TOWER	EAST OF 86TH ST.	WEST OF UNSER BLVD.	5,887	5,799	5,724	7,128	7,014	7,014	7,416	7,698	8,110	7,843
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**

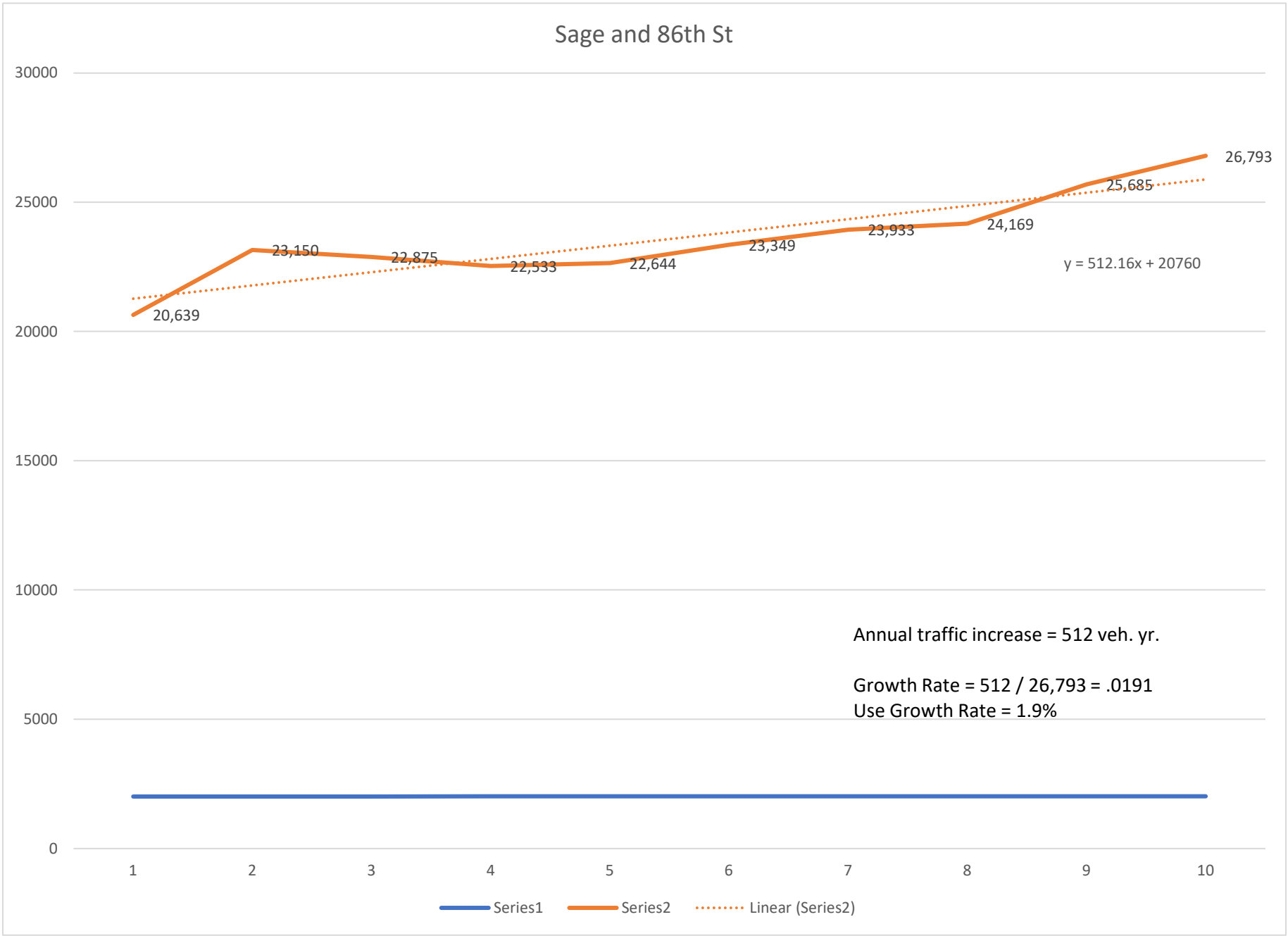
COG ID	Location											
Intersection #4:	**SAGE / COORS**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26352	SAGE	EAST 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**

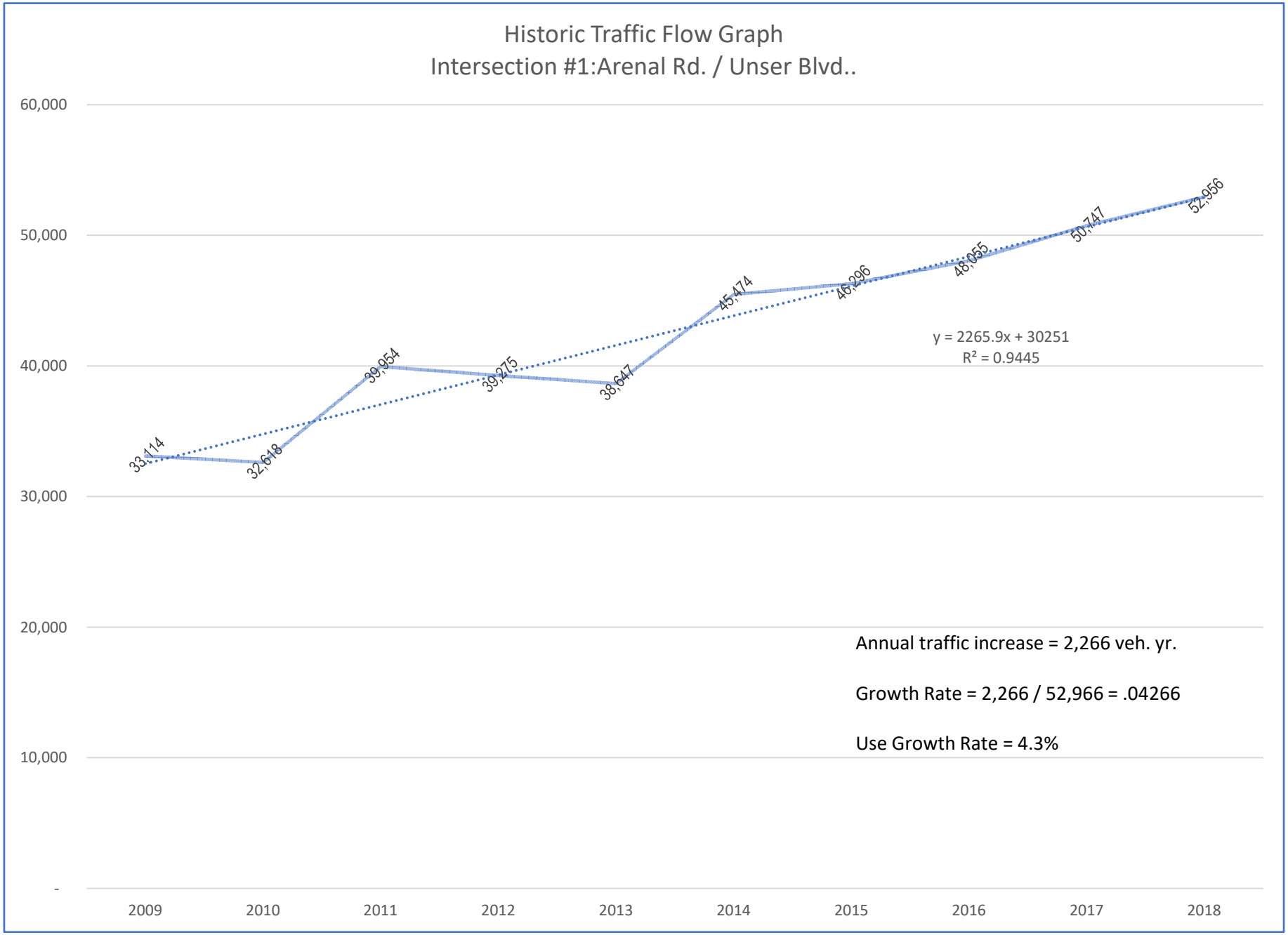
COG ID	Location	****No Data for Serracino**										
Intersection #5:	**SAGE / 86TH STREET**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26523	SAGE	EAST OF 98TH ST.	WEST OF 86TH ST.	6,592	7,903	7,801	7,715	8,414	8,414	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**

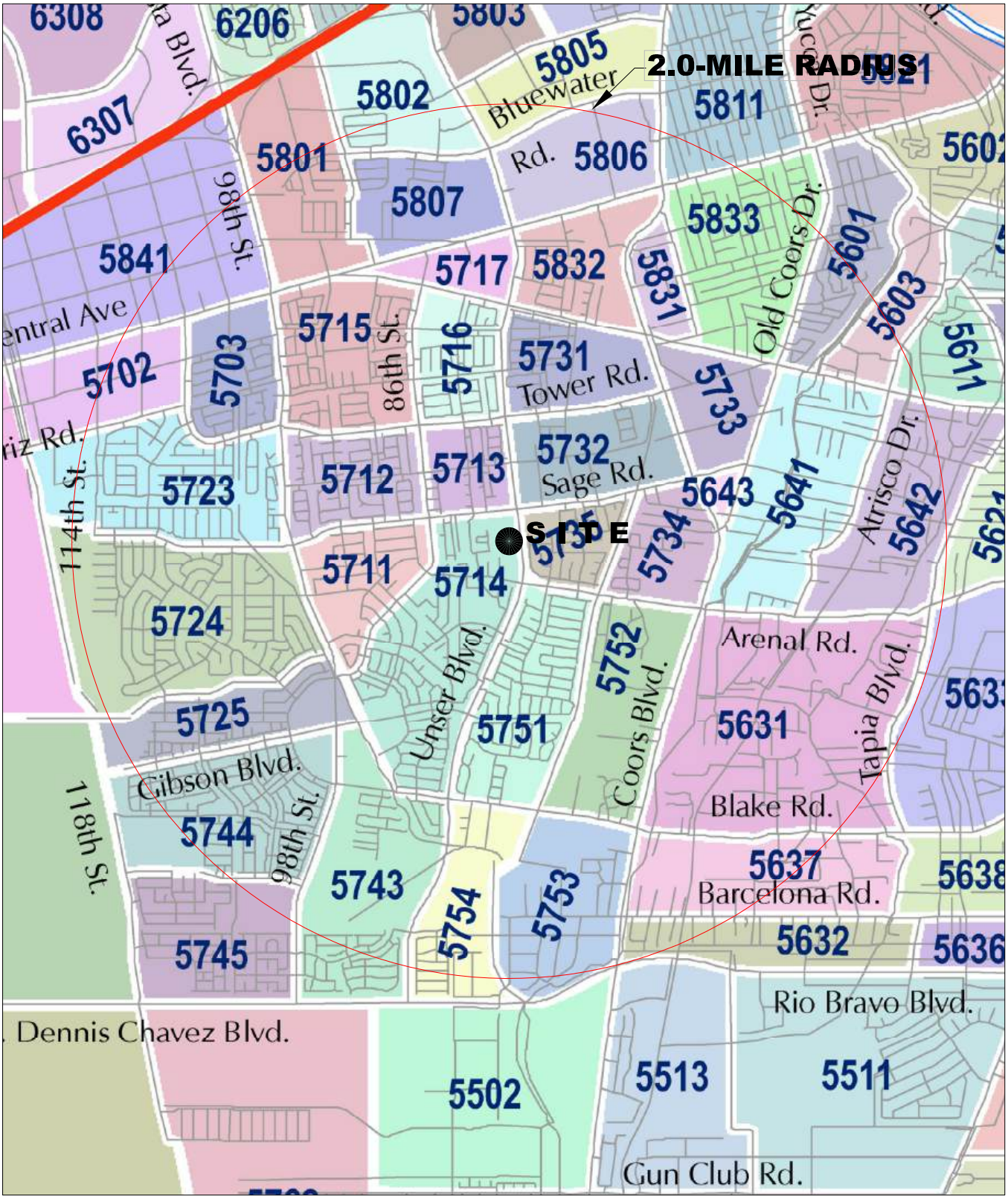

Unser / Sage
70000
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
35,746
35,210
40,322
43,040
42,351
48,404
50,906
52,841
55,477
56,088
y = 2528.4x + 32132
Annual traffic increase = 2,528 veh. yr.
Growth Rate = 2,528 / 56,088 = .04507
Use Growth Rate = 4.5%
Series1
Series2
Linear (Series2)


Unser / Tower Rd
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
34,444
33,927
33,486
44,504
43,957
43,957
47,860
49,592
52,246
53,413
y = 2360.9x + 30754
Annual traffic increase = 2,361 veh. yr.
Growth Rate = 2,361 / 53,413 = .0442
Use Growth Rate = 4.4%
Series1
Series2
Linear (Series2)


Sage and Coors
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
48,440
47,185
46,955
46,572
43,961
45,886
47,033
51,170
53,760
53,524
y = 704.02x + 44576
Annual traffic increase = 704 veh. yr.
Growth Rate = 704 / 53,524 = .01315
Use Growth Rate = 1.3%
Series1
Series2
Linear (Series2)


Sage and 86th St
30000
25000
20000
15000
10000
5000
0
1
2
3
4
5
6
7
8
9
10
20,639
23,150
22,875
22,533
22,644
23,349
23,933
24,169
25,685
26,793
y = 512.16x + 20760
Annual traffic increase = 512 veh. yr.
Growth Rate = 512 / 26,793 = .0191
Use Growth Rate = 1.9%
Series1
Series2
Linear (Series2)


Historic Traffic Flow Graph
Intersection #1:Arenal Rd. / Unser Blvd..
60,000
50,000
40,000
30,000
20,000
10,000
-
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
33,114
32,618
39,954
39,275
38,647
45,474
46,296
48,055
50,747
52,956
y = 2265.9x + 30251
R² = 0.9445
Annual traffic increase = 2,266 veh. yr.
Growth Rate = 2,266 / 52,966 = .04266
Use Growth Rate = 4.3%



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 Proposed **Retail Commercial Trips**

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

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

							(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 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

							outh	(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
				86,230	71,327	100.00%		**4,044**			**5,195**			**2,295**			**1,075**			**12,371**
								5.67%			7.28%			3.22%			1.51%			17.34%

Trip Distribution Table

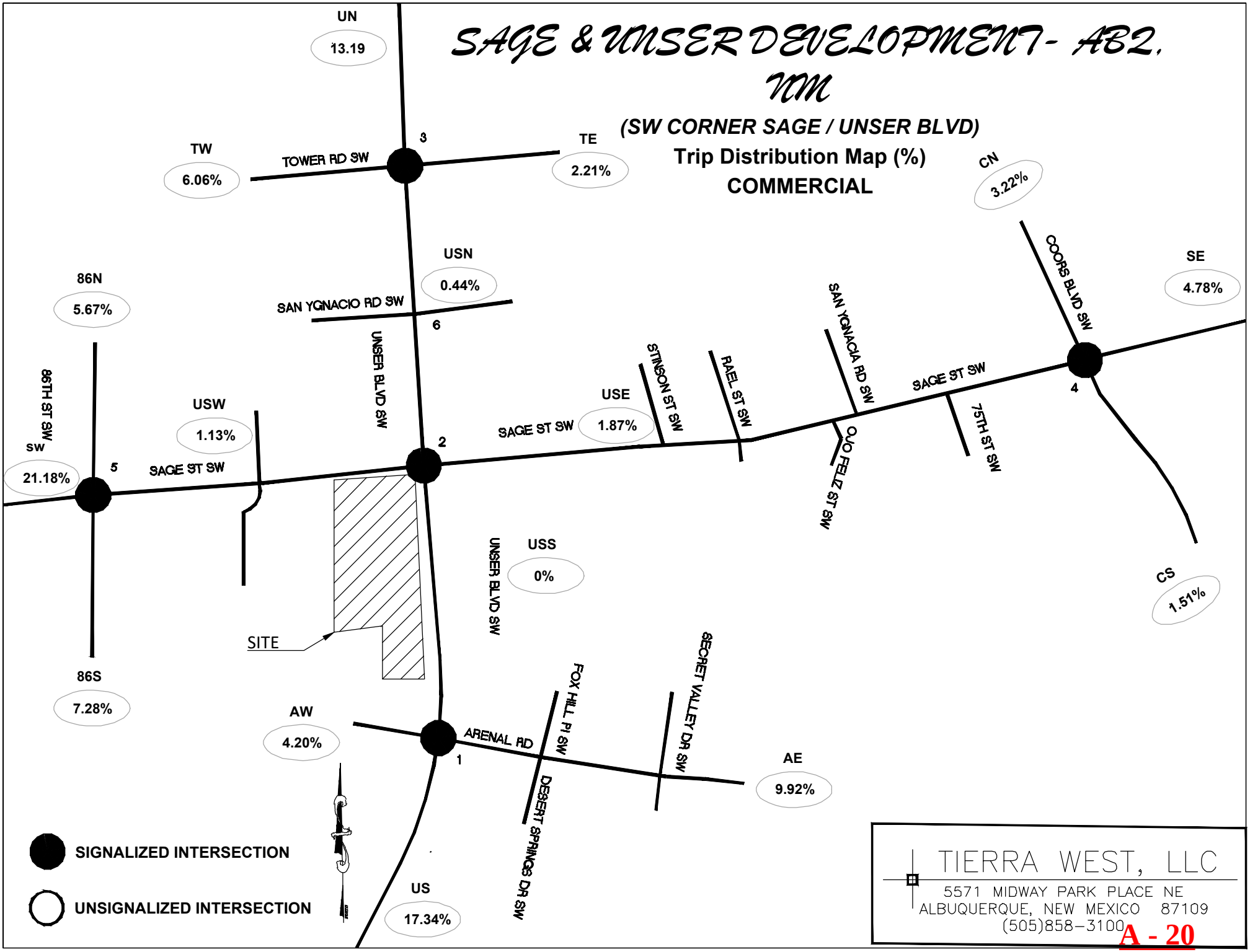
Sage and Unser Development [2021113]

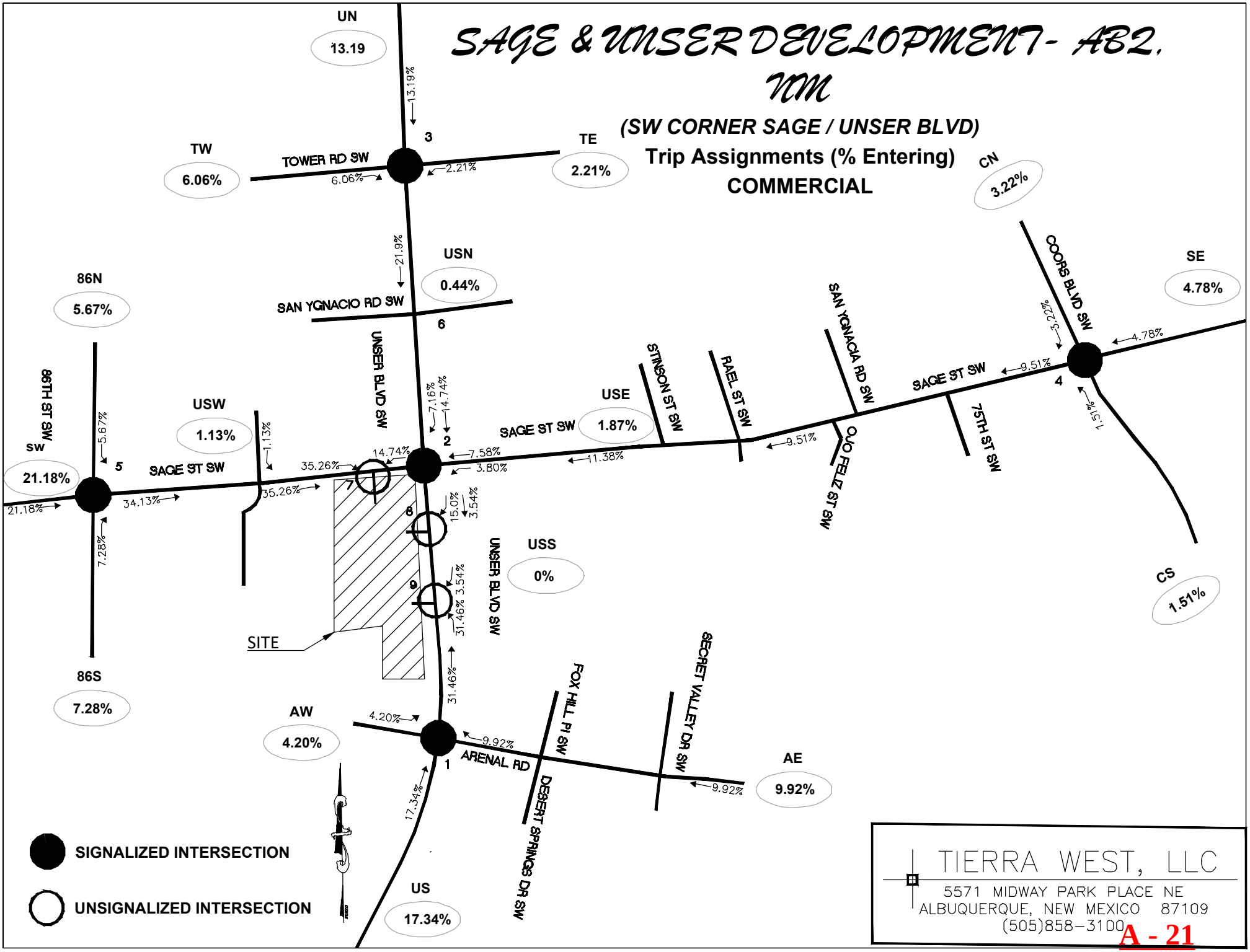
Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Retail Commercial**

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

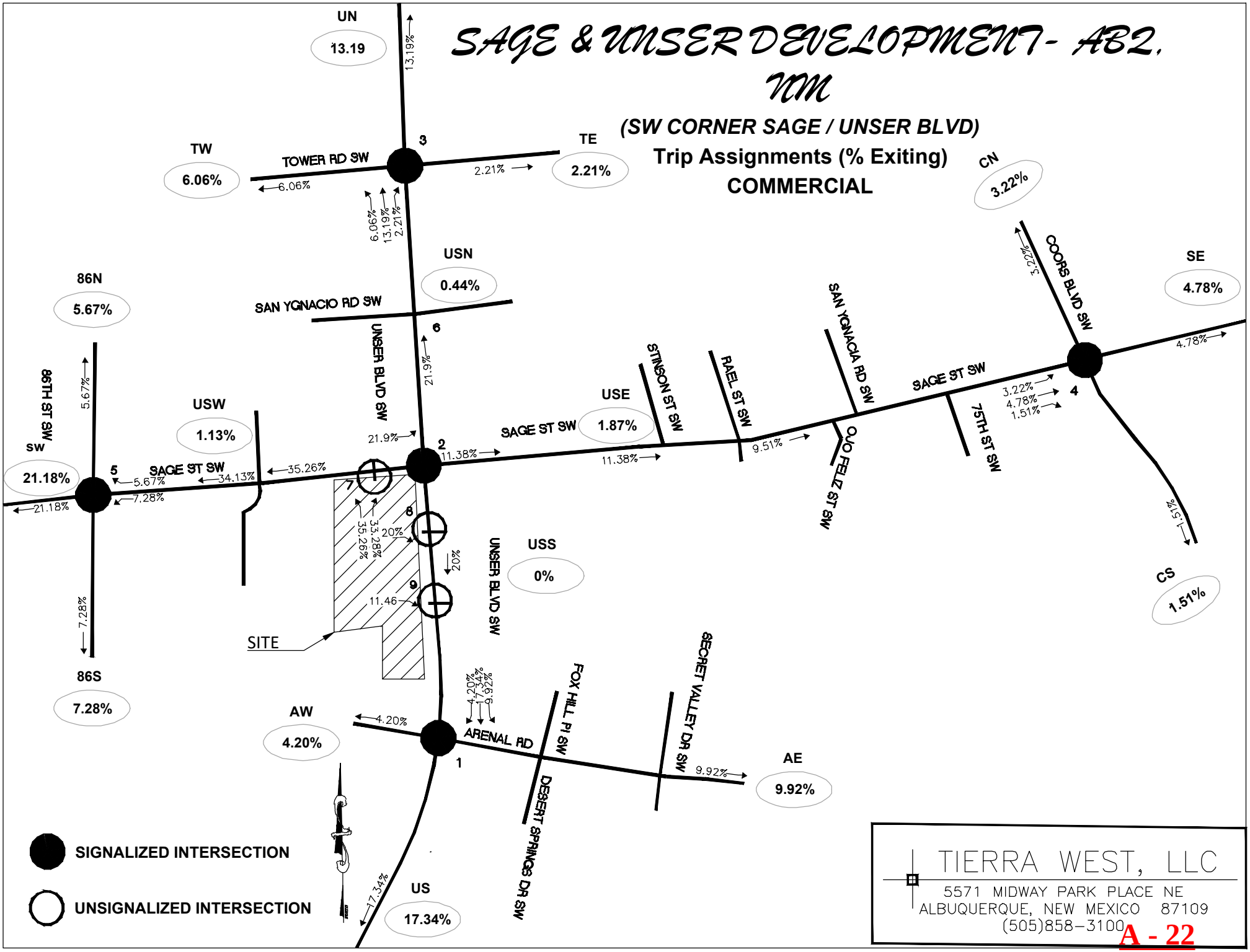
2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(AW) Areneal West			(AE) 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
				86,230	71,327	100.00%			**2,995**			**7,074**
									4.20%			9.92%


SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Distribution Map (%)
COMMERCIAL
UN
13.19
TW
6.06%
TOWER RD SW
3
TE
2.21%
CN
3.22%
COORS BLVD SW
SE
4.78%
USN
0.44%
SAN YGNACIO RD SW
6
86N
5.67%
UNSER BLVD SW
SAN YGNACIA RD SW
STINSON ST SW
RAEL ST SW
SAGE ST SW
USE
1.87%
4
86TH ST SW
USW
1.13%
SW
21.18%
5
SAGE ST SW
2
OJO FELZ ST SW
75TH ST SW
CS
1.51%
USS
0%
UNSER BLVD SW
SITE
86S
7.28%
AW
4.20%
ARENAL RD
1
FOX HILL PI SW
SECRET VALLEY DR SW
AE
9.92%
DESERT SPRINGS DR SW
US
17.34%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100



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

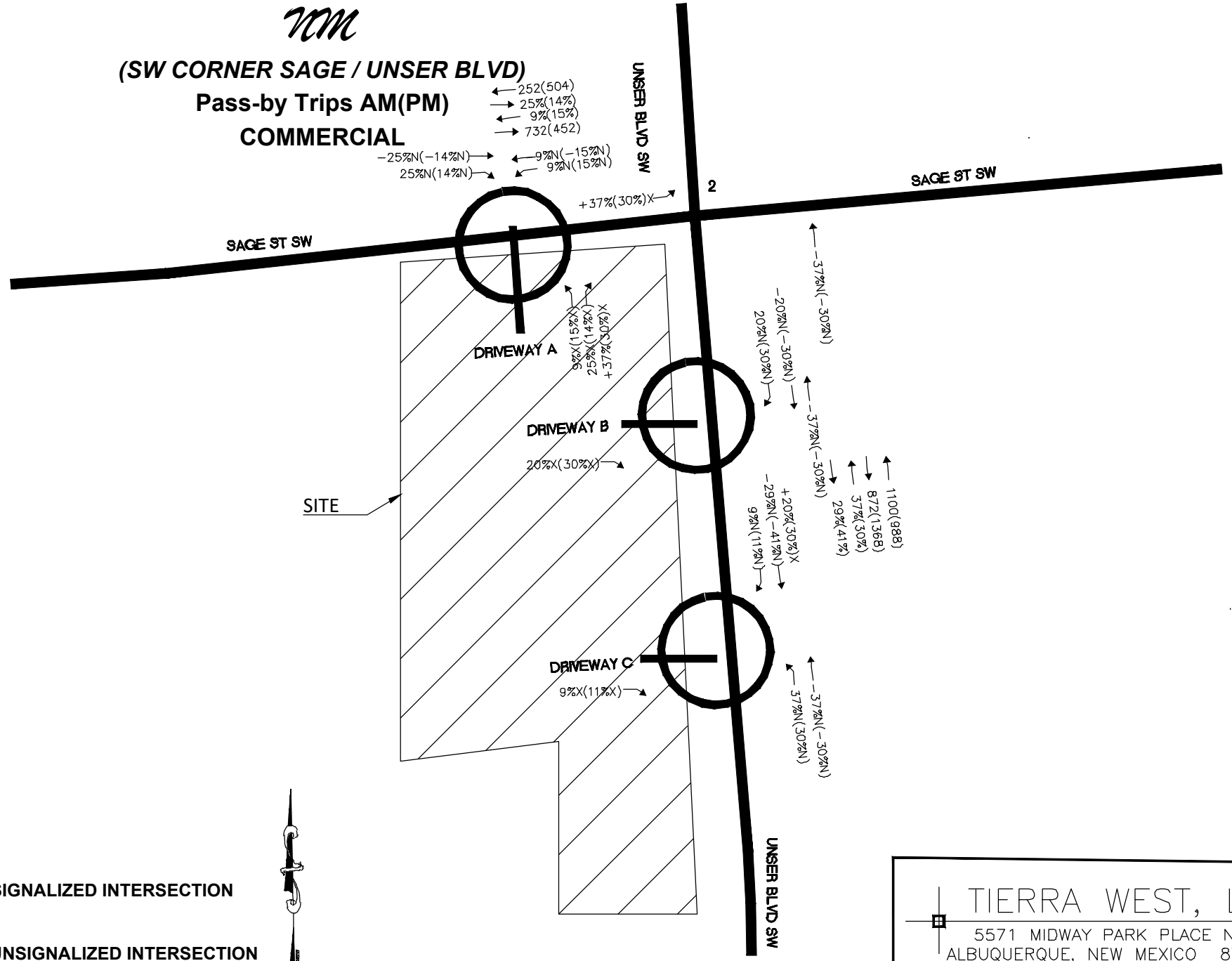

SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Assignments (% Exiting)
COMMERCIAL
UN
13.19
TW
6.06%
TOWER RD SW
TE
2.21%
CN
3.22%
USN
0.44%
SAN YGNACIO RD SW
UNSER BLVD SW
COORS BLVD SW
SE
4.78%
86N
5.67%
86TH ST SW
SW
21.18%
USW
1.13%
USE
1.87%
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
SAGE ST SW
75TH ST SW
QUO FELZ ST SW
CS
1.51%
SITE
USS
0%
86S
7.28%
AW
4.20%
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
AE
9.92%
DESERT SPRINGS DR SW
US
17.34%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
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)

Pass-by Trips AM(PM)

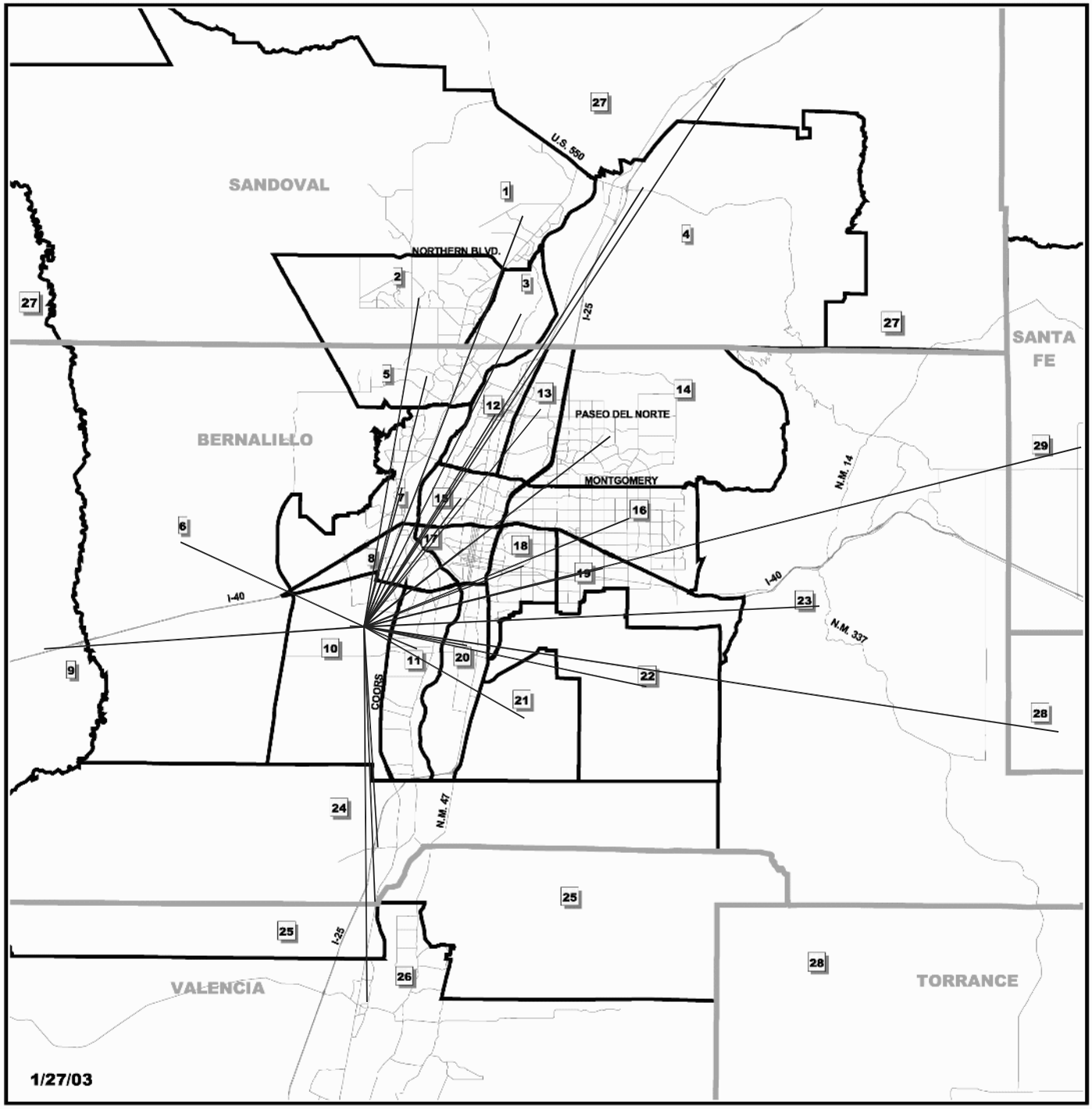
COMMERCIAL



SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

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



22 Subarea Identification Number

Figure 6

Subareas of the MRCOG Region

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

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

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%

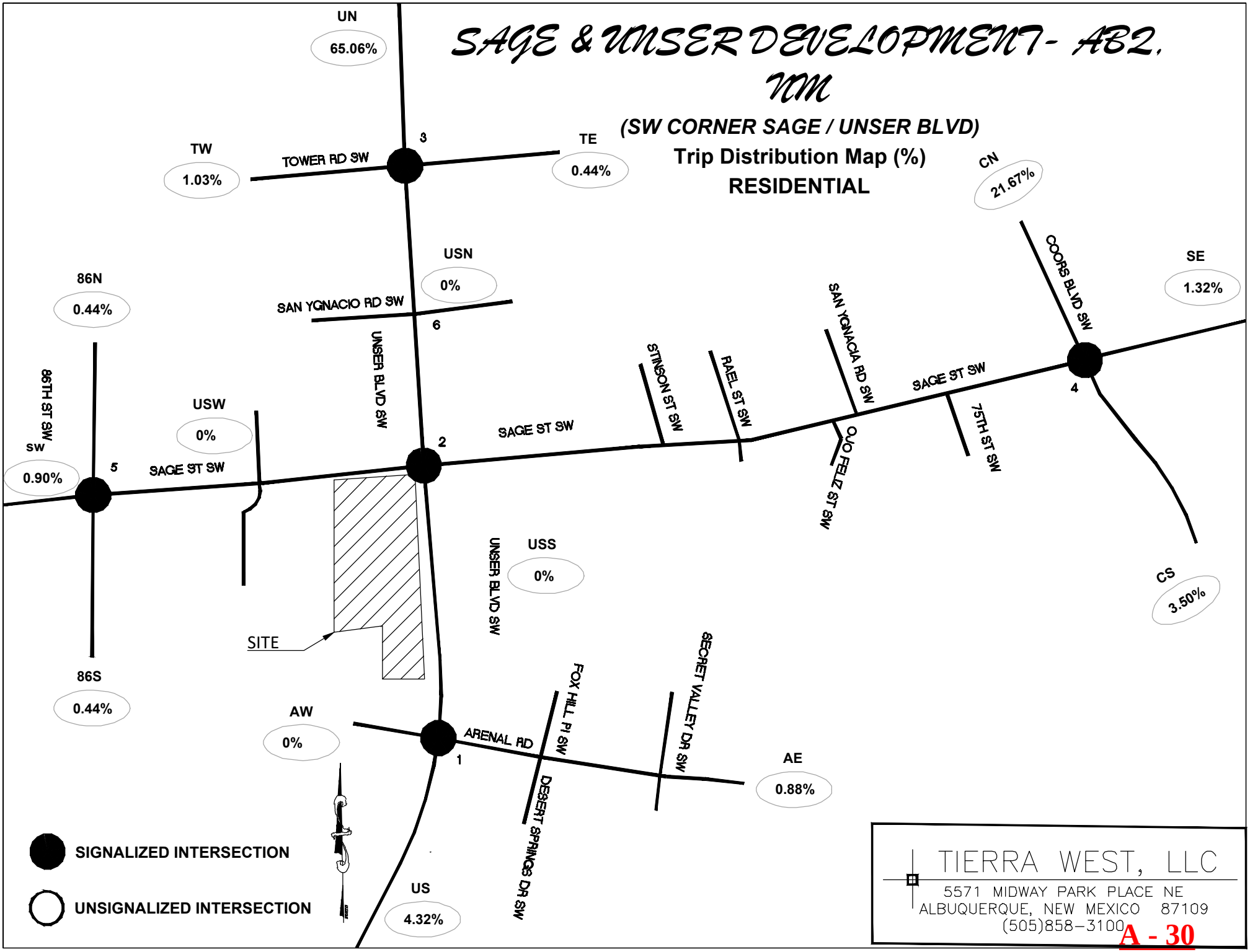
* - Subarea in which the site it located.

SAGE & UNSER DEVELOPMENT- AB2, NM

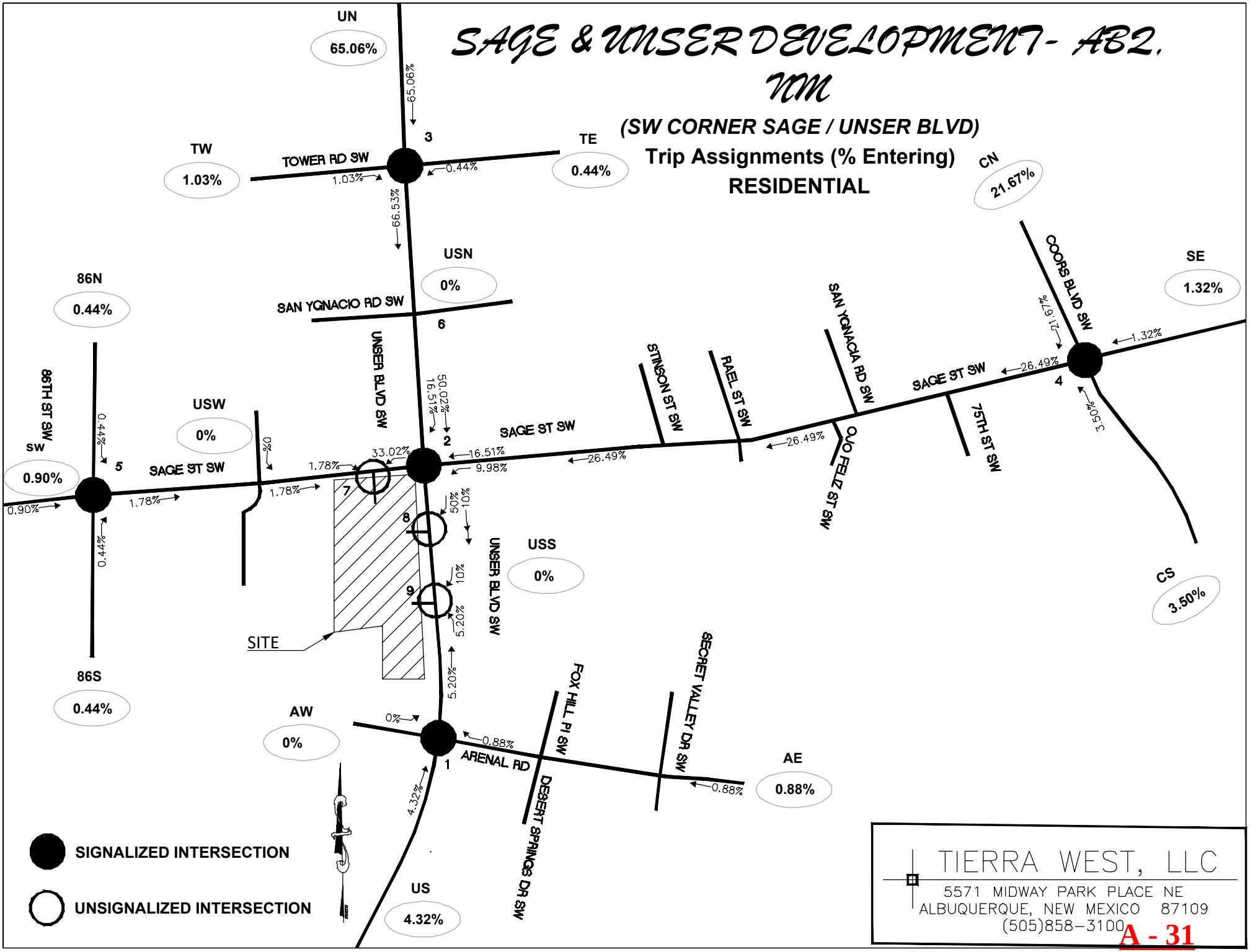
(SW CORNER SAGE / UNSER BLVD)

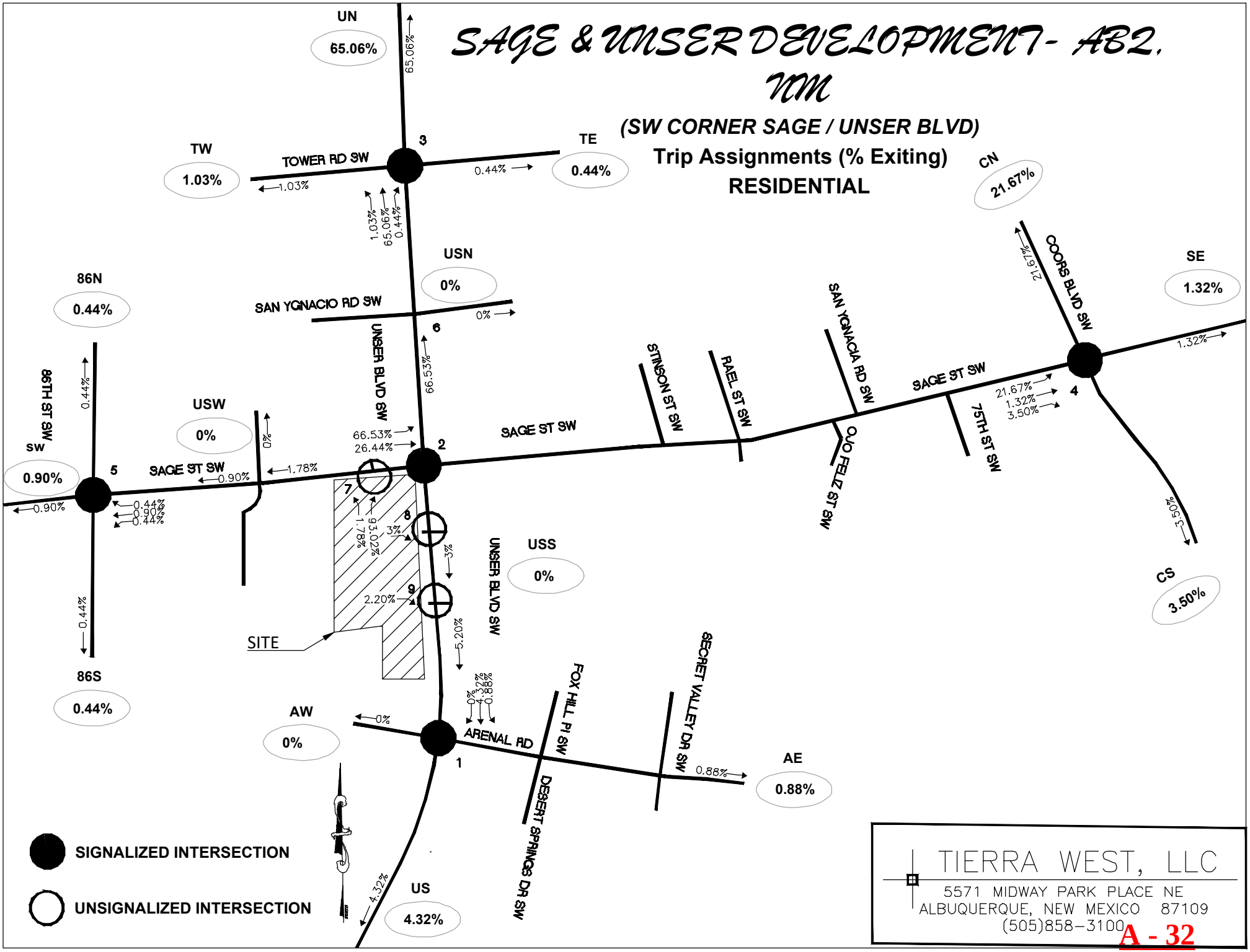
Trip Distribution Map (%)

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
UN
65.06%
TW
1.03%
TE
0.44%
CN
21.67%
SE
1.32%
USN
0%
86N
0.44%
USW
0%
SW
0.90%
USS
0%
86S
0.44%
AW
0%
AE
0.88%
US
4.32%
CS
3.50%
TOWER RD SW
SAN YGNACIO RD SW
UNSER BLVD SW
SAGE ST SW
86TH ST SW
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
COORS BLVD SW
75TH ST SW
QUO FELZ ST SW
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
DESERT SPRINGS DR SW
SITE
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100
A - 31


SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Assignments (% Exiting)
RESIDENTIAL
UN
65.06%
TW
1.03%
TOWER RD SW
TE
0.44%
CN
21.67%
USN
0%
SAN YGNACIO RD SW
SE
1.32%
COORS BLVD SW
86N
0.44%
86TH ST SW
SW
0.90%
USW
0%
UNSER BLVD SW
SAGE ST SW
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
QUO FELIZ ST SW
75TH ST SW
CS
3.50%
SITE
USS
0%
AW
0%
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
AE
0.88%
DESERT SPRINGS DR SW
US
4.32%
86S
0.44%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100
A - 32

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2025) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Arenal Rd / Unser Blvd

(1)

3.0% Truck

	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	
Existing (2025)	172	230	63	163	149	275	63	763	235	239	714	41	
2025 (NO BUILD - A.M.)	*172*	*230*	*63*	*163*	*149*	*275*	*63*	*763*	*235*	*239*	*714*	*41*	
2025 (BUILD - A.M.)	***185***	***230***	***63***	***163***	***149***	***306***	***63***	***817***	***235***	***270***	***769***	***54***	

	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	
Existing (2025)	68	81	63	190	113	388	36	637	163	316	966	131	
2025 (NO BUILD - P.M.)	*68*	*81*	*63*	*190*	*113*	*388*	*36*	*637*	*163*	*316*	*966*	*131*	
2025 (BUILD - P.M.)	***80***	***81***	***63***	***190***	***113***	***416***	***36***	***688***	***163***	***344***	***1,016***	***143***	

Sage Rd / Unser Blvd

(2)

3.0% Truck

	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	
Existing (2025)	286	331	213	41	109	86	95	1,053	100	86	735	82	
2025 (NO BUILD - A.M.)	*286*	*331*	*213*	*41*	*109*	*86*	*95*	*1,053*	*100*	*86*	*735*	*82*	
2025 (BUILD - A.M.)	***425***	***372***	***213***	***54***	***134***	***86***	***95***	***997***	***100***	***86***	***785***	***105***	

	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	
Existing (2025)	127	136	250	136	209	59	200	858	64	95	1,167	163	
2025 (NO BUILD - P.M.)	*127*	*136*	*250*	*136*	*209*	*59*	*200*	*858*	*64*	*95*	*1,167*	*163*	
2025 (BUILD - P.M.)	***244***	***173***	***250***	***150***	***236***	***59***	***200***	***816***	***64***	***95***	***1,226***	***189***	

Tower / Unser

(3)

3.0% Truck

	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	
Existing (2025)	95	118	68	36	86	63	32	969	36	27	462	59	
2025 (NO BUILD - A.M.)	*95*	*118*	*68*	*36*	*86*	*63*	*32*	*969*	*36*	*27*	*462*	*59*	
2025 (BUILD - A.M.)	***95***	***118***	***87***	***43***	***86***	***63***	***51***	***1,025***	***43***	***27***	***508***	***59***	

	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	
Existing (2025)	63	118	100	54	267	77	136	906	32	50	1,295	131	
2025 (NO BUILD - P.M.)	*63*	*118*	*100*	*54*	*267*	*77*	*136*	*906*	*32*	*50*	*1,295*	*131*	
2025 (BUILD - P.M.)	***63***	***118***	***117***	***60***	***267***	***77***	***153***	***956***	***38***	***50***	***1,354***	***131***	

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2025) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Sage / Coors Blvd

(4)

3.0% Truck

	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	
Existing (2025)	249	199	66	46	129	162	21	1,060	17	54	582	66	
2025 (NO BUILD - A.M.)	*304*	*210*	*68*	*94*	*164*	*234*	*22*	*1,137*	*17*	*54*	*585*	*71*	
2025 (BUILD - A.M.)	***319***	***225***	***74***	***94***	***179***	***234***	***27***	***1,137***	***17***	***54***	***585***	***83***	

	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	
Existing (2025)	58	66	4	91	266	199	83	860	179	91	790	112	
2025 (NO BUILD - P.M.)	*80*	*73*	*5*	*131*	*302*	*255*	*85*	*892*	*179*	*91*	*792*	*115*	
2025 (BUILD - P.M.)	***93***	***87***	***10***	***131***	***316***	***255***	***90***	***892***	***179***	***91***	***792***	***131***	

Sage / 86th Street

(5)

3.0% Truck

	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	
Existing (2025)	59	541	13	38	211	59	4	114	80	42	30	51	
2025 (NO BUILD - A.M.)	*59*	*541*	*13*	*38*	*211*	*59*	*4*	*114*	*80*	*42*	*30*	*51*	
2025 (BUILD - A.M.)	***59***	***607***	***13***	***61***	***277***	***77***	***4***	***114***	***103***	***60***	***30***	***51***	

	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	
Existing (2025)	55	300	42	51	410	55	17	85	25	30	110	93	
2025 (NO BUILD - P.M.)	*55*	*300*	*42*	*51*	*410*	*55*	*17*	*85*	*25*	*30*	*110*	*93*	
2025 (BUILD - P.M.)	***55***	***361***	***42***	***72***	***470***	***71***	***17***	***85***	***46***	***46***	***110***	***93***	

San Ygnacio / Unser Blvd

(6)

3.0% Truck

	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	
Existing (2025)	0	0	34	0	0	11	0	1,609	11	0	1,019	11	
2025 (NO BUILD - A.M.)	*0*	*0*	*34*	*0*	*0*	*11*	*0*	*1,609*	*11*	*0*	*1,019*	*11*	
2025 (BUILD - A.M.)	***0***	***0***	***34***	***0***	***0***	***11***	***0***	***1,692***	***11***	***0***	***1,092***	***11***	

	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	
Existing (2025)	0	0	34	0	0	11	0	1,179	11	0	1,609	34	
2025 (NO BUILD - P.M.)	*0*	*0*	*34*	*0*	*0*	*11*	*0*	*1,179*	*11*	*0*	*1,609*	*34*	
2025 (BUILD - P.M.)	***0***	***0***	***34***	***0***	***0***	***11***	***0***	***1,254***	***11***	***0***	***1,694***	***34***	

Driveway A / Sage St

(7)

3.0% Truck

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - A.M.)	*0*	*830*	*0*	*0*	*286*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2025 (BUILD - A.M.)	***0***	***830***	***149***	***62***	***286***	***0***	***123***	***0***	***218***	***0***	***0***	***0***	

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - P.M.)	*0*	*513*	*0*	*0*	*572*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2025 (BUILD - P.M.)	***0***	***513***	***122***	***74***	***572***	***0***	***121***	***0***	***174***	***0***	***0***	***0***	

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2025) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Unser Blvd / Driveway B

(8)

3.0% Truck

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,248*	*0*	*0*	*989*	*0*	
2025 (BUILD - A.M.)	***0***	***0***	***129***	***0***	***0***	***0***	***0***	***1,191***	***0***	***0***	***962***	***128***	

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,122*	*0*	*0*	*1,553*	*0*	
2025 (BUILD - P.M.)	***0***	***0***	***132***	***0***	***0***	***0***	***0***	***1,080***	***0***	***0***	***1,517***	***158***	

Unser Blvd / Driveway C

(9)

3.0% Truck

	1.00			1.00			1.00			1.00			PHF
	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 (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,248*	*0*	*0*	*989*	*0*	
2025 (BUILD - A.M.)	***0***	***0***	***18***	***0***	***0***	***0***	***155***	***1,191***	***0***	***0***	***1,034***	***18***	

	1.00			1.00			1.00			1.00			PHF
	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 (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2025 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,122*	*0*	*0*	*1,553*	*0*	
2025 (BUILD - P.M.)	***0***	***0***	***18***	***0***	***0***	***0***	***134***	***1,080***	***0***	***0***	***1,577***	***21***	

Sage and Unser Development

Projected Turning Movements Worksheet

Arenal Rd / Unser Blvd

INTERSECTION: E-W Street: **Arenal Rd** (1)

N-S Street: **Unser Blvd**

Year of Existing Counts 2022

Horizon Year **2025**

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	13	0	0	0	0	31	0	54	0	31	55	13
Subtotal AM Pk Hr. BUILD Volumes	**185**	**230**	**63**	**163**	**149**	**306**	**63**	**817**	**235**	**270**	**769**	**54**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**185**	**230**	**63**	**163**	**149**	**306**	**63**	**817**	**235**	**270**	**769**	**54**

	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	12	0	0	0	0	28	0	51	0	28	50	12
Subtotal PM Pk Hr. BUILD Volumes	**80**	**81**	**63**	**190**	**113**	**416**	**36**	**688**	**163**	**344**	**1,016**	**143**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**80**	**81**	**63**	**190**	**113**	**416**	**36**	**688**	**163**	**344**	**1,016**	**143**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

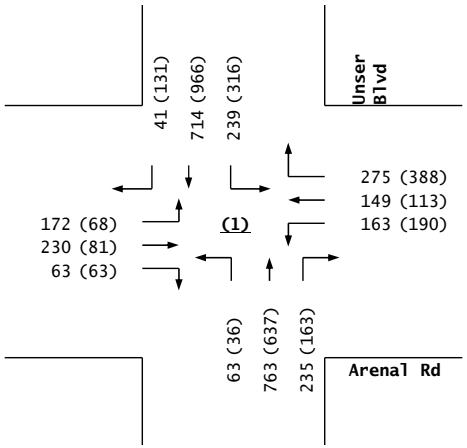
Pass-by Trip Calculations:

AM Pass-by 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***

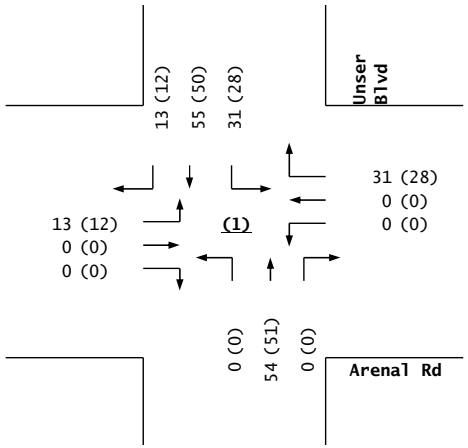
PM Pass-by Trips	***Eastbound (Arenal Rd)***			***Westbound (Arenal Rd)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

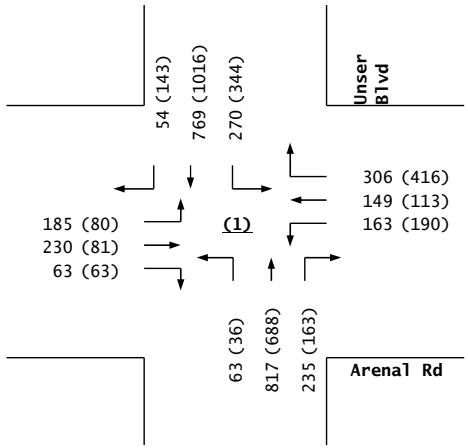
2025
NO BUILD



Trips



2025
BUILD



Arenal Rd / Unser Blvd

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%*
Total Trips Generated	83	41	0	13	25	0	0	0	0	0	50	23
Subtotal AM Pk Hr. BUILD Volumes	**369**	**372**	**213**	**54**	**134**	**86**	**95**	**1,053**	**100**	**86**	**785**	**105**
Pass-by Trip Adjustments	*56*	*0*	*0*	*0*	*0*	*0*	*0*	*-56*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**425**	**372**	**213**	**54**	**134**	**86**	**95**	**997**	**100**	**86**	**785**	**105**

	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	75	37	0	14	27	0	0	0	0	0	59	26
Subtotal PM Pk Hr. BUILD Volumes	**202**	**173**	**250**	**150**	**236**	**59**	**200**	**858**	**64**	**95**	**1,226**	**189**
Pass-by Trip Adjustments	*42*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**244**	**173**	**250**	**150**	**236**	**59**	**200**	**816**	**64**	**95**	**1,226**	**189**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

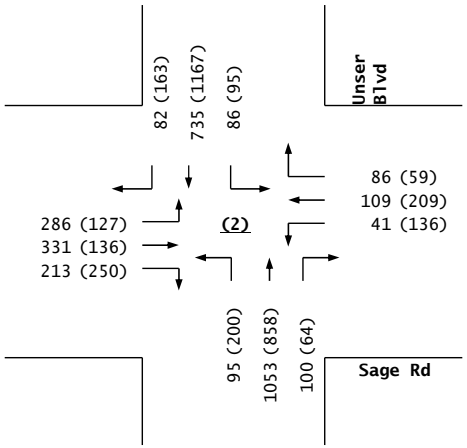
Pass-by Trip Calculations:

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	*56*	*0*	*0*	*0*	*0*	*0*	*0*	*-56*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***56***	***0***	***0***	***0***	***0***	***0***	***0***	***-56***	***0***	***0***	***0***	***0***

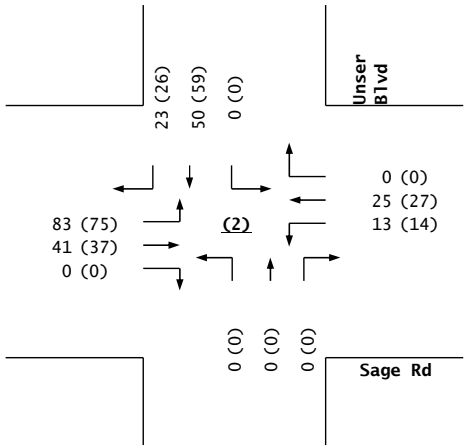
PM Pass-by Trips	***Eastbound (Sage Rd)***			***Westbound (Sage Rd)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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	*42*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***42***	***0***	***0***	***0***	***0***	***0***	***0***	***-42***	***0***	***0***	***0***	***0***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

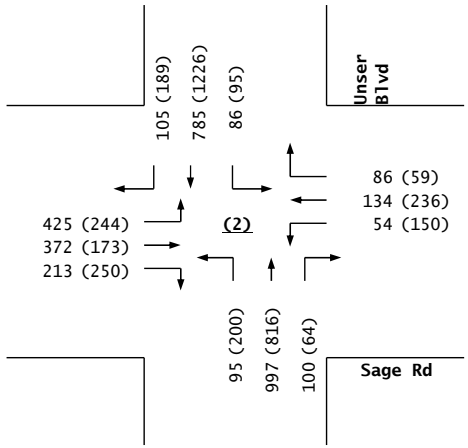
2025
NO BUILD



Trips



2025
BUILD



Sage Rd / Unser Blvd

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%**		
	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	11	14	8	4	10	7	4	113	4	3	54	7
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	19	7	0	0	19	56	7	0	46	0
Subtotal AM Pk Hr. BUILD Volumes	**95**	**118**	**87**	**43**	**86**	**63**	**51**	**1,025**	**43**	**27**	**508**	**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**	**87**	**43**	**86**	**63**	**51**	**1,025**	**43**	**27**	**508**	**59**

	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	7	14	12	6	31	9	16	106	4	6	151	15
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	17	6	0	0	17	50	6	0	59	0
Subtotal PM Pk Hr. BUILD Volumes	**63**	**118**	**117**	**60**	**267**	**77**	**153**	**956**	**38**	**50**	**1,354**	**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**	**117**	**60**	**267**	**77**	**153**	**956**	**38**	**50**	**1,354**	**131**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

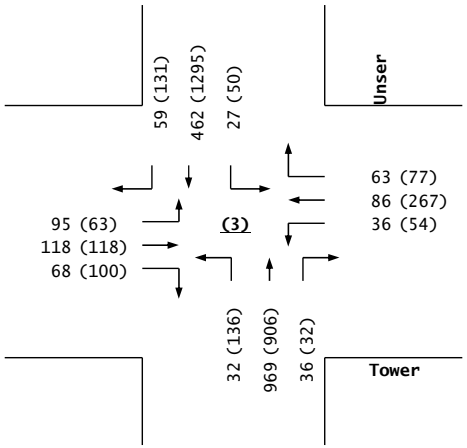
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Tower)***			***Westbound (Tower)***			***Northbound (Unser)***			***Southbound (Unser)***		
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***

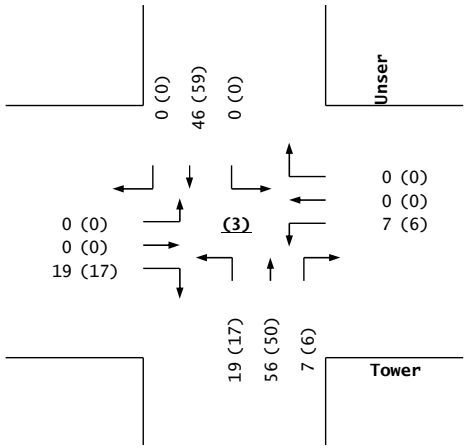
PM Pass-by Trips	***Eastbound (Tower)***			***Westbound (Tower)***			***Northbound (Unser)***			***Southbound (Unser)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent 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	***154***	***152***	*AM*
	141	***139***	*PM*

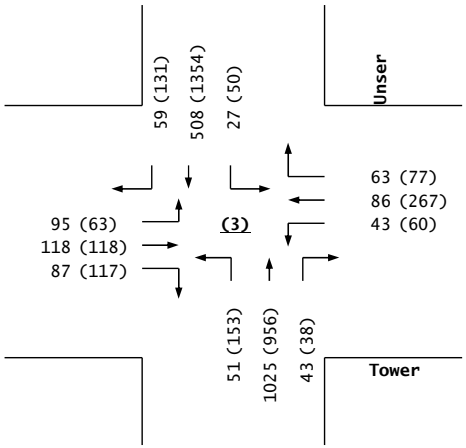
2025
NO BUILD



Trips



2025
BUILD



Tower / Unser

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**

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	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	15	15	6	0	15	0	5	0	0	0	0	12
Subtotal AM Pk Hr. BUILD Volumes	**319**	**225**	**74**	**94**	**179**	**234**	**27**	**1,137**	**17**	**54**	**585**	**83**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**319**	**225**	**74**	**94**	**179**	**234**	**27**	**1,137**	**17**	**54**	**585**	**83**

	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	13	14	5	0	14	0	5	0	0	0	0	16
Subtotal PM Pk Hr. BUILD Volumes	**93**	**87**	**10**	**131**	**316**	**255**	**90**	**892**	**179**	**91**	**792**	**131**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**93**	**87**	**10**	**131**	**316**	**255**	**90**	**892**	**179**	**91**	**792**	**131**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

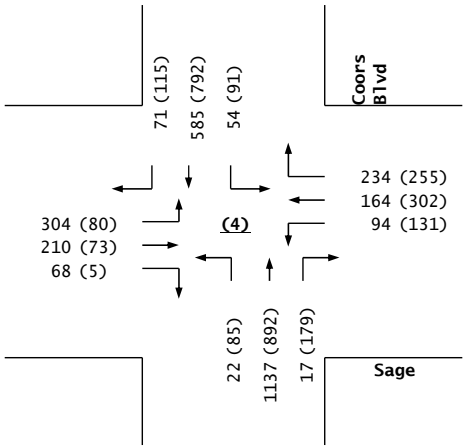
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (Coors Blvd)***			***Southbound (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***

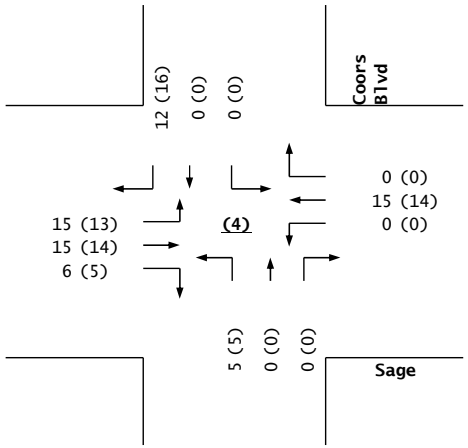
PM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (Coors Blvd)***			***Southbound (Coors Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

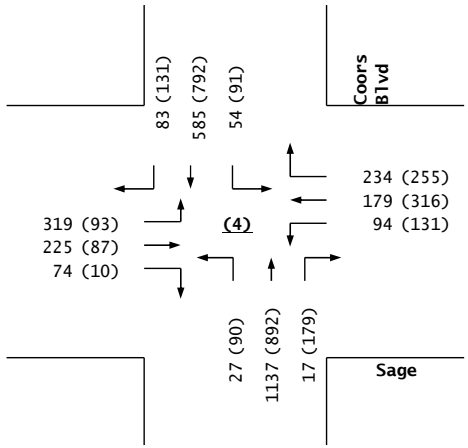
2025
NO BUILD



Trips



2025
BUILD



Sage / Coors Blvd

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	66	0	23	66	18	0	0	23	18	0	0
Subtotal AM Pk Hr. BUILD Volumes	**59**	**607**	**13**	**61**	**277**	**77**	**4**	**114**	**103**	**60**	**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**	**607**	**13**	**61**	**277**	**77**	**4**	**114**	**103**	**60**	**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	61	0	21	60	16	0	0	21	16	0	0
Subtotal PM Pk Hr. BUILD Volumes	**55**	**361**	**42**	**72**	**470**	**71**	**17**	**85**	**46**	**46**	**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**	**361**	**42**	**72**	**470**	**71**	**17**	**85**	**46**	**46**	**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	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

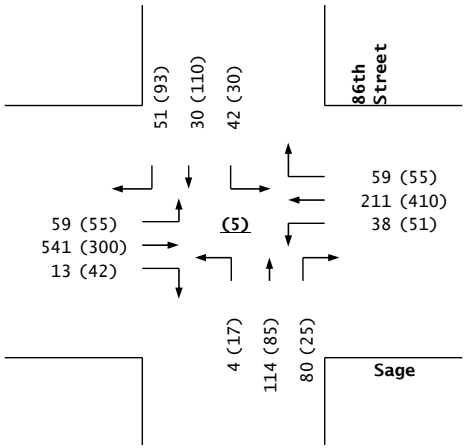
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (86th Street)***			***Southbound (86th Street)***		
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***

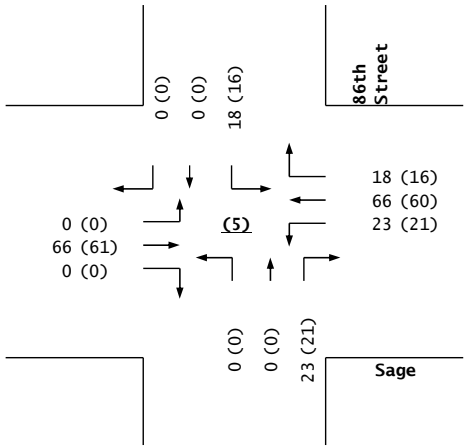
PM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (86th Street)***			***Southbound (86th Street)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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	***154***	***152***	*AM*
	141	***139***	*PM*

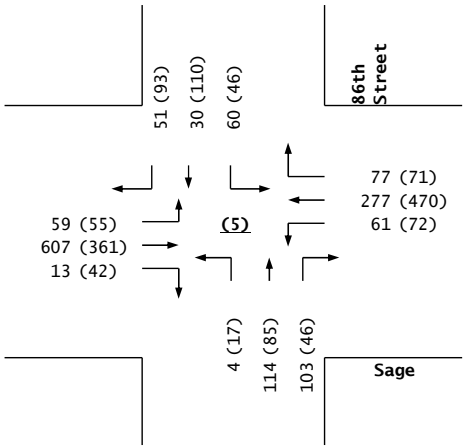
2025
NO BUILD



Trips



2025
BUILD



Sage / 86th Street

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	83	0	0	73	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**34**	**0**	**0**	**11**	**0**	**1,692**	**11**	**0**	**1,092**	**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**	**1,692**	**11**	**0**	**1,092**	**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	75	0	0	85	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**34**	**0**	**0**	**11**	**0**	**1,254**	**11**	**0**	**1,694**	**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**	**1,254**	**11**	**0**	**1,694**	**34**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

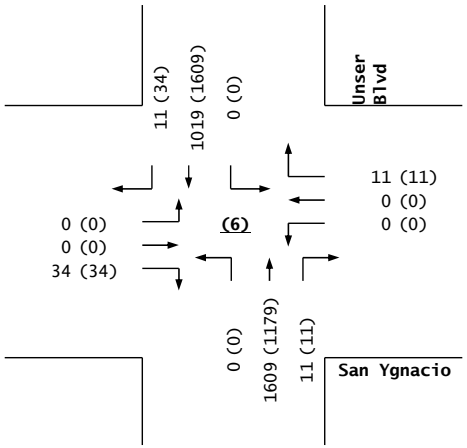
Pass-by Trip Calculations:

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

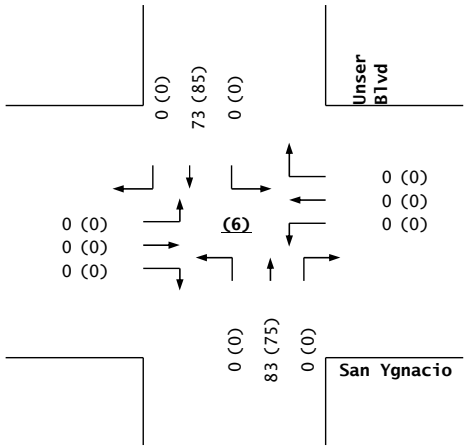
PM Pass-by Trips	***Eastbound (San Ygnacio)***			***Westbound (San Ygnacio)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*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

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

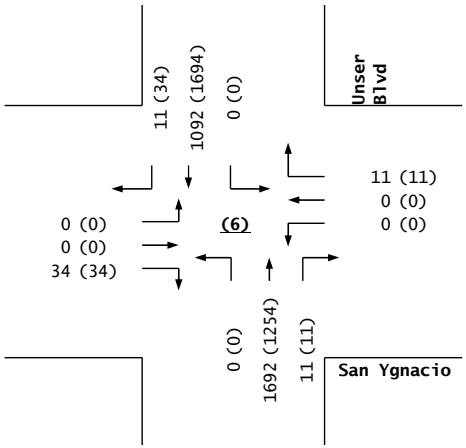
2025
NO BUILD



Trips



2025
BUILD



San Ygnacio / Unser Blvd

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	110	48	0	0	109	0	124	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**830**	**110**	**48**	**286**	**0**	**109**	**0**	**124**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*39*	*14*	*0*	*0*	*14*	*0*	*94*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**830**	**149**	**62**	**286**	**0**	**123**	**0**	**218**	**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	102	53	0	0	100	0	113	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**513**	**102**	**53**	**572**	**0**	**100**	**0**	**113**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*20*	*21*	*0*	*0*	*21*	*0*	*61*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**513**	**122**	**74**	**572**	**0**	**121**	**0**	**174**	**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	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

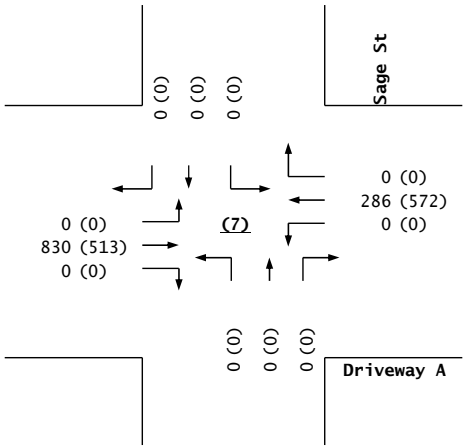
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Driveway A)***			***Westbound (Driveway A)***			***Northbound (Sage St)***			***Southbound (Sage St)***		
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*	*39*	*14*	*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*	*14*	*0*	*94*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***39***	***14***	***0***	***0***	***14***	***0***	***94***	***0***	***0***	***0***

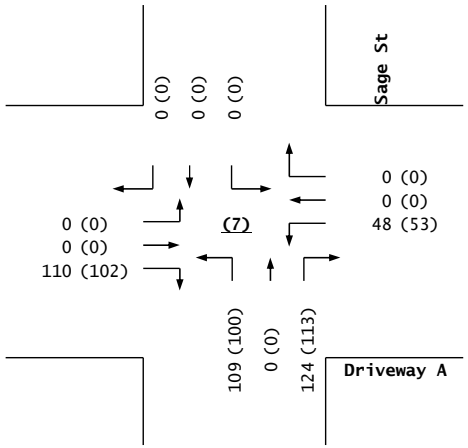
PM Pass-by Trips	***Eastbound (Driveway A)***			***Westbound (Driveway A)***			***Northbound (Sage St)***			***Southbound (Sage St)***		
Percent Entering	*0.00%*	*0.00%*	***14.00%***	***15.00%***	*0.00%*	*0.00%*	***15.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*20*	*21*	*0*	*0*	*21*	*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*	*61*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***20***	***21***	***0***	***0***	***21***	***0***	***61***	***0***	***0***	***0***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

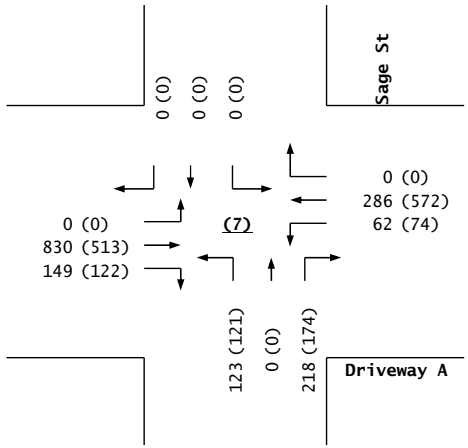
2025
NO BUILD



Trips



2025
BUILD



Driveway A / Sage St

Sage and Unser Development

Projected Turning Movements Worksheet

Unser Blvd / Driveway B

Case "Y"

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%*	***29.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	91	0	0	0	0	0	0	0	12	51
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**91**	**0**	**0**	**0**	**0**	**1,248**	**0**	**0**	**1,001**	**51**
Pass-by Trip Adjustments	*0*	*0*	*38*	*0*	*0*	*0*	*0*	*-57*	*0*	*0*	*-39*	*77*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**129**	**0**	**0**	**0**	**0**	**1,191**	**0**	**0**	**962**	**128**

	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%*	***29.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	83	0	0	0	0	0	0	0	13	60
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**83**	**0**	**0**	**0**	**0**	**1,122**	**0**	**0**	**1,566**	**60**
Pass-by Trip Adjustments	*0*	*0*	*49*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*-49*	*98*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**132**	**0**	**0**	**0**	**0**	**1,080**	**0**	**0**	**1,517**	**158**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

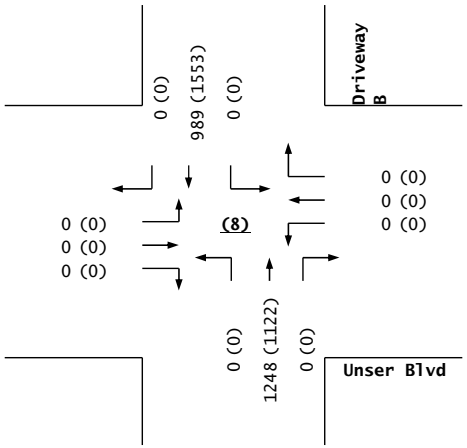
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Unser Blvd)***			***Westbound (Unser Blvd)***			***Northbound (Driveway B)***			***Southbound (Driveway B)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***-37.00%***	*0.00%*	*0.00%*	***-25.00%***	***25.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-57*	*0*	*0*	*-39*	*39*
Percent Exiting	*0.00%*	*0.00%*	***25.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***25.00%***
Volume Exiting	*0*	*0*	*38*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*38*
Net AM Passby Trips	***0***	***0***	***38***	***0***	***0***	***0***	***0***	***-57***	***0***	***0***	***-39***	***77***

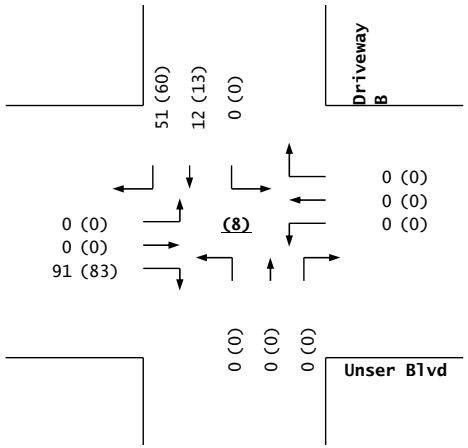
PM Pass-by Trips	***Eastbound (Unser Blvd)***			***Westbound (Unser Blvd)***			***Northbound (Driveway B)***			***Southbound (Driveway B)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***-30.00%***	*0.00%*	*0.00%*	***-35.00%***	***35.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*-49*	*49*
Percent Exiting	*0.00%*	*0.00%*	***35.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.00%***
Volume Exiting	*0*	*0*	*49*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*49*
Net PM Passby Trips	***0***	***0***	***49***	***0***	***0***	***0***	***0***	***-42***	***0***	***0***	***-49***	***98***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

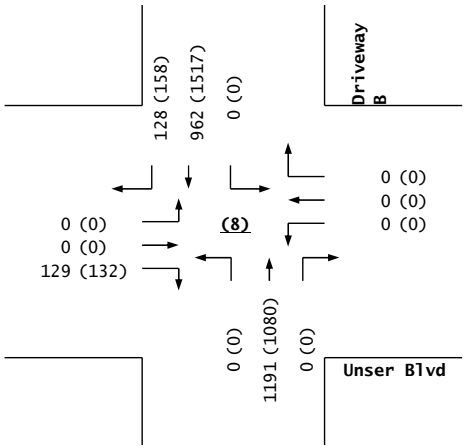
2025
NO BUILD



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%**		
	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	12	0	0	0	98	0	0	0	90	12
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**12**	**0**	**0**	**0**	**98**	**1,248**	**0**	**0**	**1,079**	**12**
Pass-by Trip Adjustments	*0*	*0*	*6*	*0*	*0*	*0*	*57*	*-57*	*0*	*0*	*-45*	*6*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**18**	**0**	**0**	**0**	**155**	**1,191**	**0**	**0**	**1,034**	**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%*	***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	10	0	0	0	92	0	0	0	82	13
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**10**	**0**	**0**	**0**	**92**	**1,122**	**0**	**0**	**1,635**	**13**
Pass-by Trip Adjustments	*0*	*0*	*8*	*0*	*0*	*0*	*42*	*-42*	*0*	*0*	*-58*	*8*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**18**	**0**	**0**	**0**	**134**	**1,080**	**0**	**0**	**1,577**	**21**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

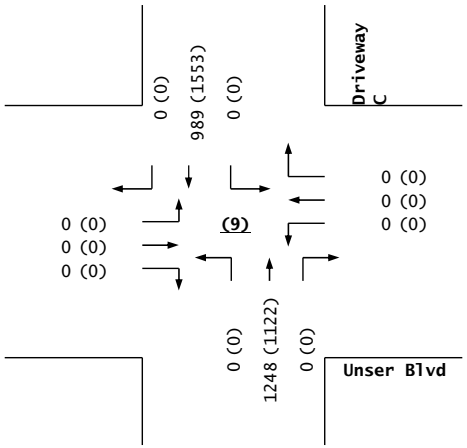
Pass-by Trip Calculations:

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%***	***4.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*57*	*-57*	*0*	*0*	*-45*	*6*
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*	*6*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***6***	***0***	***0***	***0***	***57***	***-57***	***0***	***0***	***-45***	***6***

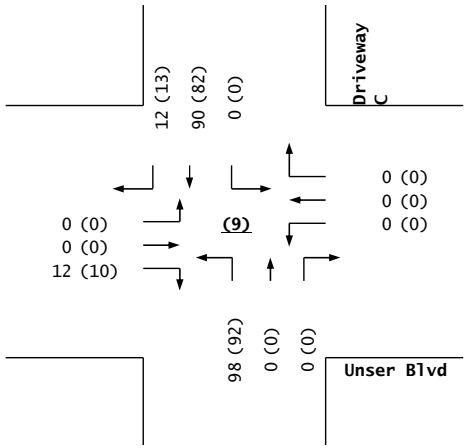
PM Pass-by Trips	***Eastbound (Unser Blvd)***			***Westbound (Unser Blvd)***			***Northbound (Driveway C)***			***Southbound (Driveway C)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***30.00%***	***-30.00%***	*0.00%*	*0.00%*	***-41.00%***	***6.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*42*	*-42*	*0*	*0*	*-58*	*8*
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*	*8*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***8***	***0***	***0***	***0***	***42***	***-42***	***0***	***0***	***-58***	***8***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

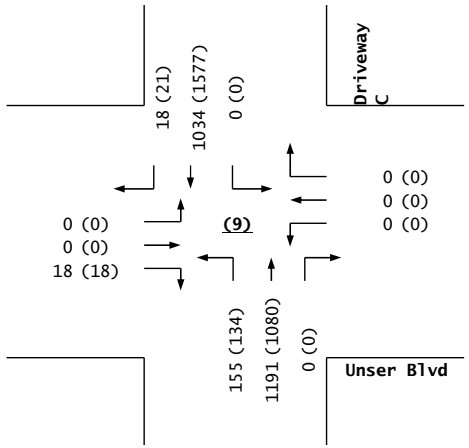
2025
NO BUILD



Trips



2025
BUILD



Unser Blvd / Driveway C

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2035) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Arenal Rd / Unser Blvd

(1)

	1.00			1.00			1.00			1.00			PHF
	Eastbound (Arenal Rd)			Westbound (Arenal Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
3.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2025)	172	230	63	163	149	275	63	763	235	239	714	41	
2035 (NO BUILD - A.M.)	*237*	*318*	*87*	*224*	*206*	*380*	*87*	*1,054*	*324*	*331*	*985*	*56*	
2035 (BUILD - A.M.)	***250***	***318***	***87***	***224***	***206***	***411***	***87***	***1,108***	***324***	***362***	***1,040***	***69***	

	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	
Existing (2025)	68	81	63	190	113	388	36	637	163	316	966	131	
2035 (NO BUILD - P.M.)	*94*	*112*	*87*	*262*	*156*	*536*	*50*	*879*	*224*	*437*	*1,335*	*181*	
2035 (BUILD - P.M.)	***106***	***112***	***87***	***262***	***156***	***564***	***50***	***930***	***224***	***465***	***1,385***	***193***	

Sage Rd / Unser Blvd

(2)

	1.00			1.00			1.00			1.00			PHF
	Eastbound (Sage Rd)			Westbound (Sage Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
3.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2025)	286	331	213	41	109	86	95	1,053	100	86	735	82	
2035 (NO BUILD - A.M.)	*399*	*463*	*298*	*57*	*152*	*120*	*133*	*1,471*	*139*	*120*	*1,027*	*114*	
2035 (BUILD - A.M.)	***538***	***504***	***298***	***70***	***177***	***120***	***133***	***1,415***	***139***	***120***	***1,077***	***137***	

	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	
Existing (2025)	127	136	250	136	209	59	200	858	64	95	1,167	163	
2035 (NO BUILD - P.M.)	*178*	*190*	*349*	*190*	*292*	*82*	*279*	*1,198*	*89*	*133*	*1,629*	*228*	
2035 (BUILD - P.M.)	***295***	***227***	***349***	***204***	***319***	***82***	***279***	***1,156***	***89***	***133***	***1,688***	***254***	

Tower / Unser

(3)

	1.00			1.00			1.00			1.00			PHF
	Eastbound (Tower)			Westbound (Tower)			Northbound (Unser)			Southbound (Unser)			
3.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2025)	95	118	68	36	86	63	32	969	36	27	462	59	
2035 (NO BUILD - A.M.)	*132*	*163*	*94*	*50*	*119*	*88*	*44*	*1,346*	*50*	*38*	*641*	*82*	
2035 (BUILD - A.M.)	***132***	***163***	***113***	***57***	***119***	***88***	***63***	***1,402***	***57***	***38***	***687***	***82***	

	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	
Existing (2025)	63	118	100	54	267	77	136	906	32	50	1,295	131	
2035 (NO BUILD - P.M.)	*88*	*163*	*138*	*75*	*371*	*107*	*189*	*1,258*	*44*	*69*	*1,798*	*182*	
2035 (BUILD - P.M.)	***88***	***163***	***155***	***81***	***371***	***107***	***206***	***1,308***	***50***	***69***	***1,857***	***182***	

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2035) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Sage / Coors Blvd

(4)

3.0% Truck

	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	
Existing (2025)	249	199	66	46	129	162	21	1,060	17	54	582	66	
2035 (NO BUILD - A.M.)	*336*	*235*	*77*	*99*	*180*	*254*	*24*	*1,269*	*19*	*61*	*658*	*80*	
2035 (BUILD - A.M.)	***351***	***250***	***83***	***99***	***195***	***254***	***29***	***1,269***	***19***	***61***	***658***	***92***	

	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	
Existing (2025)	58	66	4	91	266	199	83	860	179	91	790	112	
2035 (NO BUILD - P.M.)	*87*	*82*	*6*	*143*	*335*	*280*	*96*	*1,000*	*201*	*103*	*890*	*129*	
2035 (BUILD - P.M.)	***100***	***96***	***11***	***143***	***349***	***280***	***101***	***1,000***	***201***	***103***	***890***	***145***	

Sage / 86th Street

(5)

3.0% Truck

	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	
Existing (2025)	59	541	13	38	211	59	4	114	80	42	30	51	
2035 (NO BUILD - A.M.)	*70*	*638*	*15*	*45*	*249*	*70*	*5*	*135*	*95*	*50*	*35*	*60*	
2035 (BUILD - A.M.)	***70***	***704***	***15***	***68***	***315***	***88***	***5***	***135***	***118***	***68***	***35***	***60***	

	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	
Existing (2025)	55	300	42	51	410	55	17	85	25	30	110	93	
2035 (NO BUILD - P.M.)	*65*	*354*	*50*	*60*	*484*	*65*	*20*	*100*	*30*	*35*	*130*	*110*	
2035 (BUILD - P.M.)	***65***	***415***	***50***	***81***	***544***	***81***	***20***	***100***	***51***	***51***	***130***	***110***	

San Ygnacio / Unser Blvd

(6)

3.0% Truck

	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	
Existing (2025)	0	0	34	0	0	11	0	2,247	11	0	1,424	11	
2035 (NO BUILD - A.M.)	*0*	*0*	*47*	*0*	*0*	*16*	*0*	*3,102*	*16*	*0*	*1,966*	*16*	
2035 (BUILD - A.M.)	***0***	***0***	***47***	***0***	***0***	***16***	***0***	***3,185***	***16***	***0***	***2,039***	***16***	

	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	
Existing (2025)	0	0	34	0	0	11	0	1,646	11	0	2,247	34	
2035 (NO BUILD - P.M.)	*0*	*0*	*47*	*0*	*0*	*16*	*0*	*2,273*	*16*	*0*	*3,102*	*47*	
2035 (BUILD - P.M.)	***0***	***0***	***47***	***0***	***0***	***16***	***0***	***2,348***	***16***	***0***	***3,187***	***47***	

Driveway A / Sage St

(7)

3.0% Truck

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2035 (NO BUILD - A.M.)	*0*	*1,160*	*0*	*0*	*399*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2035 (BUILD - A.M.)	***0***	***1,160***	***149***	***62***	***399***	***0***	***123***	***0***	***218***	***0***	***0***	***0***	

	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	
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0	
2035 (NO BUILD - P.M.)	*0*	*717*	*0*	*0*	*799*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2035 (BUILD - P.M.)	***0***	***717***	***122***	***74***	***799***	***0***	***121***	***0***	***174***	***0***	***0***	***0***	

Sage and Unser Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2035) - 100% Development

Case "Y"

INTERSECTION: **Summary**

Unser Blvd / Driveway B

(8)

3.0% Truck

	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
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0
2035 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,743*	*0*	*0*	*1,382*	*0*
2035 (BUILD - A.M.)	***0***	***0***	***129***	***0***	***0***	***0***	***0***	***1,686***	***0***	***0***	***1,355***	***128***

	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
Existing (2025)	0	0	0	0	0	0	0	0	0	0	0	0
2035 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,566*	*0*	*0*	*2,168*	*0*
2035 (BUILD - P.M.)	***0***	***0***	***132***	***0***	***0***	***0***	***0***	***1,524***	***0***	***0***	***2,132***	***158***

Unser Blvd / Driveway C

(9)

3.0% Truck

	1.00			1.00			1.00			1.00		PHF
	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 (2025)	0	0	0	0	0	0	0	0	0	0	0	0
2035 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,743*	*0*	*0*	*1,382*	*0*
2035 (BUILD - A.M.)	***0***	***0***	***18***	***0***	***0***	***0***	***155***	***1,686***	***0***	***0***	***1,427***	***18***

	1.00			1.00			1.00			1.00		PHF
	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 (2025)	0	0	0	0	0	0	0	0	0	0	0	0
2035 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,566*	*0*	*0*	*2,168*	*0*
2035 (BUILD - P.M.)	***0***	***0***	***18***	***0***	***0***	***0***	***134***	***1,524***	***0***	***0***	***2,192***	***21***

Sage and Unser Development

Projected Turning Movements Worksheet

Arenal Rd / Unser Blvd

INTERSECTION: E-W Street: **Arenal Rd** (1)

N-S Street: **Unser Blvd**

Year of Existing Counts 2022

Horizon Year **2035**

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	13	0	0	0	0	31	0	54	0	31	55	13
Subtotal AM Pk Hr. BUILD Volumes	**250**	**318**	**87**	**224**	**206**	**411**	**87**	**1,108**	**324**	**362**	**1,040**	**69**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**250**	**318**	**87**	**224**	**206**	**411**	**87**	**1,108**	**324**	**362**	**1,040**	**69**

	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	12	0	0	0	0	28	0	51	0	28	50	12
Subtotal PM Pk Hr. BUILD Volumes	**106**	**112**	**87**	**262**	**156**	**564**	**50**	**930**	**224**	**465**	**1,385**	**193**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**106**	**112**	**87**	**262**	**156**	**564**	**50**	**930**	**224**	**465**	**1,385**	**193**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

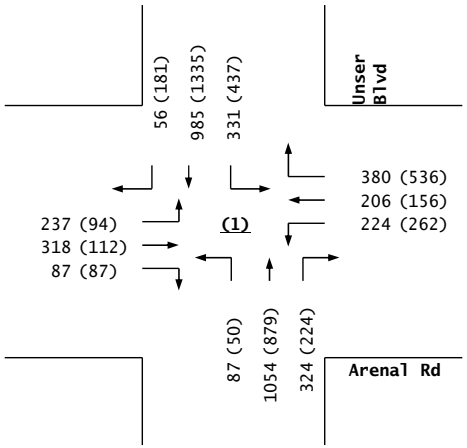
Pass-by Trip Calculations:

AM Pass-by 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***

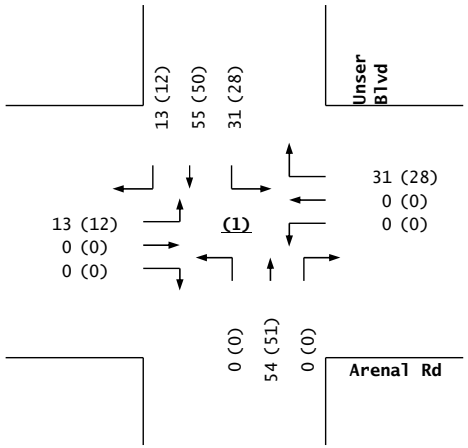
PM Pass-by Trips	***Eastbound (Arenal Rd)***			***Westbound (Arenal Rd)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

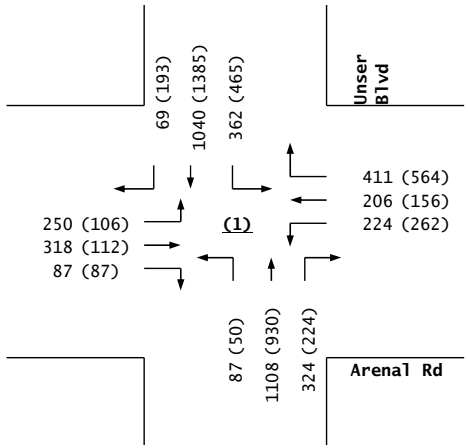
2035
NO BUILD



Trips



2035
BUILD



Arenal Rd / Unser Blvd

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%*
Total Trips Generated	83	41	0	13	25	0	0	0	0	0	50	23
Subtotal AM Pk Hr. BUILD Volumes	**482**	**504**	**298**	**70**	**177**	**120**	**133**	**1,471**	**139**	**120**	**1,077**	**137**
Pass-by Trip Adjustments	*56*	*0*	*0*	*0*	*0*	*0*	*0*	*-56*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**538**	**504**	**298**	**70**	**177**	**120**	**133**	**1,415**	**139**	**120**	**1,077**	**137**

	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	75	37	0	14	27	0	0	0	0	0	59	26
Subtotal PM Pk Hr. BUILD Volumes	**253**	**227**	**349**	**204**	**319**	**82**	**279**	**1,198**	**89**	**133**	**1,688**	**254**
Pass-by Trip Adjustments	*42*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**295**	**227**	**349**	**204**	**319**	**82**	**279**	**1,156**	**89**	**133**	**1,688**	**254**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

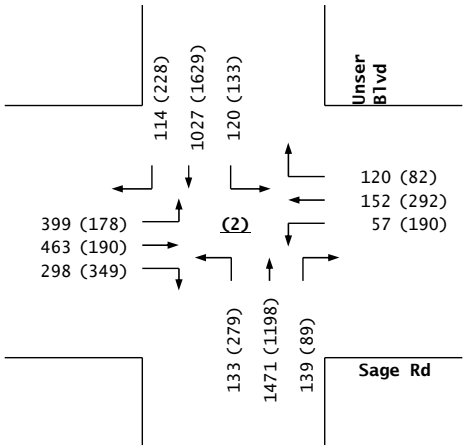
Pass-by Trip Calculations:

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	*56*	*0*	*0*	*0*	*0*	*0*	*0*	*-56*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***56***	***0***	***0***	***0***	***0***	***0***	***0***	***-56***	***0***	***0***	***0***	***0***

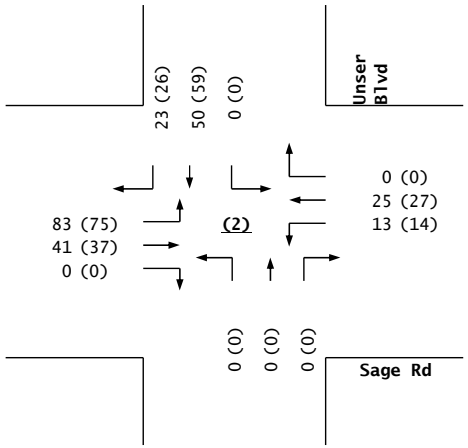
PM Pass-by Trips	***Eastbound (Sage Rd)***			***Westbound (Sage Rd)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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	*42*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***42***	***0***	***0***	***0***	***0***	***0***	***0***	***-42***	***0***	***0***	***0***	***0***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

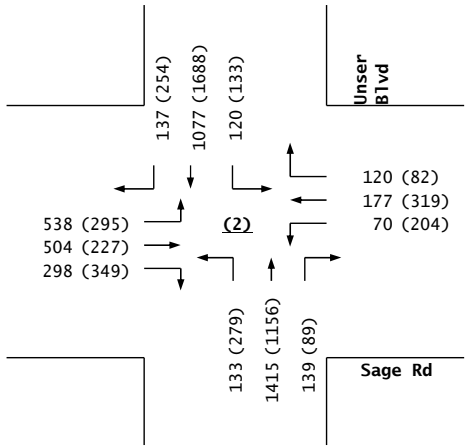
2035
NO BUILD



Trips



2035
BUILD



Sage Rd / Unser Blvd

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	19	7	0	0	19	56	7	0	46	0
Subtotal AM Pk Hr. BUILD Volumes	**132**	**163**	**113**	**57**	**119**	**88**	**63**	**1,402**	**57**	**38**	**687**	**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**	**113**	**57**	**119**	**88**	**63**	**1,402**	**57**	**38**	**687**	**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	17	6	0	0	17	50	6	0	59	0
Subtotal PM Pk Hr. BUILD Volumes	**88**	**163**	**155**	**81**	**371**	**107**	**206**	**1,308**	**50**	**69**	**1,857**	**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**	**155**	**81**	**371**	**107**	**206**	**1,308**	**50**	**69**	**1,857**	**182**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

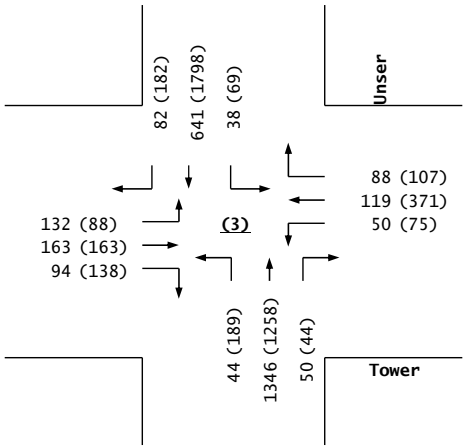
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Tower)***			***Westbound (Tower)***			***Northbound (Unser)***			***Southbound (Unser)***		
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***

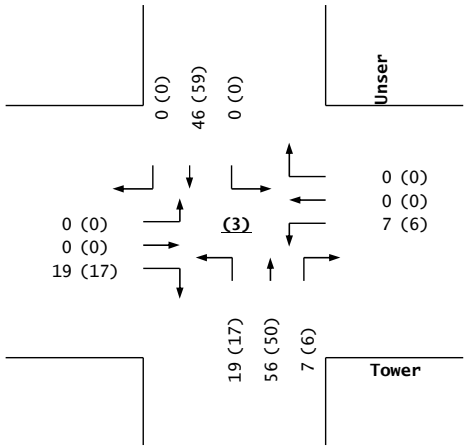
PM Pass-by Trips	***Eastbound (Tower)***			***Westbound (Tower)***			***Northbound (Unser)***			***Southbound (Unser)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent 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	***154***	***152***	*AM*
	141	***139***	*PM*

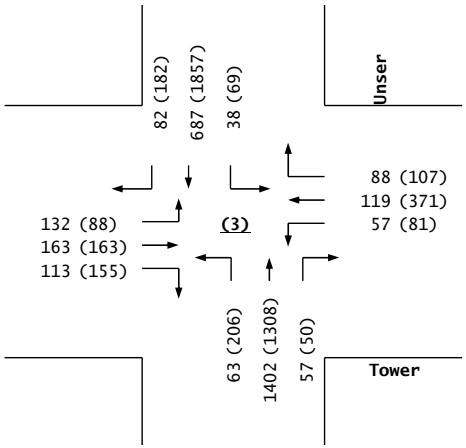
2035
NO BUILD



Trips



2035
BUILD



Tower / Unser

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 Subdivision	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	15	15	6	0	15	0	5	0	0	0	0	12
Subtotal AM Pk Hr. BUILD Volumes	**351**	**250**	**83**	**99**	**195**	**254**	**29**	**1,269**	**19**	**61**	**658**	**92**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**351**	**250**	**83**	**99**	**195**	**254**	**29**	**1,269**	**19**	**61**	**658**	**92**

	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 Subdivision	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	13	14	5	0	14	0	5	0	0	0	0	16
Subtotal PM Pk Hr. BUILD Volumes	**100**	**96**	**11**	**143**	**349**	**280**	**101**	**1,000**	**201**	**103**	**890**	**145**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**100**	**96**	**11**	**143**	**349**	**280**	**101**	**1,000**	**201**	**103**	**890**	**145**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

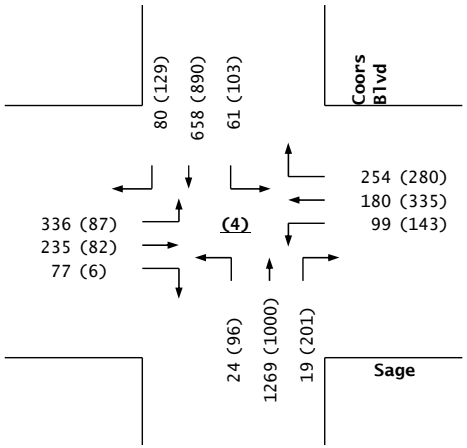
Pass-by Trip Calculations:

AM Pass-by Trips	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (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***

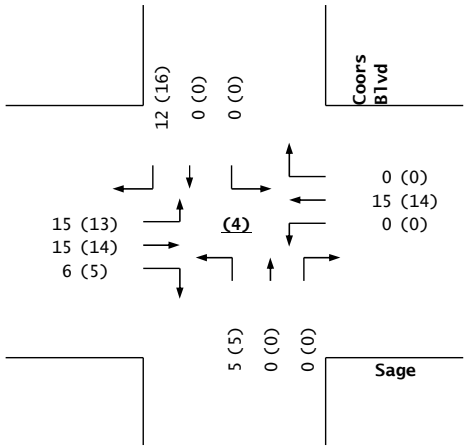
PM Pass-by Trips	Eastbound (Sage)			Westbound (Sage)			Northbound (Coors Blvd)			Southbound (Coors Blvd)		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*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***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

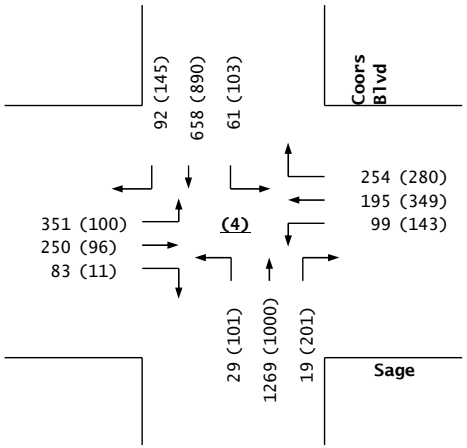
2035
NO BUILD



Trips



2035
BUILD



Sage / Coors Blvd

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	66	0	23	66	18	0	0	23	18	0	0
Subtotal AM Pk Hr. BUILD Volumes		**70**	**704**	**15**	**68**	**315**	**88**	**5**	**135**	**118**	**68**	**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**	**704**	**15**	**68**	**315**	**88**	**5**	**135**	**118**	**68**	**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	61	0	21	60	16	0	0	21	16	0	0
Subtotal PM Pk Hr. BUILD Volumes	**65**	**415**	**50**	**81**	**544**	**81**	**20**	**100**	**51**	**51**	**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**	**415**	**50**	**81**	**544**	**81**	**20**	**100**	**51**	**51**	**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	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

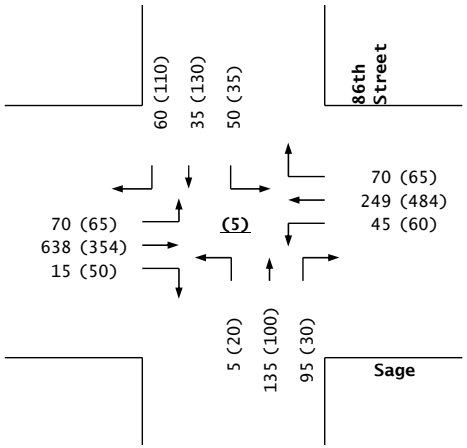
Pass-by Trip Calculations:

AM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (86th Street)***			***Southbound (86th Street)***		
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***

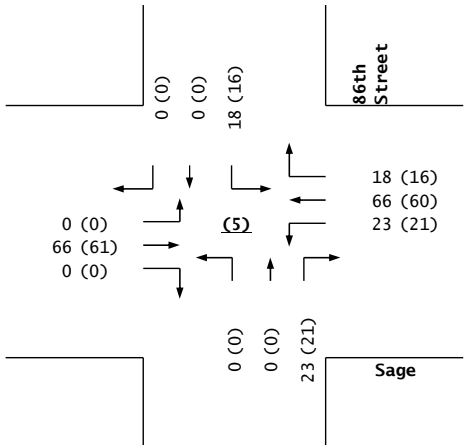
PM Pass-by Trips	***Eastbound (Sage)***			***Westbound (Sage)***			***Northbound (86th Street)***			***Southbound (86th Street)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*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	***154***	***152***	*AM*
	141	***139***	*PM*

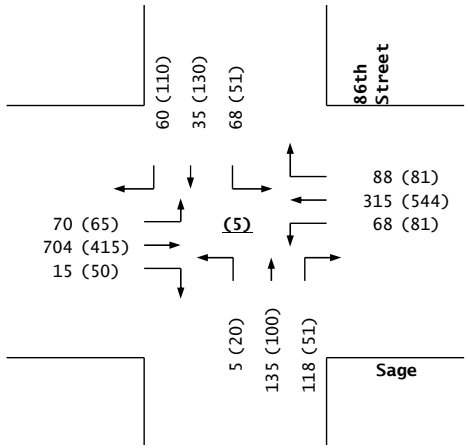
2035
NO BUILD



Trips



2035
BUILD



Sage / 86th Street

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	83	0	0	73	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**47**	**0**	**0**	**16**	**0**	**3,185**	**16**	**0**	**2,039**	**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**	**3,185**	**16**	**0**	**2,039**	**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	75	0	0	85	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**47**	**0**	**0**	**16**	**0**	**2,348**	**16**	**0**	**3,187**	**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**	**2,348**	**16**	**0**	**3,187**	**47**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

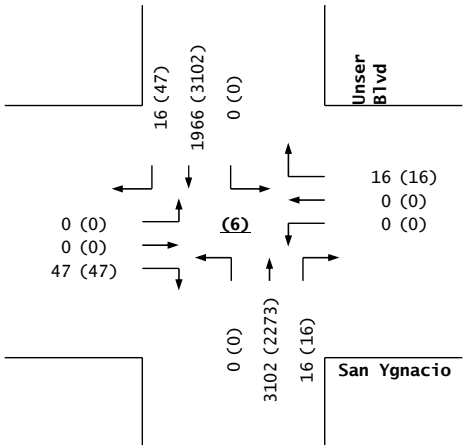
Pass-by Trip Calculations:

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

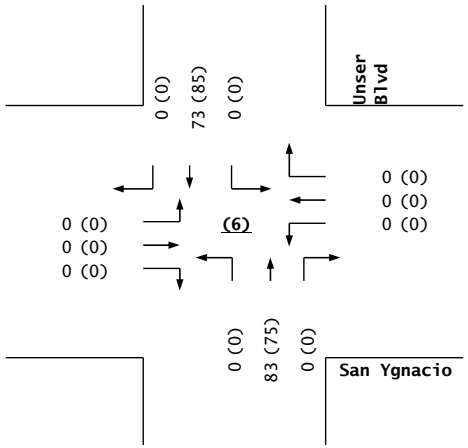
PM Pass-by Trips	***Eastbound (San Ygnacio)***			***Westbound (San Ygnacio)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*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

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

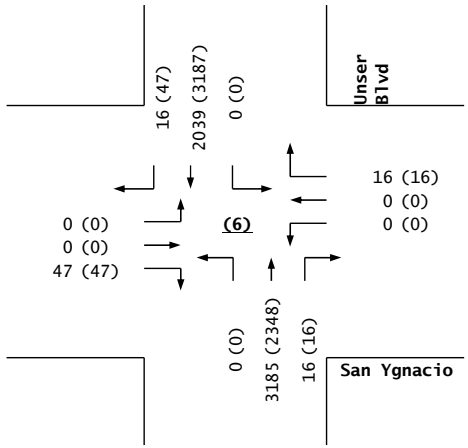
2035
NO BUILD



Trips



2035
BUILD



San Ygnacio / Unser Blvd

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 (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	110	48	0	0	109	0	124	0	0	0
Subtotal AM Pk Hr. BUILD Volumes	**0**	**1,160**	**110**	**48**	**399**	**0**	**109**	**0**	**124**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*39*	*14*	*0*	*0*	*14*	*0*	*94*	*0*	*0*	*0*
Total AM Peak Hour BUILD Volumes	**0**	**1,160**	**149**	**62**	**399**	**0**	**123**	**0**	**218**	**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***	***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	102	53	0	0	100	0	113	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**717**	**102**	**53**	**799**	**0**	**100**	**0**	**113**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*20*	*21*	*0*	*0*	*21*	*0*	*61*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**717**	**122**	**74**	**799**	**0**	**121**	**0**	**174**	**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	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

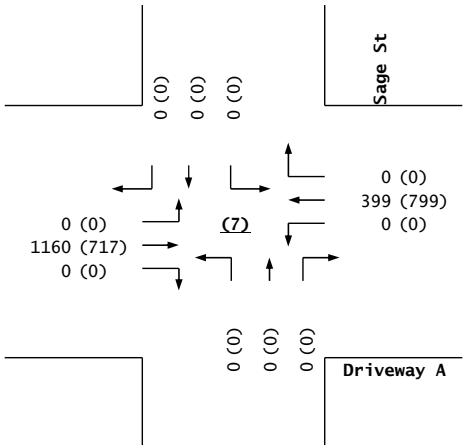
Pass-by Trip Calculations:

AM Pass-by Trips	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
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*	*39*	*14*	*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*	*14*	*0*	*94*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***39***	***14***	***0***	***0***	***14***	***0***	***94***	***0***	***0***	***0***

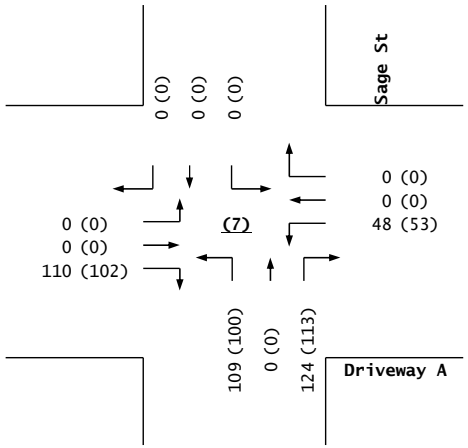
PM Pass-by Trips	Eastbound (Driveway A)			Westbound (Driveway A)			Northbound (Sage St)			Southbound (Sage St)		
Percent Entering	*0.00%*	*0.00%*	***14.00%***	***15.00%***	*0.00%*	*0.00%*	***15.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*20*	*21*	*0*	*0*	*21*	*0*	*0*	*0*	*0*	*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*	*61*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***20***	***21***	***0***	***0***	***21***	***0***	***61***	***0***	***0***	***0***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

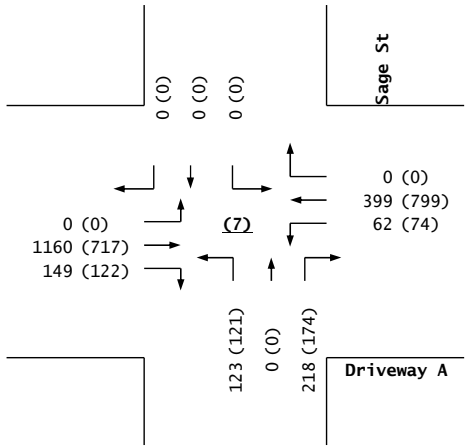
2035
NO BUILD



Trips



2035
BUILD



Driveway A / Sage St

Sage and Unser Development

Projected Turning Movements Worksheet

Unser Blvd / Driveway B

Case "Y"

INTERSECTION: E-W Street: **Unser Blvd** (8)

N-S Street: **Driveway B**

Year of Existing Counts 2022

Horizon Year **2035**

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***	***1,743***	***0***	***0***	***1,382***	***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%*	***29.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	91	0	0	0	0	0	0	0	12	51
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**91**	**0**	**0**	**0**	**0**	**1,743**	**0**	**0**	**1,394**	**51**
Pass-by Trip Adjustments	*0*	*0*	*38*	*0*	*0*	*0*	*0*	*-57*	*0*	*0*	*-39*	*77*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**129**	**0**	**0**	**0**	**0**	**1,686**	**0**	**0**	**1,355**	**128**

	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***	***1,566***	***0***	***0***	***2,168***	***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%*	***29.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	83	0	0	0	0	0	0	0	13	60
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**83**	**0**	**0**	**0**	**0**	**1,566**	**0**	**0**	**2,181**	**60**
Pass-by Trip Adjustments	*0*	*0*	*49*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*-49*	*98*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**132**	**0**	**0**	**0**	**0**	**1,524**	**0**	**0**	**2,132**	**158**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	100% Residential Development
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

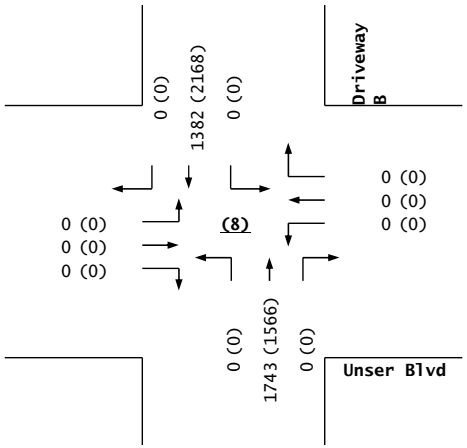
Pass-by Trip Calculations:

AM Pass-by Trips	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***-37.00%***	*0.00%*	*0.00%*	***-25.00%***	***25.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-57*	*0*	*0*	*-39*	*39*
Percent Exiting	*0.00%*	*0.00%*	***25.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***25.00%***
Volume Exiting	*0*	*0*	*38*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*38*
Net AM Passby Trips	***0***	***0***	***38***	***0***	***0***	***0***	***0***	***-57***	***0***	***0***	***-39***	***77***

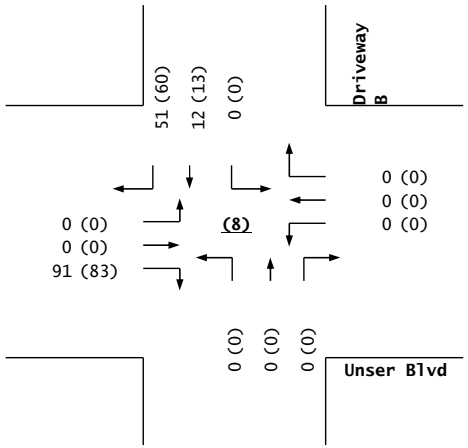
PM Pass-by Trips	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway B)			Southbound (Driveway B)		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***-30.00%***	*0.00%*	*0.00%*	***-35.00%***	***35.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-42*	*0*	*0*	*-49*	*49*
Percent Exiting	*0.00%*	*0.00%*	***35.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.00%***
Volume Exiting	*0*	*0*	*49*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*49*
Net PM Passby Trips	***0***	***0***	***49***	***0***	***0***	***0***	***0***	***-42***	***0***	***0***	***-49***	***98***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

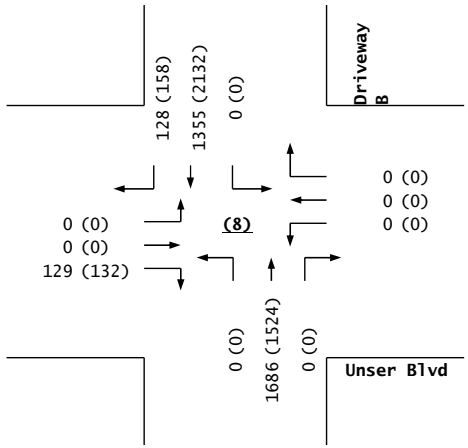
2035
NO BUILD



Trips



2035
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 **2035**

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***	***1,743***	***0***	***0***	***1,382***	***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	12	0	0	0	98	0	0	0	90	12
Subtotal AM Pk Hr. BUILD Volumes	**0**	**0**	**12**	**0**	**0**	**0**	**98**	**1,743**	**0**	**0**	**1,472**	**12**
Pass-by Trip Adjustments	*0*	*0*	*6*	*0*	*0*	*0*	*57*	*-57*	*0*	*0*	*-45*	*6*
Total AM Peak Hour BUILD Volumes	**0**	**0**	**18**	**0**	**0**	**0**	**155**	**1,686**	**0**	**0**	**1,427**	**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***	***1,566***	***0***	***0***	***2,168***	***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	10	0	0	0	92	0	0	0	82	13
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**10**	**0**	**0**	**0**	**92**	**1,566**	**0**	**0**	**2,250**	**13**
Pass-by Trip Adjustments	*0*	*0*	*8*	*0*	*0*	*0*	*42*	*-42*	*0*	*0*	*-58*	*8*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**18**	**0**	**0**	**0**	**134**	**1,524**	**0**	**0**	**2,192**	**21**

	Entering	Exiting		
Number of Residential Trips Generated	**7**	**23**	A.M.	
	33	**20**	P.M.	
Number of Commercial Trips Generated	**312**	**310**	A.M.	100% Commercial Development
	287	**283**	P.M.	

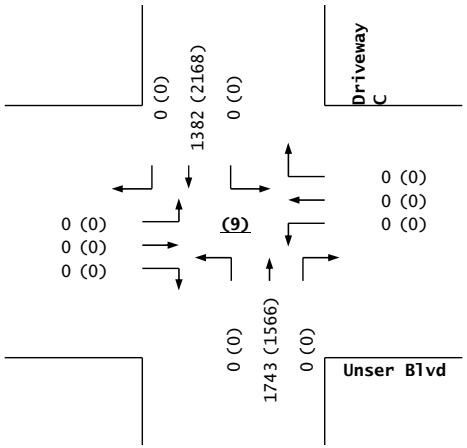
Pass-by Trip Calculations:

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%***	***4.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*57*	*-57*	*0*	*0*	*-45*	*6*
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*	*6*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net AM Passby Trips	***0***	***0***	***6***	***0***	***0***	***0***	***57***	***-57***	***0***	***0***	***-45***	***6***

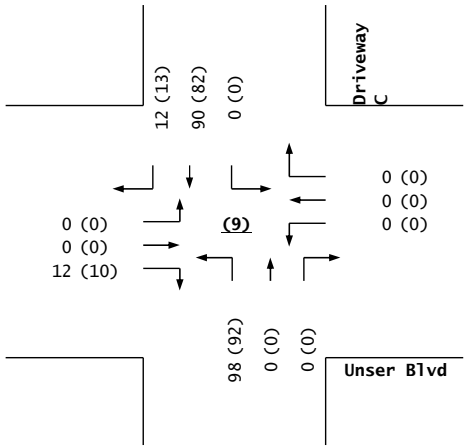
PM Pass-by Trips	Eastbound (Unser Blvd)			Westbound (Unser Blvd)			Northbound (Driveway C)			Southbound (Driveway C)		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***30.00%***	***-30.00%***	*0.00%*	*0.00%*	***-41.00%***	***6.00%***
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*42*	*-42*	*0*	*0*	*-58*	*8*
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*	*8*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***0***	***0***	***8***	***0***	***0***	***0***	***42***	***-42***	***0***	***0***	***-58***	***8***

	Entering	*Exiting*	
Pass-by Trips	***154***	***152***	*AM*
	141	***139***	*PM*

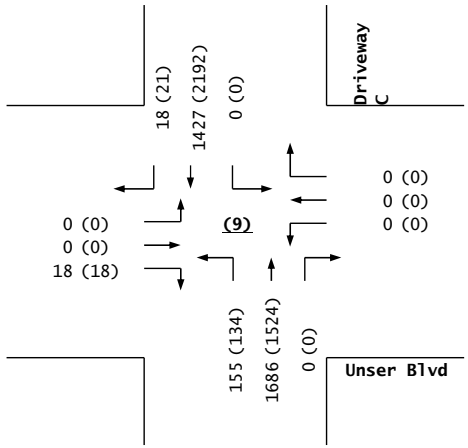
2035
NO BUILD



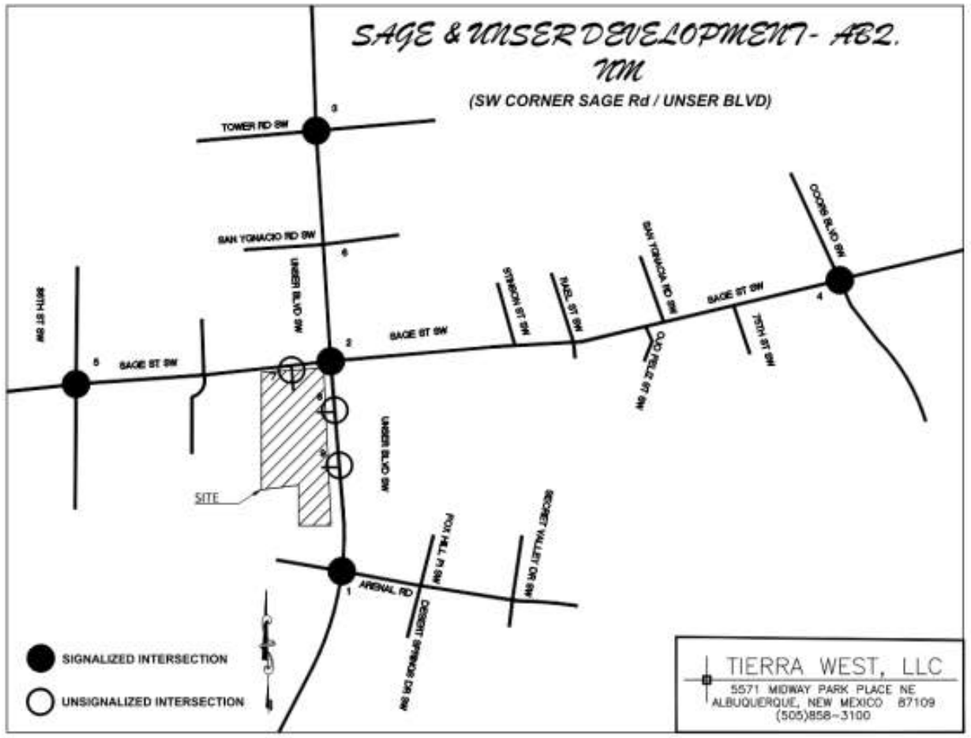
Trips

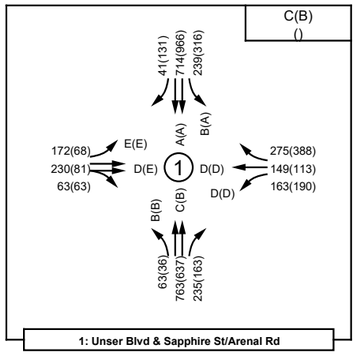
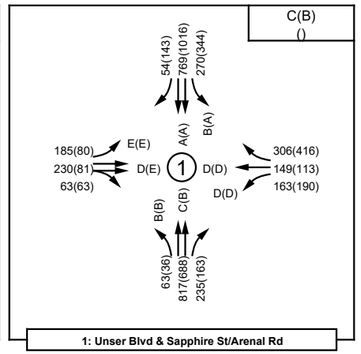
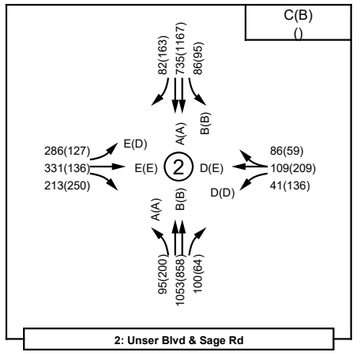
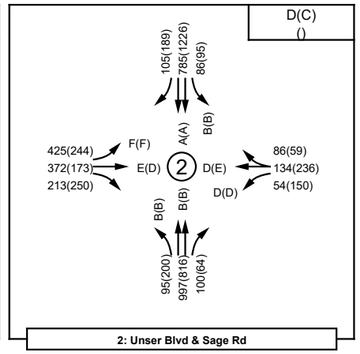
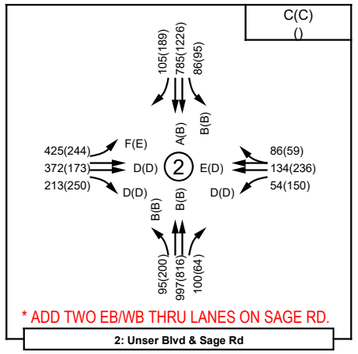
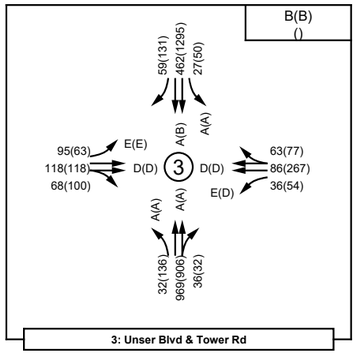
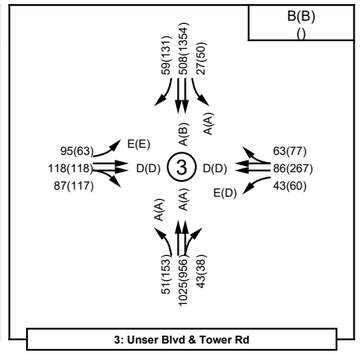
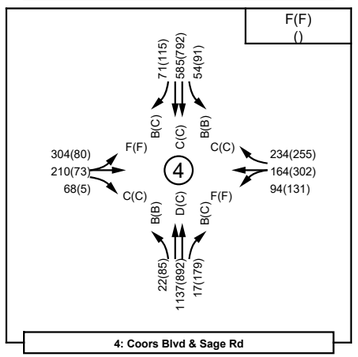
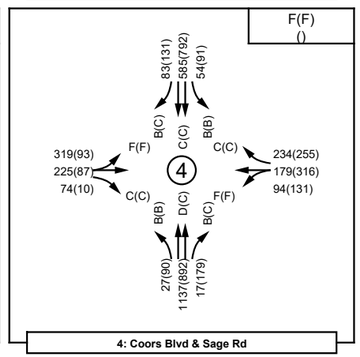


2035
BUILD



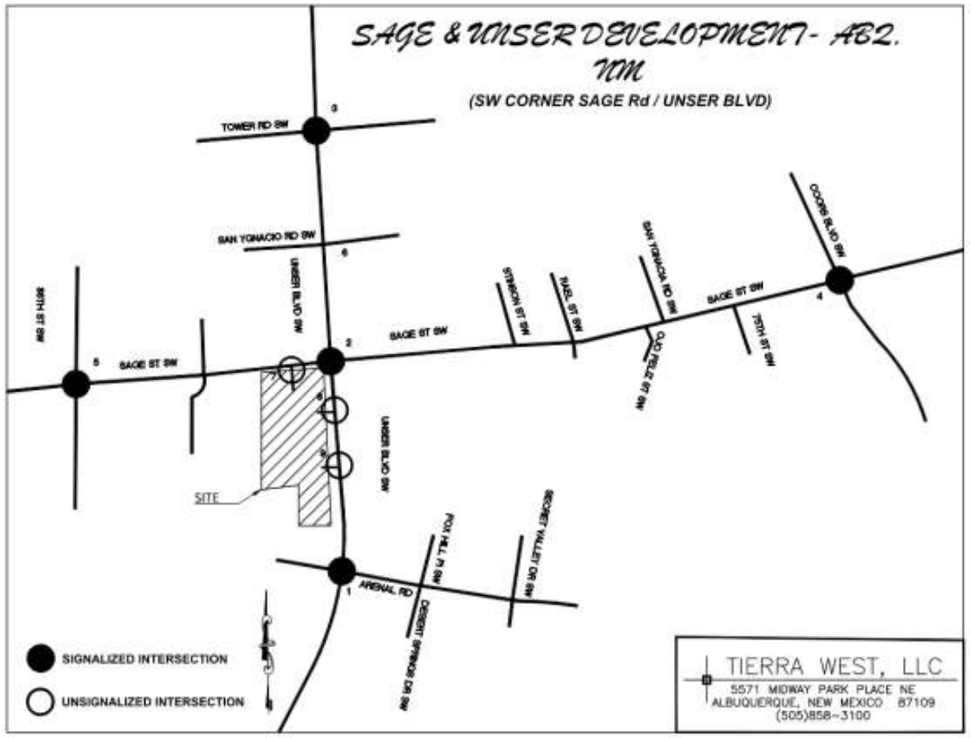
Unser Blvd / Driveway C



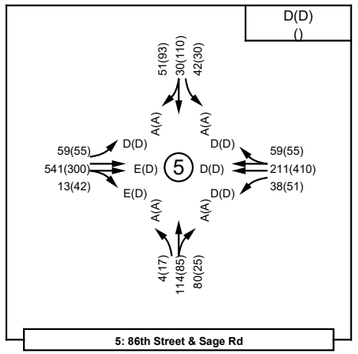
NO BUILD 2025 Condition	BUILD 2025 Condition	MITIGATIONS 2025 Condition
		NO RECOMMENDATIONS
		
		NO RECOMMENDATIONS
		NO RECOMMENDATIONS

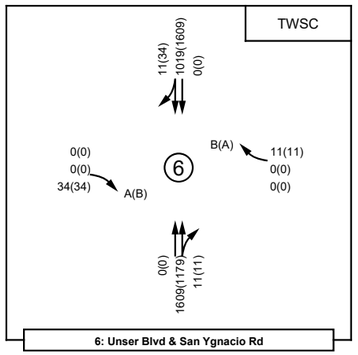
Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)



NO BUILD
2025 Condition





BUILD
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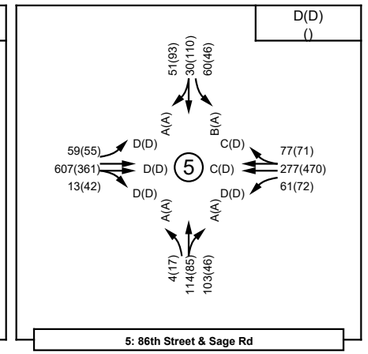
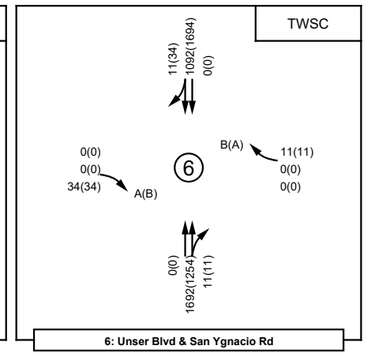




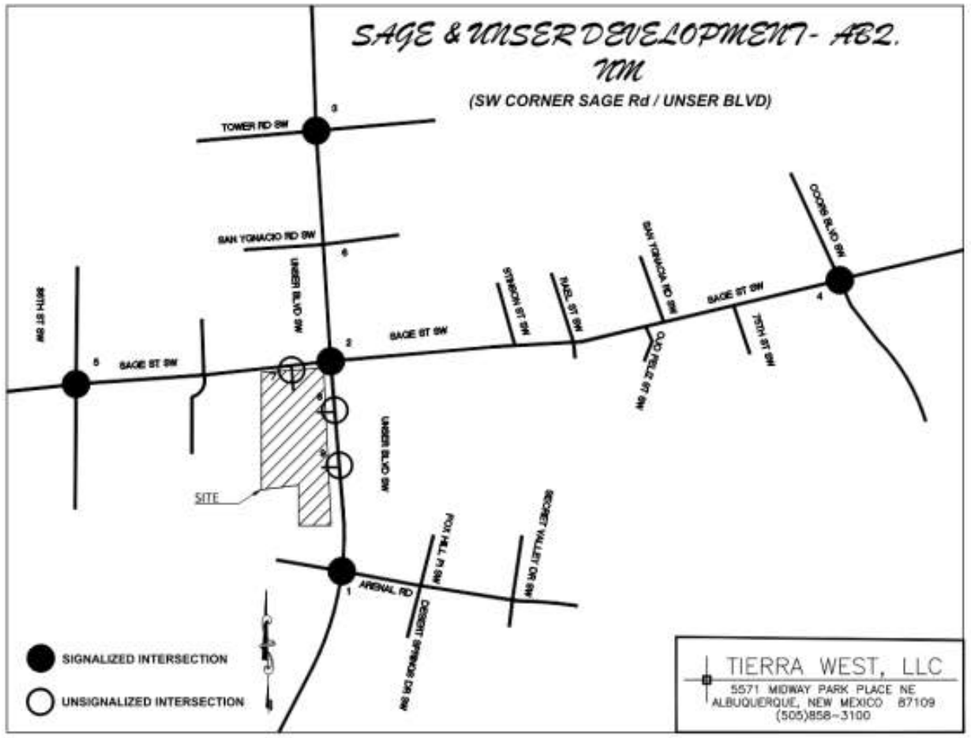
MITIGATIONS
2025 Condition

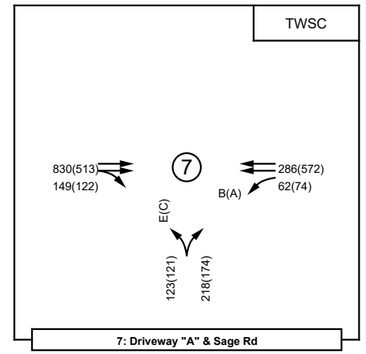
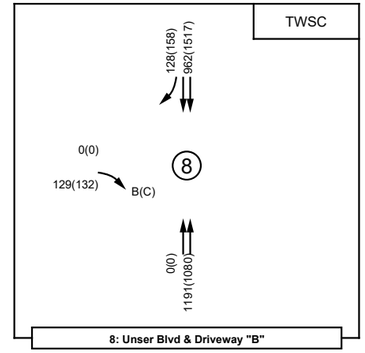
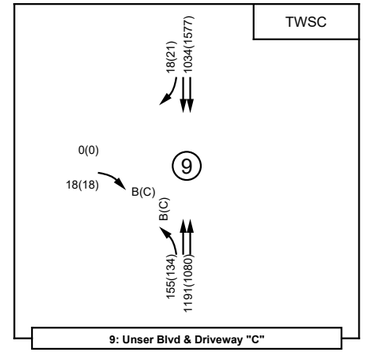
NO RECOMMENDATIONS

NO RECOMMENDATIONS

Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)



NO BUILD 2025 Condition	BUILD 2025 Condition	MITIGATIONS 2025 Condition
		NO RECOMMENDATIONS
		NO RECOMMENDATIONS
		NO RECOMMENDATIONS

Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	172	230	163	149	275	63	763	235	239	714	41
Future Volume (vph)	172	230	163	149	275	63	763	235	239	714	41
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	23.8	23.8	42.3	39.8	130.0	62.5	62.5	130.0	80.7	78.2	130.0
Actuated g/C Ratio	0.18	0.18	0.33	0.31	1.00	0.48	0.48	1.00	0.62	0.60	1.00
v/c Ratio	0.76	0.45	0.46	0.26	0.17	0.19	0.45	0.15	0.55	0.34	0.03
Control Delay (s/veh)	71.0	43.8	35.4	33.4	0.2	26.4	25.9	0.2	30.7	17.0	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
Total Delay (s/veh)	71.0	43.8	35.4	33.4	0.2	26.4	25.9	0.2	30.7	17.0	0.0
LOS	E	D	D	C	A	C	C	A	C	B	A
Approach Delay (s/veh)		53.9		18.4			20.2			19.6	
Approach LOS		D		B			C			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: 0.76			
Intersection Signal Delay (s/veh): 24.7		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	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
Lane Width 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
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	0	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	258	582		336	523		432	1818		467	2204	
Arrive On Green	0.16	0.16	0.00	0.09	0.28	0.00	0.51	0.51	0.00	0.16	1.00	0.00
Sat Flow, veh/h	1239	3647	0	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	0	1781	1870	1585	736	1777	1585	1781	1777	1585
Q Serve(g_s), s	17.5	7.5	0.0	9.6	8.1	0.0	5.9	17.4	0.0	8.5	0.0	0.0
Cycle Q Clear(g_c), s	17.5	7.5	0.0	9.6	8.1	0.0	5.9	17.4	0.0	8.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	582		336	523		432	1818		467	2204	
V/C Ratio(X)	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Avail Cap(c_a), veh/h	408	1011		349	774		432	1818		630	2204	
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	0.96	0.96	0.00
Uniform Delay (d), s/veh	52.8	48.6	0.0	38.7	36.6	0.0	17.0	19.8	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.4	0.0	0.4	0.3	0.0	0.7	0.7	0.0	0.3	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	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
LnGrp LOS	E	D		D	D		B	C		B	A	
Approach Vol, veh/h		402			312			826			953	
Approach Delay, s/veh		51.9			38.1			20.3			3.5	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	14.1	72.5	15.1	28.3	86.6	43.4
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	10.5	19.4	11.6	19.5	2.0	10.1
Green Ext Time (p_c), s	0.2	5.3	0.0	1.8	5.4	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	21.2	
HCM 7th LOS	C	

Notes
* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	185	230	163	149	306	63	817	235	270	769	54
Future Volume (vph)	185	230	163	149	306	63	817	235	270	769	54
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	25.1	25.1	43.6	41.1	130.0	58.1	58.1	130.0	79.4	76.9	130.0
Actuated g/C Ratio	0.19	0.19	0.34	0.32	1.00	0.45	0.45	1.00	0.61	0.59	1.00
v/c Ratio	0.78	0.43	0.45	0.25	0.19	0.21	0.52	0.15	0.64	0.37	0.03
Control Delay (s/veh)	70.3	42.4	34.0	32.3	0.3	30.8	30.4	0.2	35.1	17.7	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
Total Delay (s/veh)	70.3	42.4	34.0	32.3	0.3	30.8	30.4	0.2	35.1	17.7	0.0
LOS	E	D	C	C	A	C	C	A	D	B	A
Approach Delay (s/veh)		53.2		16.9			24.1			21.1	
Approach LOS		D		B			C			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: 0.78		
Intersection Signal Delay (s/veh): 26.0	Intersection LOS: C	
Intersection Capacity Utilization 74.4%	ICU Level of Service D	
Analysis Period (min) 15		

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	230	63	163	149	306	63	817	235	270	769	54
Future Volume (veh/h)	185	230	63	163	149	306	63	817	235	270	769	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	185	230	0	163	149	0	63	817	0	270	769	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	271	618		347	540		398	1739		450	2172	
Arrive On Green	0.17	0.17	0.00	0.09	0.29	0.00	0.49	0.49	0.00	0.19	1.00	0.00
Sat Flow, veh/h	1239	3647	0	1781	1870	1585	700	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	185	230	0	163	149	0	63	817	0	270	769	0
Grp Sat Flow(s),veh/h/ln	1239	1777	0	1781	1870	1585	700	1777	1585	1781	1777	1585
Q Serve(g_s), s	18.9	7.4	0.0	9.5	8.0	0.0	6.6	19.8	0.0	10.1	0.0	0.0
Cycle Q Clear(g_c), s	18.9	7.4	0.0	9.5	8.0	0.0	6.6	19.8	0.0	10.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	618		347	540		398	1739		450	2172	
V/C Ratio(X)	0.68	0.37		0.47	0.28		0.16	0.47		0.60	0.35	
Avail Cap(c_a), veh/h	408	1011		361	774		398	1739		589	2172	
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	52.1	47.4	0.0	37.8	35.7	0.0	18.6	22.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.4	0.0	0.4	0.3	0.0	0.8	0.9	0.0	0.5	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	10.0	5.9	0.0	7.4	6.6	0.0	2.0	12.9	0.0	5.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	47.8	0.0	38.1	36.0	0.0	19.5	22.9	0.0	14.2	0.5	0.0
LnGrp LOS	E	D		D	D		B	C		B	A	
Approach Vol, veh/h		415			312			880			1039	
Approach Delay, s/veh		51.1			37.1			22.7			4.0	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	15.8	69.6	14.9	29.6	85.4	44.6
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	12.1	21.8	11.5	20.9	2.0	10.0
Green Ext Time (p_c), s	0.2	5.4	0.0	1.8	5.9	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	21.5	
HCM 7th LOS	C	

Notes

* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	68	81	190	113	388	36	637	163	316	966	131
Future Volume (vph)	68	81	190	113	388	36	637	163	316	966	131
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	12.6	12.6	31.6	29.1	130.0	72.7	72.7	130.0	91.4	88.9	130.0
Actuated g/C Ratio	0.10	0.10	0.24	0.22	1.00	0.56	0.56	1.00	0.70	0.68	1.00
v/c Ratio	0.55	0.38	0.61	0.27	0.25	0.12	0.32	0.10	0.55	0.40	0.08
Control Delay (s/veh)	71.7	32.6	49.9	42.3	0.4	18.3	17.3	0.1	22.3	18.9	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 (s/veh)	71.7	32.6	49.9	42.3	0.4	18.3	17.3	0.1	22.3	18.9	0.1
LOS	E	C	D	D	A	B	B	A	C	B	A
Approach Delay (s/veh)		45.2		20.9			14.0			17.9	
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: 0.61			
Intersection Signal Delay (s/veh): 19.4		Intersection LOS: B	
Intersection Capacity Utilization 76.0%		ICU Level of Service D	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	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
Lane Width 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
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		293	365		396	2079		612	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	3647	0	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	0	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	11.8	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	11.8	0.0	9.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	257		293	365		396	2079		612	2504	
V/C Ratio(X)	0.46	0.32		0.65	0.31		0.09	0.31		0.52	0.39	
Avail Cap(c_a), veh/h	420	1011		293	774		396	2079		755	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	0.80	0.80	0.00
Uniform Delay (d), s/veh	59.1	57.2	0.0	48.6	44.8	0.0	11.9	13.6	0.0	7.9	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.7	0.0	3.9	0.5	0.0	0.5	0.4	0.0	0.2	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	9.8	5.7	0.0	0.9	8.2	0.0	4.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.3	57.9	0.0	52.5	45.3	0.0	12.4	14.0	0.0	8.1	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			49.8			13.9			2.3	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	15.6	82.0	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	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	11.8	13.8	14.5	8.8	2.0	8.7
Green Ext Time (p_c), s	0.2	4.6	0.0	0.6	8.1	0.6

Intersection Summary		
HCM 7th Control Delay, s/veh	15.1	
HCM 7th LOS	B	

Notes

* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	80	81	190	113	416	36	688	163	344	1016	143
Future Volume (vph)	80	81	190	113	416	36	688	163	344	1016	143
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	13.7	13.7	32.7	30.2	130.0	67.9	67.9	130.0	90.3	87.8	130.0
Actuated g/C Ratio	0.11	0.11	0.25	0.23	1.00	0.52	0.52	1.00	0.69	0.68	1.00
v/c Ratio	0.60	0.36	0.59	0.26	0.26	0.13	0.37	0.10	0.61	0.42	0.09
Control Delay (s/veh)	72.9	31.4	48.0	41.1	0.4	22.3	21.0	0.1	24.5	19.1	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 (s/veh)	72.9	31.4	48.0	41.1	0.4	22.3	21.0	0.1	24.5	19.1	0.1
LOS	E	C	D	D	A	C	C	A	C	B	A
Approach Delay (s/veh)		46.2		19.4			17.2			18.5	
Approach LOS		D		B			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: 0.61			
Intersection Signal Delay (s/veh): 20.2		Intersection LOS: C	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	81	63	190	113	416	36	688	163	344	1016	143
Future Volume (veh/h)	80	81	63	190	113	416	36	688	163	344	1016	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	80	81	0	190	113	0	36	688	0	344	1016	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	160	290		306	383		368	2002		588	2471	
Arrive On Green	0.08	0.08	0.00	0.10	0.20	0.00	0.56	0.56	0.00	0.21	1.00	0.00
Sat Flow, veh/h	1280	3647	0	1781	1870	1585	555	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	80	81	0	190	113	0	36	688	0	344	1016	0
Grp Sat Flow(s),veh/h/ln	1280	1777	0	1781	1870	1585	555	1777	1585	1781	1777	1585
Q Serve(g_s), s	8.0	2.8	0.0	12.5	6.6	0.0	3.9	13.6	0.0	11.4	0.0	0.0
Cycle Q Clear(g_c), s	8.0	2.8	0.0	12.5	6.6	0.0	3.9	13.6	0.0	11.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	290		306	383		368	2002		588	2471	
V/C Ratio(X)	0.50	0.28		0.62	0.30		0.10	0.34		0.58	0.41	
Avail Cap(c_a), veh/h	420	1011		306	774		368	2002		710	2471	
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	58.5	56.1	0.0	47.5	43.7	0.0	13.3	15.4	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.5	0.0	2.9	0.4	0.0	0.5	0.5	0.0	0.3	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	4.8	2.3	0.0	9.6	5.6	0.0	1.0	9.3	0.0	5.4	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.9	56.6	0.0	50.3	44.2	0.0	13.8	15.8	0.0	9.1	0.5	0.0
LnGrp LOS	E	E		D	D		B	B		A	A	
Approach Vol, veh/h		161			303			724			1360	
Approach Delay, s/veh		58.7			48.0			15.7			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	79.2	16.0	17.6	96.4	33.6
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	13.4	15.6	14.5	10.0	2.0	8.6
Green Ext Time (p_c), s	0.2	5.0	0.0	0.7	8.8	0.6

Intersection Summary		
HCM 7th Control Delay, s/veh	15.3	
HCM 7th LOS	B	

Notes
* HCM 7th 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.

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	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)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	40.6	30.0	130.0	31.1	22.6	79.2	70.3	130.0	78.7	70.0	130.0
Actuated g/C Ratio	0.31	0.23	1.00	0.24	0.17	0.61	0.54	1.00	0.61	0.54	1.00
v/c Ratio	0.89	0.77	0.13	0.21	0.60	0.23	0.55	0.06	0.30	0.39	0.05
Control Delay (s/veh)	68.9	60.4	0.2	31.1	47.7	11.8	18.4	0.1	13.2	18.6	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 (s/veh)	68.9	60.4	0.2	31.1	47.7	11.8	18.4	0.1	13.2	18.6	0.1
LOS	E	E	A	C	D	B	B	A	B	B	A
Approach Delay (s/veh)		47.8			44.8		16.4			16.4	
Approach LOS		D			D		B			B	

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: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.89		
Intersection Signal Delay (s/veh): 26.6	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

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	324	374		133	252		548	2123		344	2116	
Arrive On Green	0.09	0.20	0.00	0.03	0.13	0.00	0.04	0.60	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	12.0	22.4	0.0	2.6	7.0	0.0	2.7	22.0	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	12.0	22.4	0.0	2.6	7.0	0.0	2.7	22.0	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	324	374		133	252		548	2123		344	2116	
V/C Ratio(X)	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Avail Cap(c_a), veh/h	324	568		250	568		651	2123		433	2116	
HCM Platoon Ratio	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.64	0.64	0.00	0.09	0.09	0.00	0.90	0.90	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.4	50.6	0.0	47.5	51.7	0.0	9.4	15.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	16.0	7.2	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.1	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	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	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		60.9			50.6			15.2			1.6	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	83.2	7.0	32.0	8.1	82.9	15.5	23.5
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	4.5	24.0	4.6	24.4	4.7	2.0	14.0	9.0
Green Ext Time (p_c), s	0.0	10.8	0.0	1.6	0.0	8.2	0.0	0.5

Intersection Summary		
HCM 7th Control Delay, s/veh	23.4	
HCM 7th LOS	C	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	425	372	213	54	134	95	997	100	86	785	105
Future Volume (vph)	425	372	213	54	134	95	997	100	86	785	105
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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	43.3	32.3	130.0	34.5	25.4	76.4	67.4	130.0	75.8	67.1	130.0
Actuated g/C Ratio	0.33	0.25	1.00	0.27	0.20	0.59	0.52	1.00	0.58	0.52	1.00
v/c Ratio	1.29	0.81	0.13	0.28	0.61	0.25	0.54	0.06	0.30	0.43	0.07
Control Delay (s/veh)	186.9	60.3	0.2	30.5	47.6	15.7	23.2	0.1	14.5	21.1	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 (s/veh)	186.9	60.3	0.2	30.5	47.6	15.7	23.2	0.1	14.5	21.1	0.1
LOS	F	E	A	C	D	B	C	A	B	C	A
Approach Delay (s/veh)		100.9			44.2		20.7			18.3	
Approach LOS		F			D		C			B	

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: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay (s/veh): 45.3		Intersection LOS: D	
Intersection Capacity Utilization 84.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	372	213	54	134	86	95	997	100	86	785	105
Future Volume (veh/h)	425	372	213	54	134	86	95	997	100	86	785	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	425	372	0	54	134	0	95	997	0	86	785	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	415		146	307		510	2014		342	2006	
Arrive On Green	0.09	0.22	0.00	0.03	0.16	0.00	0.04	0.57	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	425	372	0	54	134	0	95	997	0	86	785	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	25.1	0.0	3.3	8.4	0.0	2.9	22.0	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	12.0	25.1	0.0	3.3	8.4	0.0	2.9	22.0	0.0	2.7	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	415		146	307		510	2014		342	2006	
V/C Ratio(X)	1.23	0.90		0.37	0.44		0.19	0.50		0.25	0.39	
Avail Cap(c_a), veh/h	345	568		250	568		610	2014		428	2006	
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	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.7	49.2	0.0	44.3	48.9	0.0	10.9	17.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	127.2	13.5	0.0	0.1	0.1	0.0	0.1	0.9	0.0	0.1	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	26.5	19.1	0.0	2.0	4.9	0.0	2.0	13.6	0.0	1.8	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	175.9	62.6	0.0	44.3	49.0	0.0	11.0	17.8	0.0	12.8	0.6	0.0
LnGrp LOS	F	E		D	D		B	B		B	A	
Approach Vol, veh/h		797			188			1092			871	
Approach Delay, s/veh		123.0			47.7			17.2			1.8	
Approach LOS		F			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	79.2	8.0	34.8	8.3	78.9	15.5	27.3
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	4.7	24.0	5.3	27.1	4.9	2.0	14.0	10.4
Green Ext Time (p_c), s	0.0	10.1	0.0	1.7	0.0	8.9	0.0	0.7

Intersection Summary		
HCM 7th Control Delay, s/veh	43.2	
HCM 7th LOS	D	

Notes

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

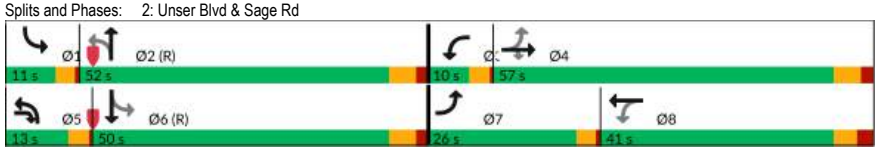
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	425	372	213	54	134	95	997	100	86	785	105
Future Volume (vph)	425	372	213	54	134	95	997	100	86	785	105
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	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	26.0	57.0	13.0	10.0	41.0	13.0	52.0		11.0	50.0	
Total Split (%)	20.0%	43.8%	10.0%	7.7%	31.5%	10.0%	40.0%		8.5%	38.5%	
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)	41.1	30.8	43.5	21.0	12.6	78.5	69.8	130.0	78.3	69.7	130.0
Actuated g/C Ratio	0.32	0.24	0.33	0.16	0.10	0.60	0.54	1.00	0.60	0.54	1.00
v/c Ratio	1.02	0.44	0.34	0.28	0.55	0.24	0.52	0.06	0.29	0.41	0.07
Control Delay (s/veh)	89.3	41.7	17.6	36.5	39.2	14.0	22.3	0.1	11.5	17.6	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 (s/veh)	89.3	41.7	17.6	36.5	39.2	14.0	22.3	0.1	11.5	17.6	0.1
LOS	F	D	B	D	D	B	C	A	B	B	A
Approach Delay (s/veh)		56.7			38.6		19.7			15.2	
Approach LOS		E			D		B			B	

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: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 30.7		Intersection LOS: C	
Intersection Capacity Utilization 82.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	372	213	54	134	86	95	997	100	86	785	105
Future Volume (veh/h)	425	372	213	54	134	86	95	997	100	86	785	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	425	372	213	54	134	0	95	997	0	86	785	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	435	813	422	197	328		504	1981		335	1972	
Arrive On Green	0.17	0.23	0.23	0.04	0.09	0.00	0.04	0.56	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	425	372	213	54	134	0	95	997	0	86	785	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	22.5	11.7	14.8	3.5	4.6	0.0	3.0	22.4	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	22.5	11.7	14.8	3.5	4.6	0.0	3.0	22.4	0.0	2.7	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	435	813	422	197	328		504	1981		335	1972	
V/C Ratio(X)	0.98	0.46	0.51	0.27	0.41		0.19	0.50		0.26	0.40	
Avail Cap(c_a), veh/h	435	1394	681	221	957		568	1981		376	1972	
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	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	46.1	43.2	40.4	50.9	55.7	0.0	11.4	17.7	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	36.9	0.4	0.9	0.3	0.8	0.0	0.1	0.9	0.0	0.1	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	11.8	8.9	9.8	2.9	3.8	0.0	2.1	13.9	0.0	1.8	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
LnGrp LOS	F	D	D	D	E		B	B		B	A	
Approach Vol, veh/h		1010			188			1092			871	
Approach Delay, s/veh		59.7			54.9			18.0			1.9	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	78.0	8.3	35.7	8.3	77.7	26.0	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	7.5	46.5	6.5	51.0	9.5	44.5	22.5	35.0
Max Q Clear Time (g_c+I1), s	4.7	24.4	5.5	16.8	5.0	2.0	24.5	6.6
Green Ext Time (p_c), s	0.0	9.5	0.0	3.3	0.0	8.8	0.0	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	29.1	
HCM 7th LOS	C	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	36.9	23.9	130.0	37.3	24.1	82.4	70.0	130.0	71.6	62.7	130.0
Actuated g/C Ratio	0.28	0.18	1.00	0.29	0.19	0.63	0.54	1.00	0.55	0.48	1.00
v/c Ratio	0.51	0.40	0.16	0.37	0.78	0.64	0.45	0.04	0.26	0.68	0.10
Control Delay (s/veh)	40.8	51.7	0.3	34.6	63.9	38.8	14.7	0.0	10.8	24.2	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 (s/veh)	40.8	51.7	0.3	34.6	63.9	38.8	14.7	0.0	10.8	24.2	0.1
LOS	D	D	A	C	E	D	B	A	B	C	A
Approach Delay (s/veh)		24.0			54.0		18.2			20.5	
Approach LOS		C			D		B			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: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 24.2		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

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	218	240		274	248		444	2179		435	2097	
Arrive On Green	0.08	0.13	0.00	0.08	0.13	0.00	0.06	0.61	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	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	7.9	8.9	0.0	8.5	14.2	0.0	5.6	16.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	7.9	8.9	0.0	8.5	14.2	0.0	5.6	16.0	0.0	2.8	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	218	240		274	248		444	2179		435	2097	
V/C Ratio(X)	0.58	0.57		0.50	0.84		0.45	0.39		0.22	0.56	
Avail Cap(c_a), veh/h	248	568		296	568		505	2179		519	2097	
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)	0.86	0.86	0.00	0.67	0.67	0.00	0.96	0.96	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.1	53.3	0.0	44.4	55.0	0.0	8.5	12.8	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	1.8	0.0	0.3	5.2	0.0	0.3	0.5	0.0	0.1	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	6.4	7.4	0.0	6.4	10.5	0.0	3.7	10.1	0.0	1.8	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.1	55.1	0.0	44.8	60.2	0.0	8.7	13.3	0.0	10.1	1.1	0.0
LnGrp LOS	D	E		D	E		A	B		B	A	
Approach Vol, veh/h		263			345			1058			1262	
Approach Delay, s/veh		50.8			54.1			12.5			1.7	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	85.2	13.9	22.7	11.1	82.2	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	18.0	10.5	10.9	7.6	2.0	9.9	16.2
Green Ext Time (p_c), s	0.0	9.2	0.0	0.7	0.1	15.8	0.0	1.1

Intersection Summary		
HCM 7th Control Delay, s/veh	16.2	
HCM 7th LOS	B	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	244	173	250	150	236	200	816	64	95	1226	189
Future Volume (vph)	244	173	250	150	236	200	816	64	95	1226	189
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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	41.5	27.1	130.0	39.4	26.0	79.0	66.4	130.0	68.4	59.4	130.0
Actuated g/C Ratio	0.32	0.21	1.00	0.30	0.20	0.61	0.51	1.00	0.53	0.46	1.00
v/c Ratio	0.91	0.44	0.16	0.40	0.80	0.72	0.45	0.04	0.26	0.76	0.12
Control Delay (s/veh)	74.4	49.7	0.2	33.2	63.3	51.1	15.9	0.0	11.5	27.1	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 (s/veh)	74.4	49.7	0.2	33.2	63.3	51.1	15.9	0.0	11.5	27.1	0.1
LOS	E	D	A	C	E	D	B	A	B	C	A
Approach Delay (s/veh)		40.2			53.2		21.5			22.7	
Approach LOS		D			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: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.91		
Intersection Signal Delay (s/veh): 29.2	Intersection LOS: C	
Intersection Capacity Utilization 90.7%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	173	250	150	236	59	200	816	64	95	1226	189
Future Volume (veh/h)	244	173	250	150	236	59	200	816	64	95	1226	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	244	173	0	150	236	0	200	816	0	95	1226	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	289		291	277		419	2061		427	1972	
Arrive On Green	0.09	0.15	0.00	0.09	0.15	0.00	0.06	0.58	0.00	0.08	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	244	173	0	150	236	0	200	816	0	95	1226	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	11.2	0.0	9.2	16.0	0.0	6.1	16.3	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	12.0	11.2	0.0	9.2	16.0	0.0	6.1	16.3	0.0	3.0	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	248	289		291	277		419	2061		427	1972	
V/C Ratio(X)	0.98	0.60		0.52	0.85		0.48	0.40		0.22	0.62	
Avail Cap(c_a), veh/h	248	568		304	568		474	2061		508	1972	
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	0.69	0.69	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.8	51.2	0.0	42.2	54.0	0.0	10.0	14.9	0.0	11.7	0.0	0.0
Incr Delay (d2), s/veh	52.1	2.0	0.0	0.4	5.2	0.0	0.3	0.6	0.0	0.1	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	9.6	9.2	0.0	6.8	11.7	0.0	4.1	10.6	0.0	2.0	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.9	53.2	0.0	42.5	59.2	0.0	10.3	15.5	0.0	11.8	1.5	0.0
LnGrp LOS	F	D		D	E		B	B		B	A	
Approach Vol, veh/h		417			386			1016			1321	
Approach Delay, s/veh		80.5			52.8			14.5			2.2	
Approach LOS		F			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	80.9	14.6	26.1	11.6	77.6	15.5	25.2
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+I1), s	5.0	18.3	11.2	13.2	8.1	2.0	14.0	18.0
Green Ext Time (p_c), s	0.0	8.6	0.0	0.9	0.1	17.0	0.0	1.2

Intersection Summary		
HCM 7th Control Delay, s/veh	22.8	
HCM 7th LOS	C	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	244	173	250	150	236	200	816	64	95	1226	189
Future Volume (vph)	244	173	250	150	236	200	816	64	95	1226	189
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	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	10.0	50.0	21.0	10.0	50.0	21.0	59.0		11.0	49.0	
Total Split (%)	7.7%	38.5%	16.2%	7.7%	38.5%	16.2%	45.4%		8.5%	37.7%	
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)	24.8	15.8	33.2	24.8	15.8	94.0	83.1	130.0	85.9	77.8	130.0
Actuated g/C Ratio	0.19	0.12	0.26	0.19	0.12	0.72	0.64	1.00	0.66	0.60	1.00
v/c Ratio	1.26	0.40	0.54	0.59	0.67	0.60	0.36	0.04	0.21	0.58	0.12
Control Delay (s/veh)	200.1	72.2	18.2	54.2	57.1	13.0	14.5	0.0	10.6	30.2	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 (s/veh)	200.1	72.2	18.2	54.2	57.1	13.0	14.5	0.0	10.6	30.2	0.1
LOS	F	E	B	D	E	B	B	A	B	C	A
Approach Delay (s/veh)		98.7			56.1		13.4			25.2	
Approach LOS		F			E		B			C	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay (s/veh): 38.7		Intersection LOS: D	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	173	250	150	236	59	200	816	64	95	1226	189
Future Volume (veh/h)	244	173	250	150	236	59	200	816	64	95	1226	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	244	173	250	150	236	0	200	816	0	95	1226	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	275	616	371	271	616		322	2126		440	2039	
Arrive On Green	0.05	0.17	0.17	0.05	0.17	0.00	0.06	0.60	0.00	0.04	0.57	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	244	173	250	150	236	0	200	816	0	95	1226	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	6.5	5.5	18.6	6.5	7.6	0.0	5.8	15.6	0.0	2.9	29.2	0.0
Cycle Q Clear(g_c), s	6.5	5.5	18.6	6.5	7.6	0.0	5.8	15.6	0.0	2.9	29.2	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	275	616	371	271	616		322	2126		440	2039	
V/C Ratio(X)	0.89	0.28	0.67	0.55	0.38		0.62	0.38		0.22	0.60	
Avail Cap(c_a), veh/h	275	1203	633	271	1203		454	2126		479	2039	
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	51.6	46.7	45.3	44.8	47.6	0.0	15.6	13.6	0.0	11.1	18.0	0.0
Incr Delay (d2), s/veh	26.5	0.2	2.1	1.5	0.4	0.0	0.7	0.5	0.0	0.1	1.3	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	11.2	4.4	12.0	2.4	6.1	0.0	3.9	10.1	0.0	2.0	17.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.1	47.0	47.4	46.3	48.0	0.0	16.4	14.1	0.0	11.2	19.4	0.0
LnGrp LOS	E	D	D	D	D		B	B		B	B	
Approach Vol, veh/h		667			386			1016			1321	
Approach Delay, s/veh		58.5			47.3			14.6			18.8	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	83.3	10.0	28.5	11.4	80.1	10.0	28.5
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	7.5	53.5	6.5	44.0	17.5	43.5	6.5	44.0
Max Q Clear Time (g_c+I1), s	4.9	17.6	8.5	20.6	7.8	31.2	8.5	9.6
Green Ext Time (p_c), s	0.0	9.0	0.0	1.9	0.1	8.0	0.0	1.5

Intersection Summary		
HCM 7th Control Delay, s/veh	28.6	
HCM 7th LOS	C	

Notes

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

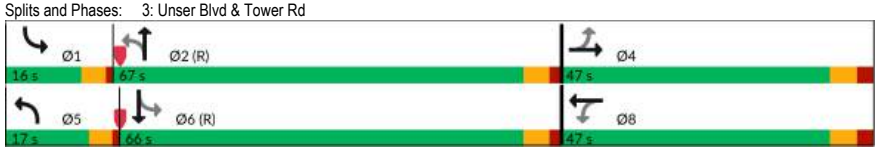
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	95	118	36	86	32	969	27	462	59
Future Volume (vph)	95	118	36	86	32	969	27	462	59
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	15.6	15.6	15.6	15.6	100.8	96.9	100.7	96.9	130.0
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.78	0.75	0.77	0.75	1.00
v/c Ratio	0.65	0.40	0.26	0.33	0.04	0.38	0.06	0.18	0.04
Control Delay (s/veh)	74.2	35.1	54.9	31.0	5.3	11.2	3.8	5.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	35.1	54.9	31.0	5.3	11.2	3.8	5.9	0.1
LOS	E	D	D	C	A	B	A	A	A
Approach Delay (s/veh)		48.3		35.6		11.1		5.1	
Approach LOS		D		D		B		A	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay (s/veh): 16.8		Intersection LOS: B	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	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
Lane Width 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
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	174	401		160	401		740	2651		513	2646	
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.03	1.00	0.00	0.01	0.74	0.00
Sat Flow, veh/h	1311	3647	0	1274	3647	0	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	0	1274	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	9.2	4.0	0.0	3.5	2.9	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Cycle Q Clear(g_c), s	12.1	4.0	0.0	7.4	2.9	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	401		160	401		740	2651		513	2646	
V/C Ratio(X)	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Avail Cap(c_a), veh/h	435	1107		413	1107		884	2651		645	2646	
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	57.9	52.9	0.0	56.3	52.4	0.0	3.8	0.0	0.0	3.8	4.9	0.0
Incr Delay (d2), s/veh	1.0	0.2	0.0	0.3	0.1	0.0	0.0	0.4	0.0	0.0	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	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
LnGrp LOS	E	D		E	D		A	A		A	A	
Approach Vol, veh/h		213			122			1001			489	
Approach Delay, s/veh		55.7			53.7			0.5			5.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	102.5		21.2	6.6	102.3		21.2				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.5	2.0		14.1	2.6	7.0		9.4				
Green Ext Time (p_c), s	0.0	12.5		0.6	0.0	4.7		0.4				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.7	
HCM 7th LOS	B	

Notes

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

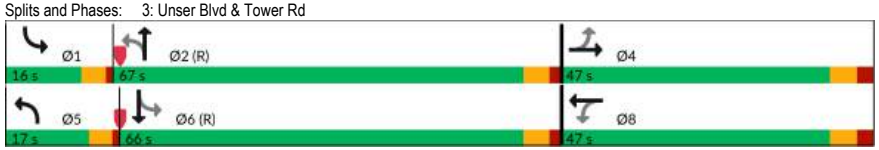
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	95	118	43	86	51	1025	27	508	59
Future Volume (vph)	95	118	43	86	51	1025	27	508	59
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	15.6	15.6	15.6	15.6	101.1	96.9	99.4	94.8	130.0
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.78	0.75	0.76	0.73	1.00
v/c Ratio	0.65	0.43	0.33	0.33	0.07	0.41	0.07	0.20	0.04
Control Delay (s/veh)	74.2	32.3	57.7	31.0	4.6	10.0	3.9	6.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	32.3	57.7	31.0	4.6	10.0	3.9	6.5	0.1
LOS	E	C	E	C	A	A	A	A	A
Approach Delay (s/veh)		45.6		37.0		9.7		5.7	
Approach LOS		D		D		A		A	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 15.9	Intersection LOS: B	
Intersection Capacity Utilization 72.2%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	118	87	43	86	63	51	1025	43	27	508	59
Future Volume (veh/h)	95	118	87	43	86	63	51	1025	43	27	508	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	43	86	0	51	1025	0	27	508	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	174	401		160	401		712	2651		489	2633	
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.04	1.00	0.00	0.01	0.74	0.00
Sat Flow, veh/h	1311	3647	0	1274	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	95	118	0	43	86	0	51	1025	0	27	508	0
Grp Sat Flow(s),veh/h/ln	1311	1777	0	1274	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	9.2	4.0	0.0	4.2	2.9	0.0	0.9	0.0	0.0	0.5	5.6	0.0
Cycle Q Clear(g_c), s	12.1	4.0	0.0	8.1	2.9	0.0	0.9	0.0	0.0	0.5	5.6	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	401		160	401		712	2651		489	2633	
V/C Ratio(X)	0.54	0.29		0.27	0.21		0.07	0.39		0.06	0.19	
Avail Cap(c_a), veh/h	435	1107		413	1107		849	2651		621	2633	
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	57.9	52.9	0.0	56.7	52.4	0.0	3.9	0.0	0.0	4.0	5.1	0.0
Incr Delay (d2), s/veh	1.0	0.2	0.0	0.3	0.1	0.0	0.0	0.4	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	5.6	3.2	0.0	2.4	2.3	0.0	0.5	0.3	0.0	0.3	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.9	53.1	0.0	57.0	52.5	0.0	3.9	0.4	0.0	4.0	5.3	0.0
LnGrp LOS	E	D		E	D		A	A		A	A	
Approach Vol, veh/h		213			129			1076			535	
Approach Delay, s/veh		55.7			54.0			0.6			5.2	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	102.5		21.2	7.0	101.8		21.2				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.5	2.0		14.1	2.9	7.6		10.1				
Green Ext Time (p_c), s	0.0	13.6		0.6	0.0	5.2		0.4				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.4	
HCM 7th LOS	B	

Notes

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

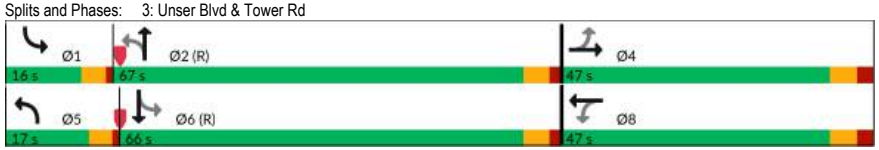
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	63	118	54	267	136	906	50	1295	131
Future Volume (vph)	63	118	54	267	136	906	50	1295	131
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	16.7	16.7	16.7	16.7	100.7	93.7	95.4	89.6	130.0
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.77	0.72	0.73	0.69	1.00
v/c Ratio	0.77	0.43	0.40	0.74	0.43	0.37	0.11	0.53	0.08
Control Delay (s/veh)	105.0	29.8	59.7	59.5	11.3	16.3	4.4	11.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.0	29.8	59.7	59.5	11.3	16.3	4.4	11.7	0.1
LOS	F	C	E	E	B	B	A	B	A
Approach Delay (s/veh)		46.7		59.6		15.7		10.4	
Approach LOS		D		E		B		B	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.77		
Intersection Signal Delay (s/veh): 21.4	Intersection LOS: C	
Intersection Capacity Utilization 82.5%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	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
Lane Width 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
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	139	514		202	514		343	2518		515	2450	
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.00	0.08	1.00	0.00	0.02	0.69	0.00
Sat Flow, veh/h	1112	3647	0	1274	3647	0	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	0	1274	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	7.2	3.8	0.0	5.1	9.0	0.0	3.1	0.0	0.0	1.1	23.1	0.0
Cycle Q Clear(g_c), s	16.3	3.8	0.0	8.9	9.0	0.0	3.1	0.0	0.0	1.1	23.1	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	514		202	514		343	2518		515	2450	
V/C Ratio(X)	0.45	0.23		0.27	0.52		0.40	0.36		0.10	0.53	
Avail Cap(c_a), veh/h	325	1107		415	1107		444	2518		637	2450	
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	58.9	49.2	0.0	53.1	51.4	0.0	7.8	0.0	0.0	5.6	9.9	0.0
Incr Delay (d2), s/veh	0.9	0.1	0.0	0.3	0.3	0.0	0.3	0.4	0.0	0.0	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	3.7	3.1	0.0	3.0	7.3	0.0	1.7	0.3	0.0	0.7	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.8	49.3	0.0	53.4	51.7	0.0	8.1	0.4	0.0	5.7	10.7	0.0
LnGrp LOS	E	D		D	D		A	A		A	B	
Approach Vol, veh/h		181			321			1042			1345	
Approach Delay, s/veh		52.9			52.0			1.4			10.5	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	97.6		25.3	9.6	95.1		25.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	3.1	2.0		18.3	5.1	25.1		11.0				
Green Ext Time (p_c), s	0.0	11.3		0.5	0.1	16.5		1.2				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.5	
HCM 7th LOS	B	

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

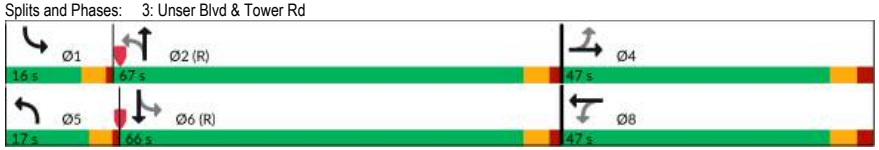
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	63	118	60	267	153	956	50	1354	131
Future Volume (vph)	63	118	60	267	153	956	50	1354	131
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	16.7	16.7	16.7	16.7	101.6	93.7	93.6	87.8	130.0
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.78	0.72	0.72	0.68	1.00
v/c Ratio	0.77	0.45	0.47	0.74	0.49	0.39	0.12	0.57	0.08
Control Delay (s/veh)	105.0	28.0	63.8	59.5	11.6	14.1	4.7	13.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.0	28.0	63.8	59.5	11.6	14.1	4.7	13.3	0.1
LOS	F	C	E	E	B	B	A	B	A
Approach Delay (s/veh)		44.3		60.2		13.7		11.9	
Approach LOS		D		E		B		B	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.77		
Intersection Signal Delay (s/veh): 21.1	Intersection LOS: C	
Intersection Capacity Utilization 85.1%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	118	117	60	267	77	153	956	38	50	1354	131
Future Volume (veh/h)	63	118	117	60	267	77	153	956	38	50	1354	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	60	267	0	153	956	0	50	1354	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	139	514		202	514		329	2518		494	2438	
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.00	0.08	1.00	0.00	0.02	0.69	0.00
Sat Flow, veh/h	1112	3647	0	1274	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	63	118	0	60	267	0	153	956	0	50	1354	0
Grp Sat Flow(s),veh/h/ln	1112	1777	0	1274	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	7.2	3.8	0.0	5.7	9.0	0.0	3.5	0.0	0.0	1.1	25.1	0.0
Cycle Q Clear(g_c), s	16.3	3.8	0.0	9.5	9.0	0.0	3.5	0.0	0.0	1.1	25.1	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	514		202	514		329	2518		494	2438	
V/C Ratio(X)	0.45	0.23		0.30	0.52		0.46	0.38		0.10	0.56	
Avail Cap(c_a), veh/h	325	1107		415	1107		425	2518		616	2438	
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	58.9	49.2	0.0	53.4	51.4	0.0	8.7	0.0	0.0	5.8	10.3	0.0
Incr Delay (d2), s/veh	0.9	0.1	0.0	0.3	0.3	0.0	0.4	0.4	0.0	0.0	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	3.7	3.1	0.0	3.3	7.3	0.0	1.9	0.3	0.0	0.7	14.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.8	49.3	0.0	53.7	51.7	0.0	9.1	0.4	0.0	5.8	11.3	0.0
LnGrp LOS	E	D		D	D		A	A		A	B	
Approach Vol, veh/h		181			327			1109			1404	
Approach Delay, s/veh		52.9			52.1			1.6			11.1	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	97.6		25.3	10.0	94.7		25.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	3.1	2.0		18.3	5.5	27.1		11.5				
Green Ext Time (p_c), s	0.0	12.2		0.5	0.1	17.1		1.2				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.6	
HCM 7th LOS	B	

Notes

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

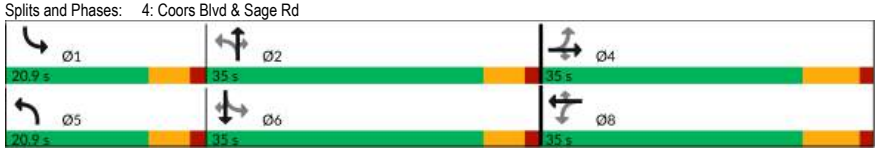
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	304	210	68	94	164	234	22	1137	17	54	585	71
Future Volume (vph)	304	210	68	94	164	234	22	1137	17	54	585	71
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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)		28.0	28.0		28.0	28.0	37.7	29.6	29.6	38.8	33.4	33.4
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.46	0.36	0.36	0.47	0.40	0.40
v/c Ratio		1.31	0.11		1.39	0.34	0.04	0.90	0.03	0.14	0.41	0.10
Control Delay (s/veh)		183.6	2.3		231.7	4.9	9.9	38.3	0.1	10.9	20.4	1.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		183.6	2.3		231.7	4.9	9.9	38.3	0.1	10.9	20.4	1.2
LOS		F	A		F	A	A	D	A	B	C	A
Approach Delay (s/veh)		162.5			123.9			37.2			17.7	
Approach LOS		F			F			D			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 82.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 71.6		Intersection LOS: E	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	210	68	94	164	234	22	1137	17	54	585	71
Future Volume (veh/h)	304	210	68	94	164	234	22	1137	17	54	585	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	304	210	68	94	164	234	22	1137	17	54	585	71
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	66	0	504	57	75	504	419	1191	531	318	1385	618
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.34	0.34	0.13	0.39	0.39
Sat Flow, veh/h	0	0	1585	0	236	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	514	0	68	258	0	234	22	1137	17	54	585	71
Grp Sat Flow(s),veh/h/ln	0	0	1585	236	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.7	0.0	0.0	10.3	0.6	27.2	0.6	1.4	10.4	2.5
Cycle Q Clear(g_c), s	27.6	0.0	2.7	27.6	0.0	10.3	0.6	27.2	0.6	1.4	10.4	2.5
Prop In Lane	0.59		1.00	0.36		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	0	504	132	0	504	419	1191	531	318	1385	618
V/C Ratio(X)	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Avail Cap(c_a), veh/h	66	0	504	132	0	504	600	1191	531	402	1385	618
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	43.4	0.0	21.1	28.7	0.0	23.7	15.7	28.2	19.4	17.5	19.3	16.9
Incr Delay (d2), s/veh	3086.2	0.0	0.1	458.6	0.0	0.5	0.0	17.2	0.1	0.1	0.9	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	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
LnGrp LOS	F		C	F		C	B	D	B	B	C	B
Approach Vol, veh/h		582			492			1176			710	
Approach Delay, s/veh		2766.4			267.0			44.5			19.8	
Approach LOS		F			F			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.8	35.0		35.0	12.1	39.7		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	3.4	29.2		29.6	2.6	12.4		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.1		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	610.7	
HCM 7th LOS	F	

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

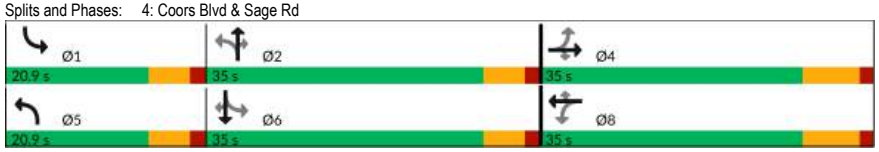
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	319	225	74	94	179	234	27	1137	17	54	585	83
Future Volume (vph)	319	225	74	94	179	234	27	1137	17	54	585	83
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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)		28.0	28.0		28.0	28.0	37.7	29.6	29.6	38.8	33.4	33.4
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.46	0.36	0.36	0.47	0.40	0.40
v/c Ratio		1.43	0.12		1.74	0.34	0.05	0.90	0.03	0.14	0.41	0.12
Control Delay (s/veh)		234.5	2.7		382.7	4.9	10.0	38.3	0.1	10.9	20.4	2.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		234.5	2.7		382.7	4.9	10.0	38.3	0.1	10.9	20.4	2.1
LOS		F	A		F	A	A	D	A	B	C	A
Approach Delay (s/veh)		206.8			208.3			37.1			17.6	
Approach LOS		F			F			D			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 82.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.74			
Intersection Signal Delay (s/veh): 95.7		Intersection LOS: F	
Intersection Capacity Utilization 106.2%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	225	74	94	179	234	27	1137	17	54	585	83
Future Volume (veh/h)	319	225	74	94	179	234	27	1137	17	54	585	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	319	225	74	94	179	234	27	1137	17	54	585	83
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	66	0	504	56	79	504	427	1191	531	318	1344	600
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.08	0.34	0.34	0.13	0.38	0.38
Sat Flow, veh/h	0	0	1585	0	247	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	544	0	74	273	0	234	27	1137	17	54	585	83
Grp Sat Flow(s),veh/h/ln	0	0	1585	247	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.9	0.0	0.0	10.3	0.8	27.2	0.6	1.5	10.6	3.0
Cycle Q Clear(g_c), s	27.6	0.0	2.9	27.6	0.0	10.3	0.8	27.2	0.6	1.5	10.6	3.0
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	66	0	504	134	0	504	427	1191	531	318	1344	600
V/C Ratio(X)	8.27	0.00	0.15	2.03	0.00	0.46	0.06	0.95	0.03	0.17	0.44	0.14
Avail Cap(c_a), veh/h	66	0	504	134	0	504	587	1191	531	402	1344	600
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	43.4	0.0	21.2	28.3	0.0	23.7	15.2	28.2	19.4	17.7	20.1	17.7
Incr Delay (d2), s/veh	3302.4	0.0	0.1	489.2	0.0	0.5	0.0	17.2	0.1	0.1	1.0	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	103.2	0.0	1.9	37.1	0.0	6.7	0.5	19.2	0.4	1.0	7.5	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3345.8	0.0	21.3	517.6	0.0	24.2	15.2	45.4	19.5	17.8	21.1	18.2
LnGrp LOS	F		C	F		C	B	D	B	B	C	B
Approach Vol, veh/h		618			507			1181			722	
Approach Delay, s/veh		2947.7			289.8			44.4			20.5	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.8	35.0		35.0	13.1	38.7		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	3.5	29.2		29.6	2.8	12.6		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.2		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	672.4	
HCM 7th LOS	F	

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

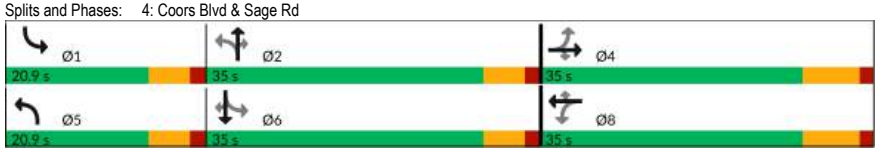
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	73	5	131	302	255	85	892	179	91	792	115
Future Volume (vph)	80	73	5	131	302	255	85	892	179	91	792	115
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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)		25.6	25.6		25.6	25.6	41.1	29.9	29.9	41.1	29.9	29.9
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.48	0.35	0.35	0.48	0.35	0.35
v/c Ratio		0.81	0.01		0.91	0.43	0.19	0.71	0.27	0.22	0.63	0.18
Control Delay (s/veh)		61.5	0.0		56.1	11.9	11.1	29.9	4.9	11.4	27.9	4.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		61.5	0.0		56.1	11.9	11.1	29.9	4.9	11.4	27.9	4.7
LOS		E	A		E	B	B	C	A	B	C	A
Approach Delay (s/veh)		59.6			39.7			24.6			23.7	
Approach LOS		E			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 84.8			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay (s/veh): 29.6		Intersection LOS: C	
Intersection Capacity Utilization 90.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	73	5	131	302	255	85	892	179	91	792	115
Future Volume (veh/h)	80	73	5	131	302	255	85	892	179	91	792	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	80	73	5	131	302	255	85	892	179	91	792	115
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	427	1158	516	401	1168	521
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	153	0	5	433	0	255	85	892	179	91	792	115
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	0.2	0.0	0.0	11.8	2.4	20.2	7.7	2.5	17.2	4.7
Cycle Q Clear(g_c), s	27.6	0.0	0.2	27.6	0.0	11.8	2.4	20.2	7.7	2.5	17.2	4.7
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	85	0	490	427	1158	516	401	1168	521
V/C Ratio(X)	1.54	0.00	0.01	5.11	0.00	0.52	0.20	0.77	0.35	0.23	0.68	0.22
Avail Cap(c_a), veh/h	100	0	490	85	0	490	463	1158	516	432	1168	521
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	21.4	34.5	0.0	25.4	14.9	27.1	22.9	15.7	25.9	21.7
Incr Delay (d2), s/veh	285.2	0.0	0.0	1875.8	0.0	0.8	0.1	5.0	1.8	0.1	3.2	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	319.6	0.0	21.4	1910.2	0.0	26.2	15.0	32.1	24.7	15.8	29.1	22.7
LnGrp LOS	F		C	F		C	B	C	C	B	C	C
Approach Vol, veh/h		158			688			1156			998	
Approach Delay, s/veh		310.2			1211.9			29.7			27.1	
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	19.1	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	22.2		29.6	4.4	19.2		29.6				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	4.3		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		314.7	
HCM 7th LOS		F	

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

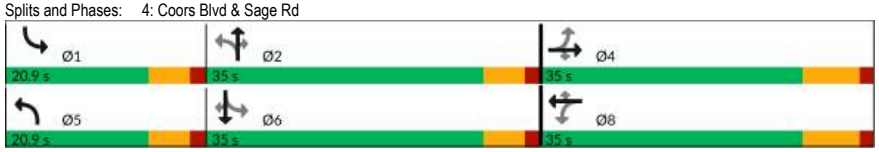
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	87	10	131	316	255	90	892	179	91	792	131
Future Volume (vph)	93	87	10	131	316	255	90	892	179	91	792	131
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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		0.87	0.02		0.89	0.41	0.21	0.74	0.27	0.23	0.66	0.21
Control Delay (s/veh)		70.7	0.1		52.4	12.0	11.3	31.2	4.9	11.6	28.8	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 (s/veh)		70.7	0.1		52.4	12.0	11.3	31.2	4.9	11.6	28.8	5.3
LOS		E	A		D	B	B	C	A	B	C	A
Approach Delay (s/veh)		67.0			37.7			25.6			24.2	
Approach LOS		E			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 30.5		Intersection LOS: C	
Intersection Capacity Utilization 92.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	87	10	131	316	255	90	892	179	91	792	131
Future Volume (veh/h)	93	87	10	131	316	255	90	892	179	91	792	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	93	87	10	131	316	255	90	892	179	91	792	131
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	490	52	32	490	428	1158	516	401	1159	517
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	127	1585	0	104	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	180	0	10	447	0	255	90	892	179	91	792	131
Grp Sat Flow(s),veh/h/ln	127	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	5.4
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	5.4
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	490	84	0	490	428	1158	516	401	1159	517
V/C Ratio(X)	1.79	0.00	0.02	5.30	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	460	1158	516	432	1159	517
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	34.3	0.0	21.5	34.4	0.0	25.4	14.9	27.1	22.9	15.7	26.1	22.1
Incr Delay (d2), s/veh	394.4	0.0	0.0	1960.8	0.0	0.8	0.1	5.0	1.8	0.1	3.3	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.7	0.0	0.3	81.0	0.0	7.8	1.6	13.5	5.3	1.6	11.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	428.6	0.0	21.5	1995.2	0.0	26.2	15.0	32.1	24.7	15.8	29.4	23.3
LnGrp LOS	F		C	F		C	B	C	C	B	C	C
Approach Vol, veh/h		190			702			1161			1014	
Approach Delay, s/veh		407.2			1280.0			29.6			27.4	
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	35.0		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	0.0	3.8		0.0	0.0	4.4		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	338.5	
HCM 7th LOS	F	

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

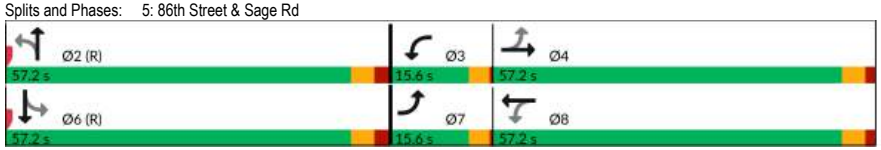
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	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)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	35.7	26.9	34.1	26.1	83.3	83.3	83.3	83.3
Actuated g/C Ratio	0.27	0.21	0.26	0.20	0.64	0.64	0.64	0.64
v/c Ratio	0.19	0.76	0.21	0.38	0.00	0.17	0.06	0.07
Control Delay (s/veh)	32.0	55.0	28.9	35.6	11.8	9.7	11.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.0	55.0	28.9	35.6	11.8	9.7	11.6	5.4
LOS	C	E	C	D	B	A	B	A
Approach Delay (s/veh)		52.8		34.8		9.8		7.5
Approach LOS		D		C		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 (s/veh): 37.0		Intersection LOS: D	
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	250	667	16	135	483	132	929	695	488	816	423	719
Arrive On Green	0.04	0.19	0.19	0.05	0.35	0.35	0.68	0.68	0.68	0.68	0.68	0.68
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	3.5	19.0	19.0	2.3	7.5	7.9	0.1	0.0	5.2	1.7	0.0	2.1
Cycle Q Clear(g_c), s	3.5	19.0	19.0	2.3	7.5	7.9	2.2	0.0	5.2	6.9	0.0	2.1
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	250	334	349	135	311	304	929	0	1183	816	0	1142
V/C Ratio(X)	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Avail Cap(c_a), veh/h	348	713	745	257	713	697	929	0	1183	816	0	1142
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	41.8	50.6	50.6	42.6	37.3	37.4	7.4	0.0	7.5	8.8	0.0	7.0
Incr Delay (d2), s/veh	0.5	4.7	4.6	1.0	0.9	1.0	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	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
LnGrp LOS	D	E	E	D	D	D	A		A	A		A
Approach Vol, veh/h		613			308			198			123	
Approach Delay, s/veh		54.0			38.9			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		93.9	6.7	29.4		93.9	8.4	27.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		7.2	4.3	21.0		8.9	5.5	9.9				
Green Ext Time (p_c), s		1.3	0.0	3.4		0.6	0.0	1.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.3	
HCM 7th LOS	D	

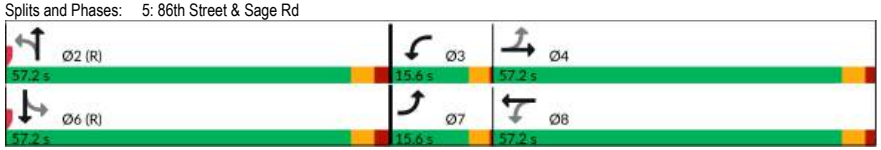
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	607	61	277	4	114	60	30
Future Volume (vph)	59	607	61	277	4	114	60	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)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	38.3	29.7	39.1	30.1	79.5	79.5	79.5	79.5
Actuated g/C Ratio	0.29	0.23	0.30	0.23	0.61	0.61	0.61	0.61
v/c Ratio	0.20	0.77	0.32	0.43	0.00	0.20	0.09	0.08
Control Delay (s/veh)	29.2	53.2	29.9	35.5	13.5	11.1	13.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.2	53.2	29.9	35.5	13.5	11.1	13.5	6.3
LOS	C	D	C	D	B	B	B	A
Approach Delay (s/veh)		51.1		34.7		11.2		9.4
Approach LOS		D		C		B		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: 0.77			
Intersection Signal Delay (s/veh): 36.3		Intersection LOS: D	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	607	13	61	277	77	4	114	103	60	30	51
Future Volume (veh/h)	59	607	13	61	277	77	4	114	103	60	30	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	607	13	61	277	77	4	114	103	60	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	259	741	16	159	577	157	883	585	529	749	402	684
Arrive On Green	0.04	0.21	0.21	0.08	0.42	0.42	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1781	3557	76	1781	2759	753	1317	905	818	1164	622	1058
Grp Volume(v), veh/h	59	303	317	61	176	178	4	0	217	60	0	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1735	1317	0	1723	1164	0	1680
Q Serve(g_s), s	3.4	21.2	21.2	3.5	9.4	9.7	0.1	0.0	6.6	2.9	0.0	2.3
Cycle Q Clear(g_c), s	3.4	21.2	21.2	3.5	9.4	9.7	2.5	0.0	6.6	9.5	0.0	2.3
Prop In Lane	1.00		0.04	1.00		0.43	1.00		0.47	1.00		0.63
Lane Grp Cap(c), veh/h	259	370	387	159	372	363	883	0	1114	749	0	1086
V/C Ratio(X)	0.23	0.82	0.82	0.38	0.47	0.49	0.00	0.00	0.19	0.08	0.00	0.07
Avail Cap(c_a), veh/h	359	713	746	258	713	697	883	0	1114	749	0	1086
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	38.7	49.1	49.1	38.6	32.6	32.7	9.0	0.0	9.3	11.2	0.0	8.5
Incr Delay (d2), s/veh	0.4	4.5	4.3	1.5	0.9	1.0	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	2.7	14.9	15.4	2.7	6.6	6.6	0.1	0.0	4.6	1.4	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.1	53.6	53.5	40.1	33.5	33.7	9.0	0.0	9.7	11.4	0.0	8.7
LnGrp LOS	D	D	D	D	C	C	A		A	B		A
Approach Vol, veh/h		679			415			221			141	
Approach Delay, s/veh		52.3			34.6			9.7			9.8	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		89.5	8.4	32.1		89.5	8.3	32.2				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		8.6	5.5	23.2		11.5	5.4	11.7				
Green Ext Time (p_c), s		1.5	0.0	3.9		0.7	0.0	2.2				

Intersection Summary		
HCM 7th Control Delay, s/veh	36.7	
HCM 7th LOS	D	

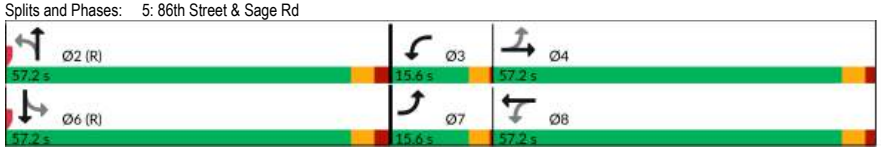
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	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	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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	23.2	31.7	23.0	86.3	86.3	86.3	86.3
Actuated g/C Ratio	0.25	0.18	0.24	0.18	0.66	0.66	0.66	0.66
v/c Ratio	0.28	0.54	0.21	0.75	0.02	0.09	0.04	0.17
Control Delay (s/veh)	36.1	49.1	31.7	52.5	10.3	8.7	10.2	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.1	49.1	31.7	52.5	10.3	8.7	10.2	8.4
LOS	D	D	C	D	B	A	B	A
Approach Delay (s/veh)		47.3		50.5		8.9		8.7
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 (s/veh): 37.7		Intersection LOS: D	
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	505	70	189	500	67	831	969	285	926	654	553
Arrive On Green	0.04	0.16	0.16	0.07	0.32	0.32	0.70	0.70	0.70	0.70	0.70	0.70
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	11.4	11.7	3.1	15.5	15.7	0.7	0.0	2.6	1.0	0.0	5.2
Cycle Q Clear(g_c), s	3.3	11.4	11.7	3.1	15.5	15.7	5.9	0.0	2.6	3.6	0.0	5.2
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	154	286	289	189	282	285	831	0	1254	926	0	1206
V/C Ratio(X)	0.36	0.59	0.60	0.27	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Avail Cap(c_a), veh/h	256	713	720	295	713	721	831	0	1254	926	0	1206
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	50.5	50.6	42.7	42.6	42.7	7.7	0.0	6.3	6.9	0.0	6.7
Incr Delay (d2), s/veh	1.4	1.9	2.0	0.6	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	9.0	9.2	2.4	9.7	9.9	0.3	0.0	1.8	0.5	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.0	52.5	52.6	43.3	47.3	47.6	7.8	0.0	6.5	7.0	0.0	7.0
LnGrp LOS	D	D	D	D	D	D	A		A	A		A
Approach Vol, veh/h		397			516			127			233	
Approach Delay, s/veh		51.6			47.1			6.6			7.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		96.2	7.8	26.0		96.2	8.1	25.6				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		7.9	5.1	13.7		7.2	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 7th Control Delay, s/veh	37.1	
HCM 7th LOS	D	

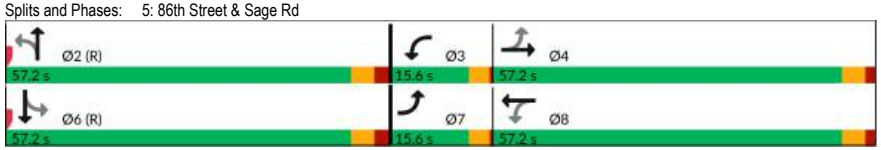
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	361	72	470	17	85	46	110
Future Volume (vph)	55	361	72	470	17	85	46	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	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	34.2	25.4	36.0	26.3	83.1	83.1	83.1	83.1
Actuated g/C Ratio	0.26	0.20	0.28	0.20	0.64	0.64	0.64	0.64
v/c Ratio	0.29	0.58	0.29	0.76	0.02	0.12	0.06	0.18
Control Delay (s/veh)	33.9	49.1	33.0	52.1	11.8	9.4	11.8	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.9	49.1	33.0	52.1	11.8	9.4	11.8	9.6
LOS	C	D	C	D	B	A	B	A
Approach Delay (s/veh)		47.3		49.8		9.6		10.0
Approach LOS		D		D		A		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 (s/veh): 38.2		Intersection LOS: D	
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	361	42	72	470	71	17	85	46	46	110	93
Future Volume (veh/h)	55	361	42	72	470	71	17	85	46	46	110	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	361	42	72	470	71	17	85	46	46	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	551	64	200	562	84	801	771	417	873	633	535
Arrive On Green	0.04	0.17	0.17	0.09	0.36	0.36	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1781	3210	371	1781	3098	466	1179	1141	618	1259	936	792
Grp Volume(v), veh/h	55	199	204	72	269	272	17	0	131	46	0	203
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1787	1179	0	1759	1259	0	1728
Q Serve(g_s), s	3.3	13.6	13.8	4.3	17.9	18.2	0.7	0.0	3.4	1.7	0.0	5.6
Cycle Q Clear(g_c), s	3.3	13.6	13.8	4.3	17.9	18.2	6.3	0.0	3.4	5.1	0.0	5.6
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.35	1.00		0.46
Lane Grp Cap(c), veh/h	154	305	310	200	322	324	801	0	1188	873	0	1167
V/C Ratio(X)	0.36	0.65	0.66	0.36	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.17
Avail Cap(c_a), veh/h	257	713	724	286	713	717	801	0	1188	873	0	1167
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	43.3	50.2	50.3	40.3	39.6	39.7	8.9	0.0	7.4	8.3	0.0	7.8
Incr Delay (d2), s/veh	1.4	2.3	2.4	1.1	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	10.3	10.5	3.3	11.3	11.5	0.3	0.0	2.4	0.9	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.7	52.6	52.7	41.4	45.2	45.6	9.0	0.0	7.6	8.4	0.0	8.1
LnGrp LOS	D	D	D	D	D	D	A		A	A		A
Approach Vol, veh/h		458			613			148			249	
Approach Delay, s/veh		51.7			44.9			7.7			8.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		93.3	9.4	27.3		93.3	8.1	28.6				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		8.3	6.3	15.8		7.6	5.3	20.2				
Green Ext Time (p_c), s		0.9	0.1	2.5		1.5	0.0	3.4				

Intersection Summary		
HCM 7th Control Delay, s/veh	37.0	
HCM 7th LOS	D	

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	1609	11	0	1019	11
Future Vol, veh/h	0	0	34	0	0	11	0	1609	11	0	1019	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	1609	11	0	1019	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	515	-	-	810	-	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	*801	0	0	*620	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			0			0		-	-		-	-
Mov Cap-1 Maneuver	-	-	*801	-	-	*620	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.7	10.91	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	801	620	-	-
HCM Lane V/C Ratio	-	-	0.042	0.018	-	-
HCM Control Delay (s/veh)	-	-	9.7	10.9	-	-
HCM Lane LOS	-	-	A	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	-

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	34	0	0	11	0	1692	11	0	1092	11
Future Vol, veh/h	0	0	34	0	0	11	0	1692	11	0	1092	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	1692	11	0	1092	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	552	-	-	852	-	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	*768	0	0	*604	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			0			0		-	-		-	-
Mov Cap-1 Maneuver	-	-	*768	-	-	*604	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.91	11.08	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	768	604	-	-
HCM Lane V/C Ratio	-	-	0.044	0.018	-	-
HCM Control Delay (s/veh)	-	-	9.9	11.1	-	-
HCM Lane LOS	-	-	A	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	-

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	34	0	0	11	0	1179	11	0	1609	34
Future Vol, veh/h	0	0	34	0	0	11	0	1179	11	0	1609	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	1179	11	0	1609	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	822	-	-	595	-	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	*620	0	0	*751	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			0			0		-	-		-	-
Mov Cap-1 Maneuver	-	-	*620	-	-	*751	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.14	9.86	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	620	751	-	-
HCM Lane V/C Ratio	-	-	0.055	0.015	-	-
HCM Control Delay (s/veh)	-	-	11.1	9.9	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-	-

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	34	0	0	11	0	1254	11	0	1694	34
Future Vol, veh/h	0	0	34	0	0	11	0	1254	11	0	1694	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	1254	11	0	1694	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	864	-	-	633	-	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	*604	0	0	*735	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			0			0		-	-		-	-
Mov Cap-1 Maneuver	-	-	*604	-	-	*735	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.32	9.97	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	604	735	-	-
HCM Lane V/C Ratio	-	-	0.056	0.015	-	-
HCM Control Delay (s/veh)	-	-	11.3	10	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-	-

Notes

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

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	830	149	62	286	123	218
Future Vol, veh/h	830	149	62	286	123	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	830	149	62	286	123	218

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	979	0	1172	490
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	267	-
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	-	-	884	-	375	*854
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	873	-
Platoon blocked, %	-	-	0	-	0	0
Mov Cap-1 Maneuver	-	-	884	-	349	*854
Mov Cap-2 Maneuver	-	-	-	-	497	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.67	15.55
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	678	-	-	884	-
HCM Lane V/C Ratio	0.503	-	-	0.07	-
HCM Ctrl Dly (s/v)	15.6	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.8	-	-	0.2	-

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

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	513	122	74	572	121	174
Future Vol, veh/h	513	122	74	572	121	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	513	122	74	572	121	174

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	635	0	1008	318
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	434	-
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	-	-	1100	-	490	*951
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	858	-
Platoon blocked, %	-	-	0	-	0	0
Mov Cap-1 Maneuver	-	-	1100	-	457	*951
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	801	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.97	12.54
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	771	-	-	1100	-
HCM Lane V/C Ratio	0.383	-	-	0.067	-
HCM Ctrl Dly (s/v)	12.5	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.2	-

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

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	129	0	1191	962	128
Future Vol, veh/h	0	129	0	1191	962	128
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	129	0	1191	962	128

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	481	-	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	*824	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*824	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.18	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	824	-	-
HCM Lane V/C Ratio	-	0.157	-	-
HCM Ctrl Dly (s/v)	-	10.2	-	-
HCM Lane LOS	-	B	-	-
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	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	132	0	1080	1517	158
Future Vol, veh/h	0	132	0	1080	1517	158
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	132	0	1080	1517	158

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	759	-	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	*663	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*663	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.77	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	663	-	-
HCM Lane V/C Ratio	-	0.199	-	-
HCM Ctrl Dly (s/v)	-	11.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	155	1191	1034	18
Future Vol, veh/h	0	18	155	1191	1034	18
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	300	-	-	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	18	155	1191	1034	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	517	1052	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	*808	872	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		0	0	-	-	-
Mov Cap-1 Maneuver	-	*808	872	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.56	1.15	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	872	-	808	-	-
HCM Lane V/C Ratio	0.178	-	0.022	-	-
HCM Ctrl Dly (s/v)	10	-	9.6	-	-
HCM Lane LOS	B	-	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.7

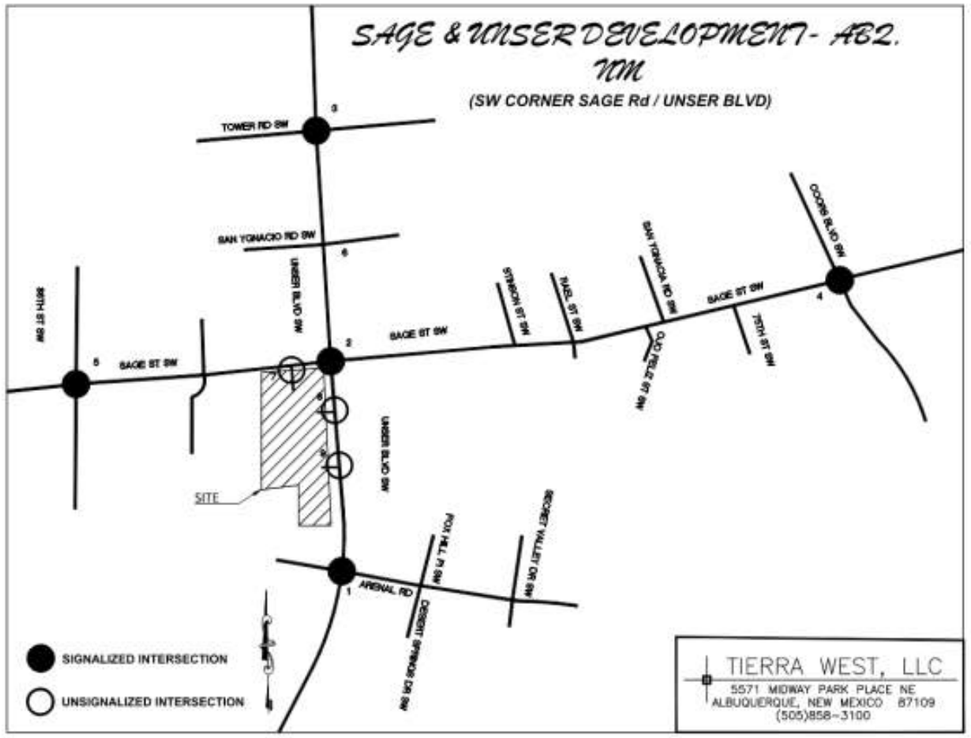
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	134	1080	1577	21
Future Vol, veh/h	0	18	134	1080	1577	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	300	-	-	0
Veh in Median Storage, #	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	18	134	1080	1577	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	789	1598	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	*647	556	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		0	0	-	-	-
Mov Cap-1 Maneuver	-	*647	556	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

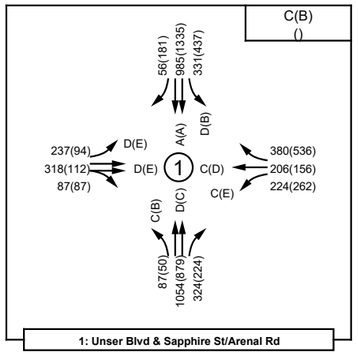
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.72	1.49	0
HCM LOS	B		

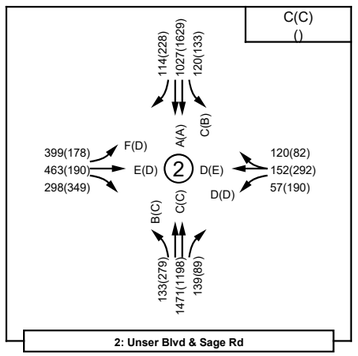
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	556	-	647	-	-
HCM Lane V/C Ratio	0.241	-	0.028	-	-
HCM Ctrl Dly (s/v)	13.5	-	10.7	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.1	-	-

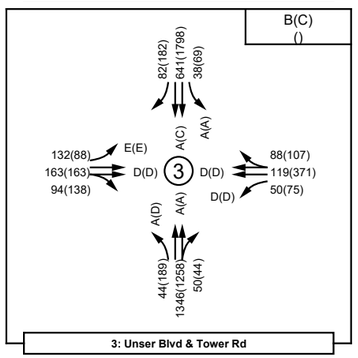
Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

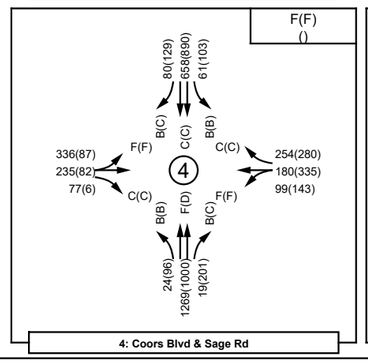


NO BUILD
2035 Condition

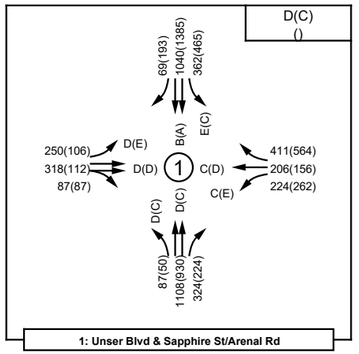


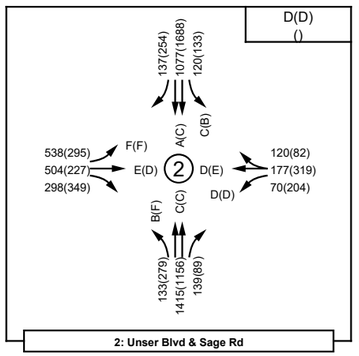


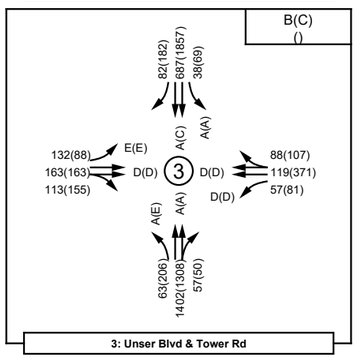


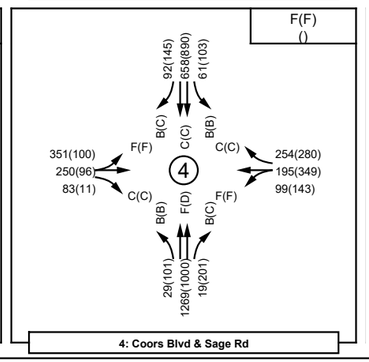


BUILD
2035 Condition



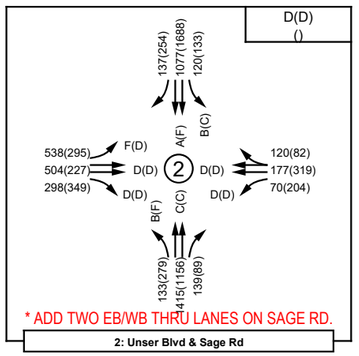






Mitigations
2035 Condition

NO RECOMMENDATIONS



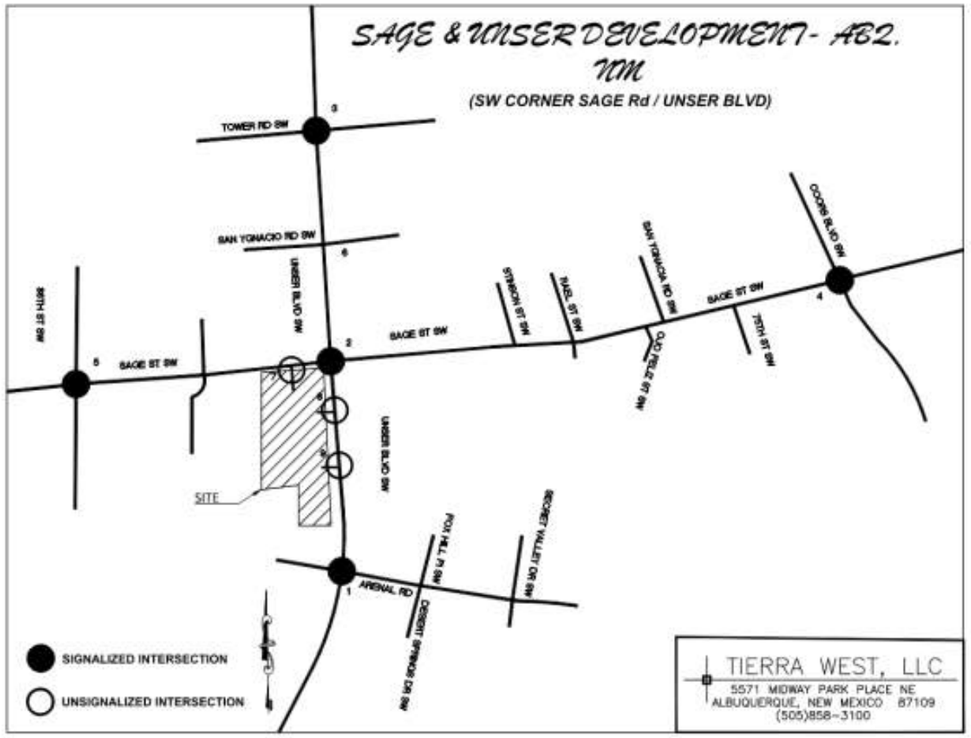
* ADD TWO EB/WB THRU LANES ON SAGE RD.

NO RECOMMENDATIONS

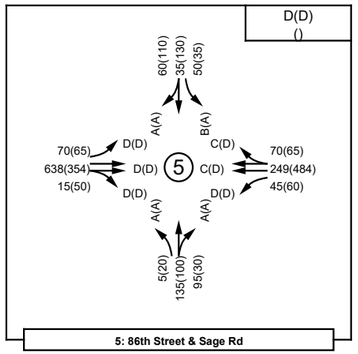
NO RECOMMENDATIONS

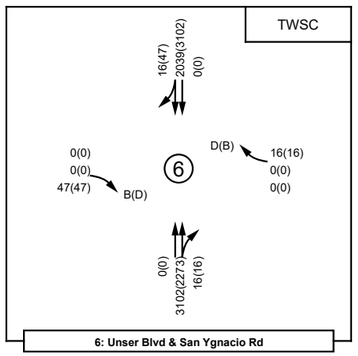
Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)

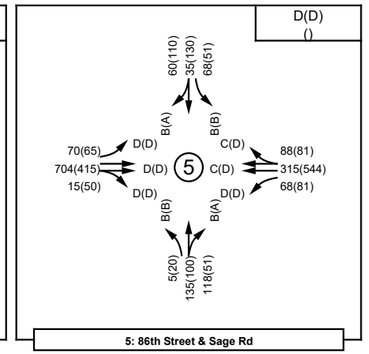


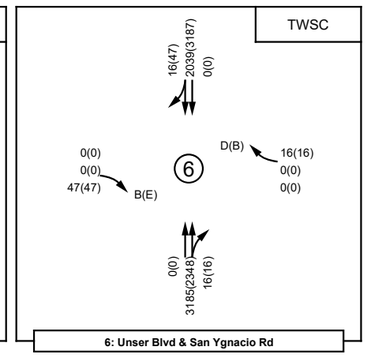
NO BUILD
2035 Condition





BUILD
2035 Condition





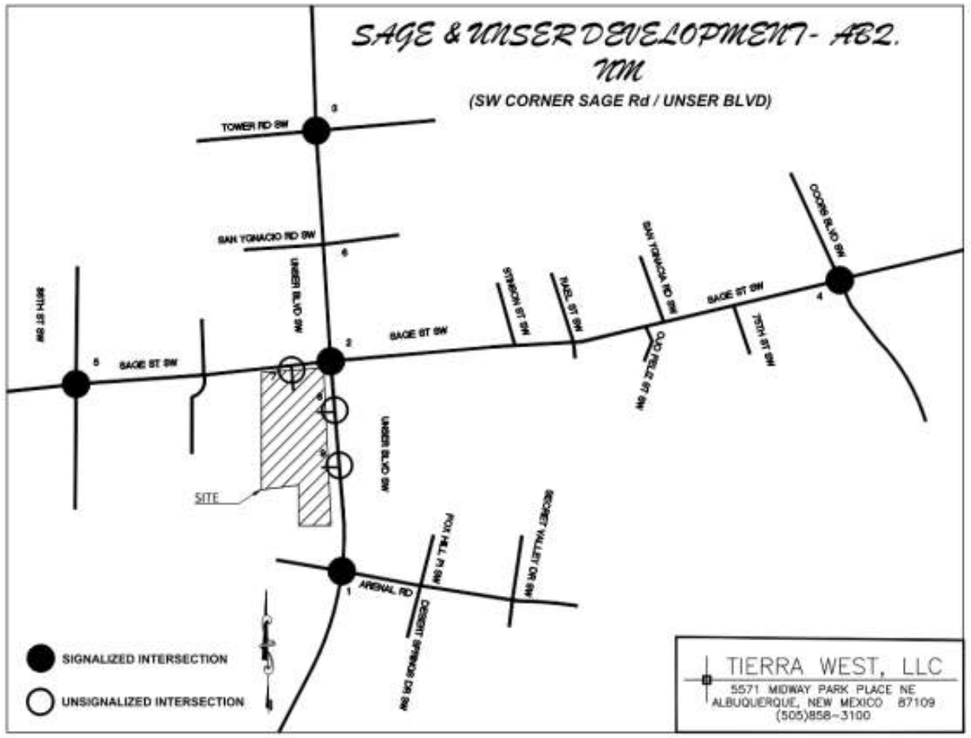
Mitigations
2035 Condition

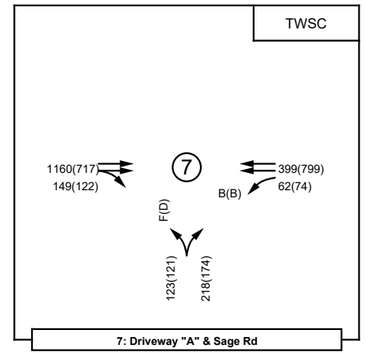
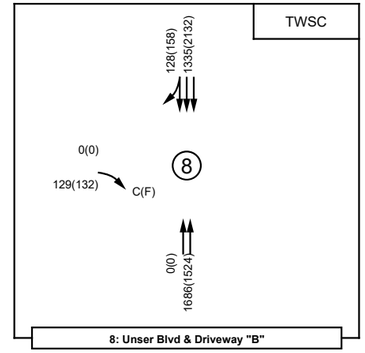
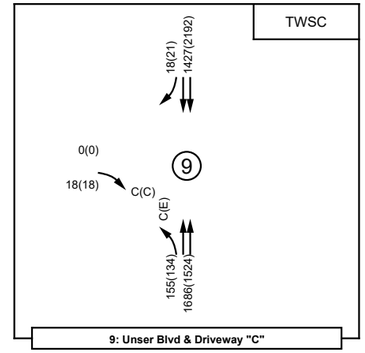
NO RECOMMENDATIONS

NO RECOMMENDATIONS

Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)



NO BUILD 2035 Condition	BUILD 2035 Condition	Mitigations 2035 Condition
		NO RECOMMENDATIONS
		NO RECOMMENDATIONS
		NO RECOMMENDATIONS

Unser and Sage Development
SW Corner
LOS / Volume Analysis Map

AM(PM)

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	237	318	224	206	380	87	1054	324	331	985	56
Future Volume (vph)	237	318	224	206	380	87	1054	324	331	985	56
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	31.0	31.0	50.2	47.7	130.0	46.0	46.0	130.0	72.8	70.3	130.0
Actuated g/C Ratio	0.24	0.24	0.39	0.37	1.00	0.35	0.35	1.00	0.56	0.54	1.00
v/c Ratio	0.85	0.48	0.61	0.30	0.24	0.46	0.84	0.20	0.94	0.51	0.04
Control Delay (s/veh)	73.1	40.8	34.6	29.4	0.4	46.0	47.6	0.3	88.9	31.0	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
Total Delay (s/veh)	73.1	40.8	34.6	29.4	0.4	46.0	47.6	0.3	88.9	31.0	0.0
LOS	E	D	C	C	A	D	D	A	F	C	A
Approach Delay (s/veh)		52.7		17.2			37.0			43.7	
Approach LOS		D		B			D			D	

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: 0.94			
Intersection Signal Delay (s/veh): 37.8		Intersection LOS: D	
Intersection Capacity Utilization 90.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	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
Lane Width 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
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	0	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	321	803		386	653		279	1392		363	1958	
Arrive On Green	0.23	0.23	0.00	0.10	0.35	0.00	0.39	0.39	0.00	0.26	1.00	0.00
Sat Flow, veh/h	1176	3647	0	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	0	1781	1870	1585	571	1777	1585	1781	1777	1585
Q Serve(g_s), s	25.4	9.9	0.0	12.4	10.5	0.0	14.2	33.3	0.0	15.0	0.0	0.0
Cycle Q Clear(g_c), s	25.4	9.9	0.0	12.4	10.5	0.0	14.2	33.3	0.0	15.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	803		386	653		279	1392		363	1958	
V/C Ratio(X)	0.74	0.40		0.58	0.32		0.31	0.76		0.91	0.50	
Avail Cap(c_a), veh/h	390	1011		386	774		279	1392		436	1958	
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	0.84	0.84	0.00
Uniform Delay (d), s/veh	48.8	42.8	0.0	33.3	30.9	0.0	28.4	34.2	0.0	21.8	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.3	0.0	1.5	0.3	0.0	2.9	3.9	0.0	16.8	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	12.4	7.7	0.0	9.2	8.3	0.0	3.8	21.0	0.0	9.8	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.5	43.1	0.0	34.8	31.2	0.0	31.3	38.1	0.0	38.6	0.8	0.0
LnGrp LOS	D	D		C	C		C	D		D	A	
Approach Vol, veh/h		555			430			1141			1316	
Approach Delay, s/veh		48.0			33.1			37.6			10.3	
Approach LOS		D			C			D			B	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	20.7	56.9	16.0	36.4	77.6	52.4
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	17.0	35.3	14.4	27.4	2.0	12.5
Green Ext Time (p_c), s	0.2	2.1	0.0	2.0	8.4	1.1

Intersection Summary		
HCM 7th Control Delay, s/veh	28.2	
HCM 7th LOS	C	

Notes

* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Future Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	31.9	31.9	51.1	48.6	130.0	42.2	42.2	130.0	71.9	69.4	130.0
Actuated g/C Ratio	0.25	0.25	0.39	0.37	1.00	0.32	0.32	1.00	0.55	0.53	1.00
v/c Ratio	0.87	0.47	0.60	0.30	0.26	0.52	0.96	0.20	0.93	0.55	0.04
Control Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.0	32.4	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
Total Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.0	32.4	0.0
LOS	E	D	C	C	A	D	E	A	F	C	A
Approach Delay (s/veh)		53.2		16.2			49.0			42.9	
Approach LOS		D		B			D			D	

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: 0.96			
Intersection Signal Delay (s/veh): 41.5		Intersection LOS: D	
Intersection Capacity Utilization 94.1%		ICU Level of Service F	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Future Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	250	318	0	224	206	0	87	1108	0	362	1040	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	333	838		397	671		242	1222		382	1922	
Arrive On Green	0.24	0.24	0.00	0.10	0.36	0.00	0.34	0.34	0.00	0.23	0.72	0.00
Sat Flow, veh/h	1176	3647	0	1781	1870	1585	542	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	250	318	0	224	206	0	87	1108	0	362	1040	0
Grp Sat Flow(s),veh/h/ln	1176	1777	0	1781	1870	1585	542	1777	1585	1781	1777	1585
Q Serve(g_s), s	26.8	9.8	0.0	12.2	10.3	0.0	16.3	38.6	0.0	20.1	17.5	0.0
Cycle Q Clear(g_c), s	26.8	9.8	0.0	12.2	10.3	0.0	16.3	38.6	0.0	20.1	17.5	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	838		397	671		242	1222		382	1922	
V/C Ratio(X)	0.75	0.38		0.56	0.31		0.36	0.91		0.95	0.54	
Avail Cap(c_a), veh/h	390	1011		397	774		242	1222		387	1922	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
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	48.2	41.7	0.0	32.3	30.0	0.0	33.3	40.7	0.0	33.7	10.8	0.0
Incr Delay (d2), s/veh	6.7	0.3	0.0	1.1	0.3	0.0	4.1	11.3	0.0	31.8	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	13.1	7.7	0.0	9.1	8.2	0.0	4.3	25.3	0.0	20.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.9	42.0	0.0	33.5	30.3	0.0	37.4	51.9	0.0	65.5	11.9	0.0
LnGrp LOS	D	D		C	C		D	D		E	B	
Approach Vol, veh/h		568			430			1195			1402	
Approach Delay, s/veh		47.7			31.9			50.9			25.8	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.6	50.7	16.0	37.7	76.3	53.7
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	22.1	40.6	14.2	28.8	19.5	12.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	8.8	1.2

Intersection Summary		
HCM 7th Control Delay, s/veh	38.3	
HCM 7th LOS	D	

Notes

* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	94	112	262	156	536	50	879	224	437	1335	181
Future Volume (vph)	94	112	262	156	536	50	879	224	437	1335	181
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	15.4	15.4	34.9	32.4	130.0	41.6	41.6	130.0	88.1	85.6	130.0
Actuated g/C Ratio	0.12	0.12	0.27	0.25	1.00	0.32	0.32	1.00	0.68	0.66	1.00
v/c Ratio	0.65	0.43	0.78	0.34	0.34	0.41	0.78	0.14	0.69	0.57	0.11
Control Delay (s/veh)	74.2	33.8	58.0	41.0	0.6	47.4	45.7	0.2	40.4	31.6	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
Total Delay (s/veh)	74.2	33.8	58.0	41.0	0.6	47.4	45.7	0.2	40.4	31.6	0.0
LOS	E	C	E	D	A	D	D	A	D	C	A
Approach Delay (s/veh)		46.8		23.0			36.9			30.6	
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: 0.78			
Intersection Signal Delay (s/veh): 31.7		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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	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
Lane Width 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
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	0	262	156	0	50	879	0	437	1335	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	175	345		313	412		262	1792		536	2416	
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	3647	0	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	0	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	21.2	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	21.2	0.0	17.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	345		313	412		262	1792		536	2416	
V/C Ratio(X)	0.54	0.32		0.84	0.38		0.19	0.49		0.82	0.55	
Avail Cap(c_a), veh/h	406	1011		313	774		262	1792		579	2416	
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	18.2	21.2	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.5	0.0	16.7	0.6	0.0	1.6	1.0	0.0	0.7	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	6.6	7.7	0.0	1.7	13.6	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.9	55.3	0.0	66.6	43.7	0.0	19.8	22.2	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			58.1			22.0			3.3	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	22.8	71.6	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	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	19.1	23.2	14.5	11.7	2.0	11.2
Green Ext Time (p_c), s	0.2	5.8	0.0	0.9	13.7	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	18.8	
HCM 7th LOS	B	

Notes

* HCM 7th 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.

Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	112	262	156	564	50	930	224	465	1385	193
Future Volume (vph)	106	112	262	156	564	50	930	224	465	1385	193
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		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	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	16.6	16.6	36.1	33.6	130.0	38.6	38.6	130.0	86.9	84.4	130.0
Actuated g/C Ratio	0.13	0.13	0.28	0.26	1.00	0.30	0.30	1.00	0.67	0.65	1.00
v/c Ratio	0.68	0.41	0.76	0.32	0.36	0.47	0.88	0.14	0.72	0.60	0.12
Control Delay (s/veh)	74.3	33.2	54.3	39.8	0.6	54.2	54.8	0.2	41.5	31.4	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
Total Delay (s/veh)	74.3	33.2	54.3	39.8	0.6	54.2	54.8	0.2	41.5	31.4	0.0
LOS	E	C	D	D	A	D	D	A	D	C	A
Approach Delay (s/veh)		47.5		21.2			44.6			30.8	
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: 0.88			
Intersection Signal Delay (s/veh): 33.5		Intersection LOS: C	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

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

HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	112	87	262	156	564	50	930	224	465	1385	193
Future Volume (veh/h)	106	112	87	262	156	564	50	930	224	465	1385	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	106	112	0	262	156	0	50	930	0	465	1385	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	187	379		326	430		242	1698		526	2381	
Arrive On Green	0.11	0.11	0.00	0.10	0.23	0.00	0.48	0.48	0.00	0.33	1.00	0.00
Sat Flow, veh/h	1231	3647	0	1781	1870	1585	391	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	106	112	0	262	156	0	50	930	0	465	1385	0
Grp Sat Flow(s),veh/h/ln	1231	1777	0	1781	1870	1585	391	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.9	3.8	0.0	12.5	9.1	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Cycle Q Clear(g_c), s	10.9	3.8	0.0	12.5	9.1	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	379		326	430		242	1698		526	2381	
V/C Ratio(X)	0.57	0.30		0.80	0.36		0.21	0.55		0.88	0.58	
Avail Cap(c_a), veh/h	406	1011		326	774		242	1698		540	2381	
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	56.7	53.5	0.0	48.6	42.1	0.0	20.3	24.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	12.6	0.5	0.0	1.9	1.3	0.0	15.0	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	6.3	3.1	0.0	5.8	7.6	0.0	1.8	15.3	0.0	10.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.4	54.0	0.0	61.2	42.6	0.0	22.3	25.3	0.0	29.2	1.0	0.0
LnGrp LOS	E	D		E	D		C	C		C	A	
Approach Vol, veh/h		218			418			980			1850	
Approach Delay, s/veh		56.6			54.3			25.1			8.1	
Approach LOS		E			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.0	68.1	16.0	20.9	93.1	36.9
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	21.4	26.1	14.5	12.9	2.0	11.1
Green Ext Time (p_c), s	0.1	5.5	0.0	0.9	14.7	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	21.6	
HCM 7th LOS	C	

Notes

* HCM 7th 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.

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	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)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	48.5	37.6	130.0	39.5	30.5	71.4	60.7	130.0	70.6	60.3	130.0
Actuated g/C Ratio	0.37	0.29	1.00	0.30	0.23	0.55	0.47	1.00	0.54	0.46	1.00
v/c Ratio	1.18	0.86	0.19	0.33	0.63	0.50	0.89	0.09	0.70	0.63	0.07
Control Delay (s/veh)	143.1	63.9	0.3	28.8	44.7	30.6	44.2	0.1	51.0	29.4	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 (s/veh)	143.1	63.9	0.3	28.8	44.7	30.6	44.2	0.1	51.0	29.4	0.1
LOS	F	E	A	C	D	C	D	A	D	C	A
Approach Delay (s/veh)		74.8			41.9		39.7			28.8	
Approach LOS		E			D		D			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: 125		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.18		
Intersection Signal Delay (s/veh): 45.9	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

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	393	500		143	394		423	1801		198	1790	
Arrive On Green	0.09	0.27	0.00	0.04	0.21	0.00	0.05	0.51	0.00	0.10	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	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	12.0	31.3	0.0	3.2	9.1	0.0	4.7	45.3	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	12.0	31.3	0.0	3.2	9.1	0.0	4.7	45.3	0.0	4.3	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	393	500		143	394		423	1801		198	1790	
V/C Ratio(X)	1.01	0.93		0.40	0.39		0.31	0.82		0.61	0.57	
Avail Cap(c_a), veh/h	393	568		246	568		498	1801		260	1790	
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)	0.61	0.61	0.00	0.09	0.09	0.00	0.64	0.64	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.2	46.4	0.0	40.5	44.1	0.0	13.9	27.0	0.0	24.1	0.0	0.0
Incr Delay (d2), s/veh	39.0	13.7	0.0	0.1	0.1	0.0	0.1	2.8	0.0	1.1	1.3	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	15.7	21.4	0.0	2.0	5.2	0.0	3.3	24.5	0.0	2.9	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	85.2	60.1	0.0	40.6	44.2	0.0	14.0	29.7	0.0	25.2	1.3	0.0
LnGrp LOS	F	E		D	D		B	C		C	A	
Approach Vol, veh/h		862			209			1604			1147	
Approach Delay, s/veh		71.7			43.2			28.4			3.8	
Approach LOS		E			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	71.4	8.1	40.8	10.2	71.0	15.5	33.4
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	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	6.3	47.3	5.2	33.3	6.7	2.0	14.0	11.1
Green Ext Time (p_c), s	0.0	1.6	0.0	1.4	0.0	13.0	0.0	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	31.6	
HCM 7th LOS	C	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Future Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	50.8	39.5	130.0	42.5	33.0	69.2	58.2	130.0	67.9	57.5	130.0
Actuated g/C Ratio	0.39	0.30	1.00	0.33	0.25	0.53	0.45	1.00	0.52	0.44	1.00
v/c Ratio	1.58	0.89	0.19	0.41	0.64	0.56	0.89	0.09	0.69	0.69	0.09
Control Delay (s/veh)	301.5	64.6	0.3	30.3	44.6	36.0	47.6	0.1	49.9	32.7	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 (s/veh)	301.5	64.6	0.3	30.3	44.6	36.0	47.6	0.1	49.9	32.7	0.1
LOS	F	E	A	C	D	D	D	A	D	C	A
Approach Delay (s/veh)		145.4			41.9		42.8			30.9	
Approach LOS		F			D		D			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: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.58		
Intersection Signal Delay (s/veh): 68.5	Intersection LOS: E	
Intersection Capacity Utilization 108.5%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Future Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	538	504	0	70	177	0	133	1415	0	120	1077	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	407	535		150	440		381	1706		196	1695	
Arrive On Green	0.09	0.29	0.00	0.04	0.24	0.00	0.05	0.48	0.00	0.10	0.95	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	538	504	0	70	177	0	133	1415	0	120	1077	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	34.2	0.0	3.8	10.4	0.0	4.9	44.7	0.0	4.5	4.6	0.0
Cycle Q Clear(g_c), s	12.0	34.2	0.0	3.8	10.4	0.0	4.9	44.7	0.0	4.5	4.6	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	407	535		150	440		381	1706		196	1695	
V/C Ratio(X)	1.32	0.94		0.47	0.40		0.35	0.83		0.61	0.64	
Avail Cap(c_a), veh/h	407	568		242	568		452	1706		255	1695	
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	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.8	45.3	0.0	38.6	42.0	0.0	15.6	29.2	0.0	25.0	1.7	0.0
Incr Delay (d2), s/veh	160.5	23.6	0.0	0.1	0.1	0.0	0.2	4.8	0.0	1.2	1.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	37.7	26.3	0.0	2.3	5.9	0.0	3.6	26.5	0.0	3.1	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	205.3	68.9	0.0	38.6	42.0	0.0	15.8	34.0	0.0	26.2	3.5	0.0
LnGrp LOS	F	E		D	D		B	C		C	A	
Approach Vol, veh/h		1042			247			1548			1197	
Approach Delay, s/veh		139.3			41.1			32.4			5.8	
Approach LOS		F			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	67.9	8.9	43.2	10.4	67.5	15.5	36.6
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	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	6.5	46.7	5.8	36.2	6.9	6.6	14.0	12.4
Green Ext Time (p_c), s	0.0	2.0	0.0	1.0	0.0	13.6	0.0	0.9

Intersection Summary		
HCM 7th Control Delay, s/veh	52.7	
HCM 7th LOS	D	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Future Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
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	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	23.0	54.4	13.8	9.6	41.0	13.8	56.5		9.5	52.2	
Total Split (%)	17.7%	41.8%	10.6%	7.4%	31.5%	10.6%	43.5%		7.3%	40.2%	
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)	39.2	29.0	43.9	22.0	13.7	79.4	68.5	130.0	81.3	69.5	130.0
Actuated g/C Ratio	0.30	0.22	0.34	0.17	0.11	0.61	0.53	1.00	0.63	0.53	1.00
v/c Ratio	1.54	0.64	0.50	0.37	0.66	0.44	0.76	0.09	0.56	0.57	0.09
Control Delay (s/veh)	286.5	46.8	28.0	40.0	41.5	21.6	37.4	0.1	27.8	20.9	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 (s/veh)	286.5	46.8	28.0	40.0	41.5	21.6	37.4	0.1	27.8	20.9	0.1
LOS	F	D	C	D	D	C	D	A	C	C	A
Approach Delay (s/veh)		138.9			41.2		33.1			19.4	
Approach LOS		F			D		C			B	

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: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.54			
Intersection Signal Delay (s/veh): 59.8		Intersection LOS: E	
Intersection Capacity Utilization 101.8%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Future Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	538	504	298	70	177	0	133	1415	0	120	1077	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	406	780	424	198	409		426	1945		230	1935	
Arrive On Green	0.15	0.22	0.22	0.05	0.12	0.00	0.05	0.55	0.00	0.09	1.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	538	504	298	70	177	0	133	1415	0	120	1077	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	19.5	16.8	22.0	4.5	6.0	0.0	4.3	38.9	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	19.5	16.8	22.0	4.5	6.0	0.0	4.3	38.9	0.0	4.0	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	406	780	424	198	409		426	1945		230	1935	
V/C Ratio(X)	1.33	0.65	0.70	0.35	0.43		0.31	0.73		0.52	0.56	
Avail Cap(c_a), veh/h	406	1323	666	200	957		482	1945		232	1935	
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	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	46.5	46.1	42.9	47.7	53.6	0.0	11.7	22.1	0.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	163.1	0.9	2.1	0.4	0.7	0.0	0.2	2.4	0.0	1.0	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	33.7	11.9	13.7	3.6	4.9	0.0	3.0	22.5	0.0	2.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	209.6	47.1	45.1	48.1	54.3	0.0	11.8	24.6	0.0	20.0	1.2	0.0
LnGrp LOS	F	D	D	D	D		B	C		B	A	
Approach Vol, veh/h		1340			247			1548			1197	
Approach Delay, s/veh		111.9			52.5			23.5			3.0	
Approach LOS		F			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	76.6	9.4	34.5	9.8	76.3	23.0	21.0
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	6.0	51.0	6.1	48.4	10.3	46.7	19.5	35.0
Max Q Clear Time (g_c+I1), s	6.0	40.9	6.5	24.0	6.3	2.0	21.5	8.0
Green Ext Time (p_c), s	0.0	7.6	0.0	4.5	0.0	13.9	0.0	1.0

Intersection Summary		
HCM 7th Control Delay, s/veh	46.8	
HCM 7th LOS	D	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	45.3	31.3	130.0	45.5	31.4	73.7	59.7	130.0	58.7	47.8	130.0
Actuated g/C Ratio	0.35	0.24	1.00	0.35	0.24	0.57	0.46	1.00	0.45	0.37	1.00
v/c Ratio	0.71	0.42	0.22	0.46	0.84	0.82	0.74	0.06	0.62	1.25	0.14
Control Delay (s/veh)	47.6	48.5	0.5	31.1	62.3	60.3	38.5	0.1	30.5	151.8	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 (s/veh)	47.6	48.5	0.5	31.1	62.3	60.3	38.5	0.1	30.5	151.8	0.2
LOS	D	D	A	C	E	E	D	A	C	F	A
Approach Delay (s/veh)		24.9			51.8		40.2			126.3	
Approach LOS		C			D		D			F	

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: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay (s/veh): 74.7		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

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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		359	1898		288	1767	
Arrive On Green	0.09	0.18	0.00	0.09	0.18	0.00	0.09	0.53	0.00	0.11	0.99	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	9.6	30.8	0.0	4.9	3.9	0.0
Cycle Q Clear(g_c), s	10.5	12.1	0.0	11.3	19.8	0.0	9.6	30.8	0.0	4.9	3.9	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		359	1898		288	1767	
V/C Ratio(X)	0.72	0.57		0.59	0.87		0.78	0.63		0.46	0.92	
Avail Cap(c_a), veh/h	249	568		323	568		365	1898		342	1767	
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)	0.85	0.85	0.00	0.62	0.62	0.00	0.76	0.76	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	13.6	21.3	0.0	16.8	0.2	0.0
Incr Delay (d2), s/veh	7.0	1.3	0.0	1.2	5.0	0.0	7.0	1.2	0.0	0.4	9.5	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	8.5	9.4	0.0	7.9	13.7	0.0	7.3	17.6	0.0	3.2	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
LnGrp LOS	D	D		D	E		C	C		B	A	
Approach Vol, veh/h		368			482			1477			1762	
Approach Delay, s/veh		48.7			50.5			22.1			10.2	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	74.9	15.6	29.1	15.1	70.1	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+I1), s	6.9	32.8	13.3	14.1	11.6	5.9	12.5	21.8
Green Ext Time (p_c), s	0.0	9.6	0.0	1.0	0.0	24.7	0.0	1.5

Intersection Summary		
HCM 7th Control Delay, s/veh	22.8	
HCM 7th LOS	C	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Future Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
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	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	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)	47.7	33.2	130.0	47.0	32.9	71.6	57.7	130.0	58.7	47.8	130.0
Actuated g/C Ratio	0.37	0.26	1.00	0.36	0.25	0.55	0.44	1.00	0.45	0.37	1.00
v/c Ratio	1.17	0.48	0.22	0.51	0.87	0.89	0.74	0.06	0.61	1.30	0.16
Control Delay (s/veh)	142.6	46.9	0.3	31.3	63.8	67.6	44.2	0.1	30.9	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 (s/veh)	142.6	46.9	0.3	31.3	63.8	67.6	44.2	0.1	30.9	171.1	0.2
LOS	F	D	A	C	E	E	D	A	C	F	A
Approach Delay (s/veh)		60.6			52.8		45.9			141.2	
Approach LOS		E			D		D			F	

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: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay (s/veh): 88.2	Intersection LOS: F	
Intersection Capacity Utilization 116.5%	ICU Level of Service H	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Future Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	295	227	0	204	319	0	279	1156	0	133	1688	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	360		315	362		244	1841		290	1702	
Arrive On Green	0.09	0.19	0.00	0.09	0.19	0.00	0.09	0.52	0.00	0.11	0.96	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	295	227	0	204	319	0	279	1156	0	133	1688	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	14.5	0.0	12.0	21.6	0.0	12.1	30.2	0.0	5.0	52.1	0.0
Cycle Q Clear(g_c), s	12.0	14.5	0.0	12.0	21.6	0.0	12.1	30.2	0.0	5.0	52.1	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	249	360		315	362		244	1841		290	1702	
V/C Ratio(X)	1.18	0.63		0.65	0.88		1.14	0.63		0.46	0.99	
Avail Cap(c_a), veh/h	249	568		315	568		244	1841		342	1702	
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	0.60	0.60	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.3	48.2	0.0	38.4	51.0	0.0	39.3	22.4	0.0	17.6	2.5	0.0
Incr Delay (d2), s/veh	116.2	1.8	0.0	2.2	6.2	0.0	101.8	1.6	0.0	0.4	20.0	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	16.6	11.2	0.0	8.4	14.8	0.0	22.2	18.2	0.0	3.3	9.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	160.5	50.0	0.0	40.6	57.2	0.0	141.2	24.0	0.0	18.0	22.5	0.0
LnGrp LOS	F	D		D	E		F	C		B	C	
Approach Vol, veh/h		522			523			1435			1821	
Approach Delay, s/veh		112.5			50.7			46.8			22.2	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	72.9	15.6	31.0	15.6	67.8	15.5	31.1
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	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	7.0	32.2	14.0	16.5	14.1	54.1	14.0	23.6
Green Ext Time (p_c), s	0.0	9.5	0.0	1.2	0.0	0.0	0.0	1.6

Intersection Summary		
HCM 7th Control Delay, s/veh	44.8	
HCM 7th LOS	D	

Notes

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

Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Future Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
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	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5	15.6	15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%	12.0%	12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
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)	34.7	20.2	54.0	34.2	20.0	85.0	69.9	130.0	63.4	51.8	130.0
Actuated g/C Ratio	0.27	0.16	0.42	0.26	0.15	0.65	0.54	1.00	0.49	0.40	1.00
v/c Ratio	1.15	0.41	0.49	0.60	0.73	0.64	0.61	0.06	0.45	1.20	0.16
Control Delay (s/veh)	138.6	49.6	32.6	44.6	57.0	38.5	34.2	0.1	16.0	127.6	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 (s/veh)	138.6	49.6	32.6	44.6	57.0	38.5	34.2	0.1	16.0	127.6	0.2
LOS	F	D	C	D	E	D	C	A	B	F	A
Approach Delay (s/veh)		72.9			52.8		33.0			104.9	
Approach LOS		E			D		C			F	

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: 135		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.20		
Intersection Signal Delay (s/veh): 71.6	Intersection LOS: E	
Intersection Capacity Utilization 106.1%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd

HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Future Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	295	227	349	204	319	0	279	1156	0	133	1688	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	378	798	504	365	801		221	1719		270	1588	
Arrive On Green	0.09	0.22	0.22	0.09	0.23	0.00	0.09	0.48	0.00	0.11	0.89	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	295	227	349	204	319	0	279	1156	0	133	1688	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	12.0	6.9	25.0	11.5	9.9	0.0	12.1	32.4	0.0	5.3	58.1	0.0
Cycle Q Clear(g_c), s	12.0	6.9	25.0	11.5	9.9	0.0	12.1	32.4	0.0	5.3	58.1	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	378	798	504	365	801		221	1719		270	1588	
V/C Ratio(X)	0.78	0.28	0.69	0.56	0.40		1.26	0.67		0.49	1.06	
Avail Cap(c_a), veh/h	378	1080	629	365	1080		221	1719		318	1588	
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	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	40.4	41.7	38.8	34.4	42.8	0.0	43.0	25.7	0.0	20.0	6.9	0.0
Incr Delay (d2), s/veh	9.2	0.2	2.4	1.2	0.3	0.0	148.7	2.1	0.0	0.5	41.4	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	7.3	5.5	15.1	8.7	7.8	0.0	24.9	19.7	0.0	3.6	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.6	41.9	41.2	35.6	43.2	0.0	191.7	27.8	0.0	20.6	48.3	0.0
LnGrp LOS	D	D	D	D	D		F	C		C	F	
Approach Vol, veh/h		871			523			1435			1821	
Approach Delay, s/veh		44.3			40.2			59.7			46.3	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	68.4	15.6	35.2	15.6	63.6	15.5	35.3
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	7.3	34.4	13.5	27.0	14.1	60.1	14.0	11.9
Green Ext Time (p_c), s	0.0	8.7	0.0	2.2	0.0	0.0	0.0	2.0

Intersection Summary		
HCM 7th Control Delay, s/veh	49.3	
HCM 7th LOS	D	

Notes

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

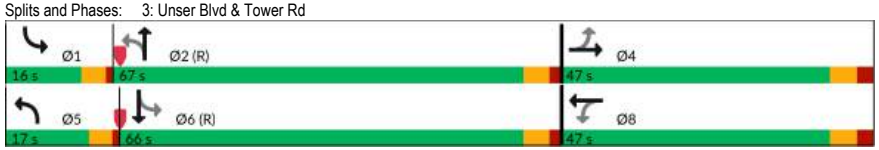
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	132	163	50	119	44	1346	38	641	82
Future Volume (vph)	132	163	50	119	44	1346	38	641	82
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	19.7	19.7	19.7	19.7	95.8	90.8	95.6	90.7	130.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.74	0.70	0.74	0.70	1.00
v/c Ratio	0.78	0.44	0.34	0.36	0.08	0.57	0.15	0.26	0.05
Control Delay (s/veh)	80.8	32.9	53.5	28.4	5.2	16.3	6.2	8.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	32.9	53.5	28.4	5.2	16.3	6.2	8.7	0.1
LOS	F	C	D	C	A	B	A	A	A
Approach Delay (s/veh)		49.2		33.3		15.9		7.6	
Approach LOS		D		C		B		A	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 19.8		Intersection LOS: B	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	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
Lane Width 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
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	212	542		192	542		590	2500		351	2496	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.02	0.94	0.00	0.02	0.70	0.00
Sat Flow, veh/h	1273	3647	0	1223	3647	0	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	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	13.2	5.3	0.0	4.9	3.8	0.0	0.9	6.4	0.0	0.8	8.5	0.0
Cycle Q Clear(g_c), s	17.0	5.3	0.0	10.2	3.8	0.0	0.9	6.4	0.0	0.8	8.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	542		192	542		590	2500		351	2496	
V/C Ratio(X)	0.62	0.30		0.26	0.22		0.07	0.54		0.11	0.26	
Avail Cap(c_a), veh/h	415	1107		387	1107		729	2500		478	2496	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	55.8	48.9	0.0	53.5	48.3	0.0	5.5	1.4	0.0	5.4	7.0	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.3	0.1	0.0	0.0	0.8	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	7.7	4.2	0.0	2.7	3.1	0.0	0.6	2.6	0.0	0.5	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	49.1	0.0	53.7	48.4	0.0	5.5	2.3	0.0	5.4	7.3	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			169			1390			679	
Approach Delay, s/veh		52.6			50.0			2.4			7.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	96.9		26.3	6.9	96.8		26.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.8	8.4		19.0	2.9	10.5		12.2				
Green Ext Time (p_c), s	0.0	20.7		0.8	0.0	6.9		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.7	
HCM 7th LOS	B	

Notes

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

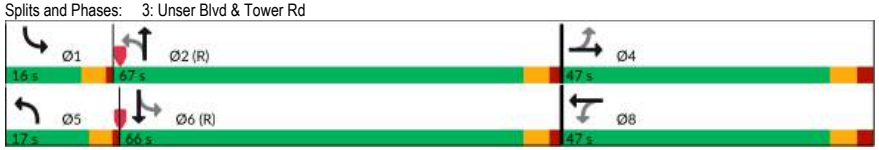
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	132	163	57	119	63	1402	38	687	82
Future Volume (vph)	132	163	57	119	63	1402	38	687	82
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	19.7	19.7	19.7	19.7	96.2	90.8	95.2	90.3	130.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.74	0.70	0.73	0.69	1.00
v/c Ratio	0.78	0.46	0.42	0.36	0.11	0.59	0.16	0.28	0.05
Control Delay (s/veh)	80.8	30.6	57.1	28.4	4.6	15.3	6.4	9.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	30.6	57.1	28.4	4.6	15.3	6.4	9.0	0.1
LOS	F	C	E	C	A	B	A	A	A
Approach Delay (s/veh)		46.9		34.6		14.8		8.0	
Approach LOS		D		C		B		A	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 19.1		Intersection LOS: B	
Intersection Capacity Utilization 83.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Future Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	57	119	0	63	1402	0	38	687	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	212	542		192	542		569	2500		336	2479	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.03	0.94	0.00	0.02	0.70	0.00
Sat Flow, veh/h	1273	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	57	119	0	63	1402	0	38	687	0
Grp Sat Flow(s),veh/h/ln	1273	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	13.2	5.3	0.0	5.6	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Cycle Q Clear(g_c), s	17.0	5.3	0.0	10.9	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	542		192	542		569	2500		336	2479	
V/C Ratio(X)	0.62	0.30		0.30	0.22		0.11	0.56		0.11	0.28	
Avail Cap(c_a), veh/h	415	1107		387	1107		699	2500		463	2479	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	55.8	48.9	0.0	53.8	48.3	0.0	5.6	1.5	0.0	5.6	7.4	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.3	0.1	0.0	0.0	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	7.7	4.2	0.0	3.1	3.1	0.0	0.8	2.8	0.0	0.5	6.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	49.1	0.0	54.1	48.4	0.0	5.6	2.4	0.0	5.6	7.7	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			176			1465			725	
Approach Delay, s/veh		52.6			50.2			2.5			7.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	96.9		26.3	7.5	96.2		26.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.8	9.0		19.0	3.3	11.4		12.9				
Green Ext Time (p_c), s	0.0	22.0		0.8	0.0	7.6		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.6	
HCM 7th LOS	B	

Notes

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

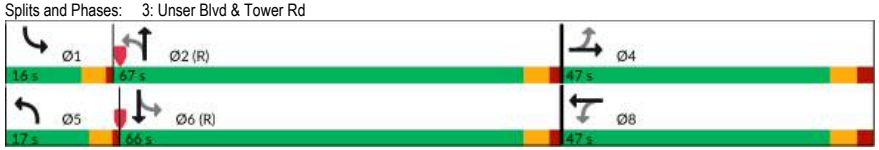
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	88	163	75	371	189	1258	69	1798	182
Future Volume (vph)	88	163	75	371	189	1258	69	1798	182
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	23.0	23.0	23.0	23.0	96.0	86.7	84.0	77.5	130.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.74	0.67	0.65	0.60	1.00
v/c Ratio	1.07	0.43	0.48	0.76	0.80	0.55	0.25	0.85	0.11
Control Delay (s/veh)	168.7	26.2	57.1	55.3	48.9	21.2	9.0	28.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	168.7	26.2	57.1	55.3	48.9	21.2	9.0	28.3	0.1
LOS	F	C	E	E	D	C	A	C	A
Approach Delay (s/veh)		58.4		55.5		24.7		25.2	
Approach LOS		E		E		C		C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 31.7	Intersection LOS: C	
Intersection Capacity Utilization 103.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	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
Lane Width 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
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	163	709		252	709		213	2296		348	2197	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.07	0.86	0.00	0.03	0.62	0.00
Sat Flow, veh/h	1011	3647	0	1223	3647	0	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	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	11.1	5.0	0.0	7.1	12.1	0.0	5.1	12.2	0.0	1.9	50.8	0.0
Cycle Q Clear(g_c), s	23.2	5.0	0.0	12.1	12.1	0.0	5.1	12.2	0.0	1.9	50.8	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	709		252	709		213	2296		348	2197	
V/C Ratio(X)	0.54	0.23		0.30	0.52		0.89	0.55		0.20	0.82	
Avail Cap(c_a), veh/h	276	1107		389	1107		286	2296		456	2197	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	56.9	43.6	0.0	48.7	46.5	0.0	27.9	4.1	0.0	8.8	19.2	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.2	0.2	0.0	18.2	0.9	0.0	0.1	3.5	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	5.1	4.0	0.0	3.9	9.2	0.0	8.2	5.5	0.0	1.2	27.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	43.7	0.0	49.0	46.7	0.0	46.1	5.0	0.0	8.9	22.7	0.0
LnGrp LOS	E	D		D	D		D	A		A	C	
Approach Vol, veh/h		251			446			1447			1867	
Approach Delay, s/veh		48.7			47.1			10.4			22.2	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	89.5		32.4	11.7	85.9		32.4				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	3.9	14.2		25.2	7.1	52.8		14.1				
Green Ext Time (p_c), s	0.0	17.8		0.7	0.1	6.8		1.7				

Intersection Summary		
HCM 7th Control Delay, s/veh	22.4	
HCM 7th LOS	C	

Notes

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

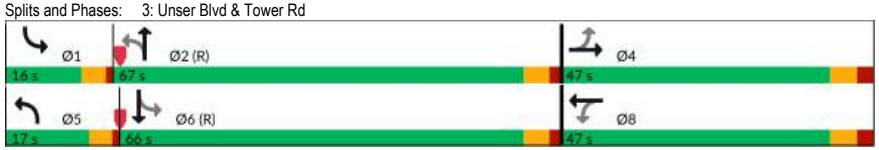
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	88	163	81	371	206	1308	69	1857	182
Future Volume (vph)	88	163	81	371	206	1308	69	1857	182
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	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)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	23.0	23.0	23.0	23.0	96.0	86.5	82.3	75.6	130.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.74	0.67	0.63	0.58	1.00
v/c Ratio	1.07	0.45	0.55	0.76	0.79	0.58	0.27	0.90	0.11
Control Delay (s/veh)	168.7	25.0	61.5	55.3	44.6	21.0	9.6	32.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	168.7	25.0	61.5	55.3	44.6	21.0	9.6	32.9	0.1
LOS	F	C	E	E	D	C	A	C	A
Approach Delay (s/veh)		56.2		56.2		24.1		29.3	
Approach LOS		E		E		C		C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 33.1	Intersection LOS: C	
Intersection Capacity Utilization 105.6%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Future Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	81	371	0	206	1308	0	69	1857	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	163	709		252	709		230	2294		334	2123	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.10	0.86	0.00	0.03	0.60	0.00
Sat Flow, veh/h	1011	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	81	371	0	206	1308	0	69	1857	0
Grp Sat Flow(s),veh/h/ln	1011	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	11.1	5.0	0.0	7.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Cycle Q Clear(g_c), s	23.2	5.0	0.0	12.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	709		252	709		230	2294		334	2123	
V/C Ratio(X)	0.54	0.23		0.32	0.52		0.90	0.57		0.21	0.87	
Avail Cap(c_a), veh/h	276	1107		389	1107		266	2294		441	2123	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	56.9	43.6	0.0	49.0	46.5	0.0	35.3	4.2	0.0	9.7	22.1	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.3	0.2	0.0	25.8	1.0	0.0	0.1	5.4	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	5.1	4.0	0.0	4.3	9.2	0.0	12.6	5.8	0.0	1.3	31.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	43.7	0.0	49.3	46.7	0.0	61.1	5.2	0.0	9.8	27.5	0.0
LnGrp LOS	E	D		D	D		E	A		A	C	
Approach Vol, veh/h		251			452			1514			1926	
Approach Delay, s/veh		48.7			47.2			12.8			26.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	89.4		32.4	14.4	83.2		32.4				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	4.0	15.3		25.2	9.8	59.3		14.7				
Green Ext Time (p_c), s	0.0	18.8		0.7	0.0	1.2		1.7				

Intersection Summary		
HCM 7th Control Delay, s/veh	25.3	
HCM 7th LOS	C	

Notes

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

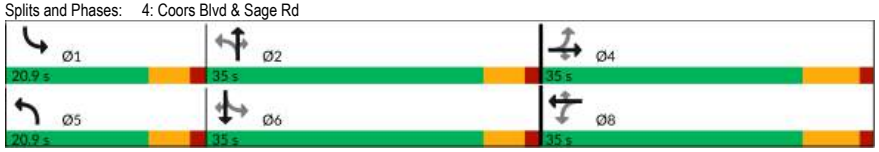
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	235	77	99	180	254	24	1269	19	61	658	80
Future Volume (vph)	336	235	77	99	180	254	24	1269	19	61	658	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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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	43.1	37.4	37.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.50	0.43	0.43
v/c Ratio		1.67	0.13		3.13	0.37	0.05	1.06	0.03	0.16	0.43	0.11
Control Delay (s/veh)		338.6	3.0		Error	5.0	9.8	73.5	0.1	10.9	20.3	1.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		338.6	3.0		Error	5.0	9.8	73.5	0.1	10.9	20.3	1.8
LOS		F	A		F	A	A	E	A	B	C	A
Approach Delay (s/veh)		298.7			527.0			71.2			17.7	
Approach LOS		F			F			E			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 3.13			
Intersection Signal Delay (s/veh): 176.8		Intersection LOS: F	
Intersection Capacity Utilization 113.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	235	77	99	180	254	24	1269	19	61	658	80
Future Volume (veh/h)	336	235	77	99	180	254	24	1269	19	61	658	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	336	235	77	99	180	254	24	1269	19	61	658	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	65	0	500	56	70	500	398	1182	527	318	1384	617
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.08	0.33	0.33	0.13	0.39	0.39
Sat Flow, veh/h	0	0	1585	0	222	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	571	0	77	279	0	254	24	1269	19	61	658	80
Grp Sat Flow(s),veh/h/ln	0	0	1585	222	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	3.1	0.0	0.0	11.4	0.7	29.1	0.7	1.6	12.1	2.8
Cycle Q Clear(g_c), s	27.6	0.0	3.1	27.6	0.0	11.4	0.7	29.1	0.7	1.6	12.1	2.8
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	65	0	500	126	0	500	398	1182	527	318	1384	617
V/C Ratio(X)	8.74	0.00	0.15	2.22	0.00	0.51	0.06	1.07	0.04	0.19	0.48	0.13
Avail Cap(c_a), veh/h	65	0	500	126	0	500	568	1182	527	388	1384	617
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	43.7	0.0	21.5	29.3	0.0	24.4	15.8	29.2	19.7	17.6	20.0	17.2
Incr Delay (d2), s/veh	3512.3	0.0	0.1	573.7	0.0	0.6	0.0	48.4	0.1	0.1	1.2	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	108.5	0.0	2.0	40.1	0.0	7.5	0.5	27.6	0.5	1.1	8.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3556.0	0.0	21.7	603.0	0.0	25.1	15.8	77.6	19.9	17.7	21.2	17.6
LnGrp LOS	F		C	F		C	B	F	B	B	C	B
Approach Vol, veh/h		648			533			1312			799	
Approach Delay, s/veh		3136.0			327.6			75.6			20.6	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	35.0		35.0	12.5	40.0		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	3.6	31.1		29.6	2.7	14.1		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	705.5	
HCM 7th LOS	F	

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

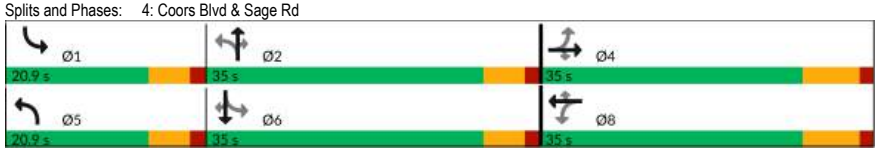
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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	43.1	37.4	37.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.50	0.43	0.43
v/c Ratio		1.82	0.14		5.16	0.38	0.06	1.06	0.03	0.16	0.43	0.12
Control Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
LOS		F	A		F	A	A	E	A	B	C	A
Approach Delay (s/veh)		357.1			1028.2			71.0			17.6	
Approach LOS		F			F			E			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 5.16			
Intersection Signal Delay (s/veh): 272.5		Intersection LOS: F	
Intersection Capacity Utilization 116.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	351	250	83	99	195	254	29	1269	19	61	658	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	0	500	55	70	500	406	1182	527	318	1345	600
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.09	0.33	0.33	0.13	0.38	0.38
Sat Flow, veh/h	0	0	1585	0	222	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	601	0	83	294	0	254	29	1269	19	61	658	92
Grp Sat Flow(s),veh/h/ln	0	0	1585	222	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	3.3	0.0	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Cycle Q Clear(g_c), s	27.6	0.0	3.3	27.6	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Prop In Lane	0.58		1.00	0.34		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	0	500	125	0	500	406	1182	527	318	1345	600
V/C Ratio(X)	9.22	0.00	0.17	2.35	0.00	0.51	0.07	1.07	0.04	0.19	0.49	0.15
Avail Cap(c_a), veh/h	65	0	500	125	0	500	557	1182	527	388	1345	600
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	43.7	0.0	21.6	29.2	0.0	24.4	15.4	29.2	19.7	17.8	20.7	17.9
Incr Delay (d2), s/veh	3730.3	0.0	0.1	632.8	0.0	0.6	0.0	48.4	0.1	0.1	1.3	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	114.3	0.0	2.2	43.4	0.0	7.5	0.6	27.6	0.5	1.1	8.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3774.0	0.0	21.7	662.0	0.0	25.1	15.4	77.6	19.9	17.9	22.0	18.5
LnGrp LOS	F		C	F		C	B	F	B	B	C	B
Approach Vol, veh/h		684			548			1317			811	
Approach Delay, s/veh		3318.7			366.8			75.4			21.3	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	35.0		35.0	13.5	39.0		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	3.7	31.1		29.6	2.8	14.4		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	770.1	
HCM 7th LOS	F	

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

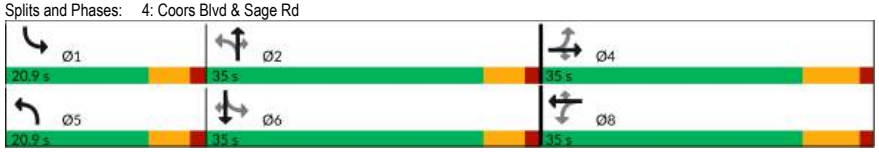
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	82	6	143	335	280	96	1000	201	103	890	129
Future Volume (vph)	87	82	6	143	335	280	96	1000	201	103	890	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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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		0.95	0.01		0.95	0.45	0.24	0.83	0.30	0.27	0.74	0.21
Control Delay (s/veh)		91.8	0.0		62.7	13.1	11.7	35.3	4.9	12.2	31.1	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 (s/veh)		91.8	0.0		62.7	13.1	11.7	35.3	4.9	12.2	31.1	5.3
LOS		F	A		E	B	B	D	A	B	C	A
Approach Delay (s/veh)		88.6			44.4			28.8			26.4	
Approach LOS		F			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 34.7		Intersection LOS: C	
Intersection Capacity Utilization 97.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	82	6	143	335	280	96	1000	201	103	890	129
Future Volume (veh/h)	87	82	6	143	335	280	96	1000	201	103	890	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	87	82	6	143	335	280	96	1000	201	103	890	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	39	487	52	22	487	407	1152	514	383	1161	518
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	128	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	169	0	6	478	0	280	96	1000	201	103	890	129
Grp Sat Flow(s),veh/h/ln	128	0	1585	73	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.2	0.0	0.0	13.3	2.7	23.7	8.8	2.9	20.2	5.4
Cycle Q Clear(g_c), s	27.6	0.0	0.2	27.6	0.0	13.3	2.7	23.7	8.8	2.9	20.2	5.4
Prop In Lane	0.51		1.00	0.30		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	0	487	75	0	487	407	1152	514	383	1161	518
V/C Ratio(X)	1.69	0.00	0.01	6.41	0.00	0.57	0.24	0.87	0.39	0.27	0.77	0.25
Avail Cap(c_a), veh/h	100	0	487	75	0	487	434	1152	514	406	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	21.6	36.7	0.0	26.1	15.7	28.5	23.5	16.9	27.1	22.1
Incr Delay (d2), s/veh	349.3	0.0	0.0	2464.5	0.0	1.4	0.1	8.9	2.2	0.1	4.9	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	21.4	0.0	0.2	88.6	0.0	8.7	1.8	16.0	6.1	1.9	13.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	383.7	0.0	21.6	2501.2	0.0	27.5	15.8	37.4	25.7	17.1	32.0	23.3
LnGrp LOS	F		C	F		C	B	D	C	B	C	C
Approach Vol, veh/h		175			758			1297			1122	
Approach Delay, s/veh		371.3			1587.5			34.0			29.6	
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	35.2		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	4.7	22.2		29.6				
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	3.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	401.4	
HCM 7th LOS	F	

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

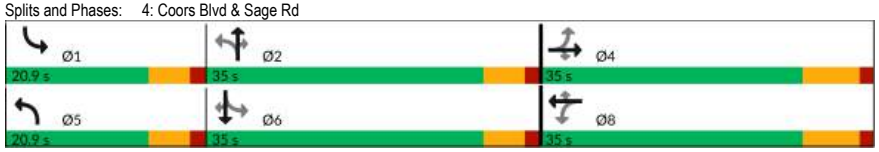
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
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)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
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
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		1.19	0.02		0.99	0.45	0.25	0.83	0.30	0.27	0.74	0.23
Control Delay (s/veh)		161.5	0.1		70.1	13.5	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 (s/veh)		161.5	0.1		70.1	13.5	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 (s/veh)		152.9			49.6			28.8			26.1	
Approach LOS		F			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay (s/veh): 40.1		Intersection LOS: D	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	100	96	11	143	349	280	101	1000	201	103	890	145
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	40	487	52	22	487	408	1152	514	383	1155	515
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.32	0.32
Sat Flow, veh/h	0	130	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	196	0	11	492	0	280	101	1000	201	103	890	145
Grp Sat Flow(s),veh/h/ln	130	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	6.1
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	6.1
Prop In Lane	0.51		1.00	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	0	487	74	0	487	408	1152	514	383	1155	515
V/C Ratio(X)	1.95	0.00	0.02	6.63	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Avail Cap(c_a), veh/h	101	0	487	74	0	487	432	1152	514	406	1155	515
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	34.3	0.0	21.7	36.7	0.0	26.1	15.8	28.5	23.5	16.9	27.3	22.5
Incr Delay (d2), s/veh	460.9	0.0	0.0	2562.7	0.0	1.4	0.1	8.9	2.2	0.1	5.0	1.4
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	27.1	0.0	0.3	91.4	0.0	8.7	1.8	16.0	6.1	1.9	13.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	495.2	0.0	21.7	2599.4	0.0	27.5	15.9	37.4	25.7	17.1	32.3	23.9
LnGrp LOS	F		C	F		C	B	D	C	B	C	C
Approach Vol, veh/h		207			772			1302			1138	
Approach Delay, s/veh		470.0			1666.6			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	0.0	2.3		0.0	0.0	3.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	427.6	
HCM 7th LOS	F	

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

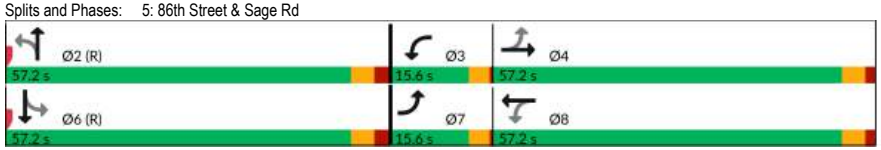
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	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)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	40.1	31.0	38.3	30.0	79.0	79.0	79.0	79.0
Actuated g/C Ratio	0.31	0.24	0.29	0.23	0.61	0.61	0.61	0.61
v/c Ratio	0.22	0.78	0.25	0.39	0.01	0.21	0.07	0.09
Control Delay (s/veh)	29.6	52.5	30.4	36.2	13.8	12.0	13.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	52.5	30.4	36.2	13.8	12.0	13.7	6.2
LOS	C	D	C	D	B	B	B	A
Approach Delay (s/veh)		50.3		35.5		12.1		8.8
Approach LOS		D		D		B		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: 0.78			
Intersection Signal Delay (s/veh): 36.4		Intersection LOS: D	
Intersection Capacity Utilization 57.7%		ICU Level of Service B	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	277	775	18	143	562	155	867	660	464	736	399	685
Arrive On Green	0.04	0.22	0.22	0.06	0.41	0.41	0.65	0.65	0.65	0.65	0.65	0.65
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	4.0	22.3	22.3	2.6	8.4	8.7	0.2	0.0	7.0	2.4	0.0	2.8
Cycle Q Clear(g_c), s	4.0	22.3	22.3	2.6	8.4	8.7	3.0	0.0	7.0	9.4	0.0	2.8
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	277	388	405	143	363	354	867	0	1124	736	0	1084
V/C Ratio(X)	0.25	0.82	0.82	0.32	0.44	0.45	0.01	0.00	0.20	0.07	0.00	0.09
Avail Cap(c_a), veh/h	366	713	745	258	713	696	867	0	1124	736	0	1084
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	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	48.4	48.4	39.8	33.1	33.2	9.2	0.0	9.4	11.3	0.0	8.7
Incr Delay (d2), s/veh	0.5	4.4	4.3	1.1	0.7	0.8	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	3.2	15.5	16.1	2.1	6.0	6.0	0.1	0.0	5.0	1.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.9	52.8	52.7	40.9	33.8	34.0	9.2	0.0	9.8	11.5	0.0	8.8
LnGrp LOS	D	D	D	D	C	C	A		A	B		A
Approach Vol, veh/h		723			364			235			145	
Approach Delay, s/veh		51.4			34.8			9.8			9.8	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		89.4	7.2	33.4		89.4	9.1	31.5				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		9.0	4.6	24.3		11.4	6.0	10.7				
Green Ext Time (p_c), s		1.5	0.0	4.1		0.8	0.1	1.9				

Intersection Summary		
HCM 7th Control Delay, s/veh	36.5	
HCM 7th LOS	D	

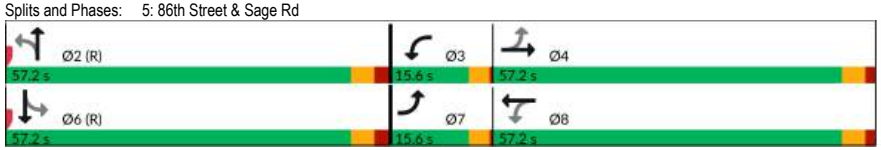
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	704	68	315	5	135	68	35
Future Volume (vph)	70	704	68	315	5	135	68	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)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	42.9	33.9	43.3	34.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.58	0.58	0.58	0.58
v/c Ratio	0.22	0.78	0.35	0.44	0.01	0.25	0.11	0.10
Control Delay (s/veh)	27.0	50.5	30.5	35.2	15.8	13.8	15.9	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	50.5	30.5	35.2	15.8	13.8	15.9	7.1
LOS	C	D	C	D	B	B	B	A
Approach Delay (s/veh)		48.4		34.5		13.9		10.8
Approach LOS		D		C		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: 0.78			
Intersection Signal Delay (s/veh): 35.6		Intersection LOS: D	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Future Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	704	15	68	315	88	5	135	118	68	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	284	848	18	165	653	180	823	565	494	672	380	651
Arrive On Green	0.04	0.24	0.24	0.08	0.47	0.47	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1781	3558	76	1781	2754	757	1301	921	805	1127	619	1061
Grp Volume(v), veh/h	70	352	367	68	201	202	5	0	253	68	0	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1734	1301	0	1725	1127	0	1679
Q Serve(g_s), s	3.8	24.4	24.4	3.7	10.0	10.4	0.2	0.0	8.6	3.8	0.0	3.0
Cycle Q Clear(g_c), s	3.8	24.4	24.4	3.7	10.0	10.4	3.2	0.0	8.6	12.4	0.0	3.0
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.47	1.00		0.63
Lane Grp Cap(c), veh/h	284	423	442	165	421	411	823	0	1058	672	0	1030
V/C Ratio(X)	0.25	0.83	0.83	0.41	0.48	0.49	0.01	0.00	0.24	0.10	0.00	0.09
Avail Cap(c_a), veh/h	376	713	746	258	713	696	823	0	1058	672	0	1030
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	35.6	47.0	47.0	36.1	28.7	28.8	11.0	0.0	11.4	14.2	0.0	10.3
Incr Delay (d2), s/veh	0.4	4.3	4.1	1.7	0.8	0.9	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	3.1	16.7	17.3	2.9	6.8	6.8	0.1	0.0	6.2	1.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.1	51.3	51.1	37.8	29.5	29.7	11.0	0.0	11.9	14.5	0.0	10.5
LnGrp LOS	D	D	D	D	C	C	B		B	B		B
Approach Vol, veh/h		789			471			258			163	
Approach Delay, s/veh		49.8			30.8			11.9			12.2	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		85.2	8.8	36.0		85.2	8.9	35.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.6	5.7	26.4		14.4	5.8	12.4				
Green Ext Time (p_c), s		1.7	0.1	4.5		0.9	0.1	2.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	35.0	
HCM 7th LOS	D	

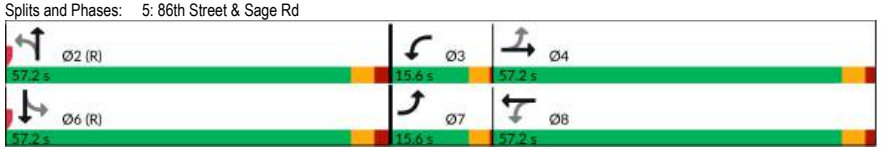
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	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	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	36.2	26.9	35.7	26.6	82.3	82.3	82.3	82.3
Actuated g/C Ratio	0.28	0.21	0.27	0.20	0.63	0.63	0.63	0.63
v/c Ratio	0.33	0.55	0.24	0.76	0.03	0.11	0.04	0.22
Control Delay (s/veh)	34.2	46.8	33.9	55.8	12.3	10.6	12.2	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.2	46.8	33.9	55.8	12.3	10.6	12.2	10.6
LOS	C	D	C	E	B	B	B	B
Approach Delay (s/veh)		45.1		53.7		10.8		10.8
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 (s/veh): 38.9		Intersection LOS: D	
Intersection Capacity Utilization 55.9%		ICU Level of Service B	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	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
Lane Width 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
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	583	82	203	578	77	756	923	277	865	625	529
Arrive On Green	0.04	0.19	0.19	0.08	0.37	0.37	0.67	0.67	0.67	0.67	0.67	0.67
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	0	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	13.4	13.6	3.5	18.2	18.4	0.9	0.0	3.4	1.3	0.0	7.0
Cycle Q Clear(g_c), s	3.8	13.4	13.6	3.5	18.2	18.4	7.9	0.0	3.4	4.7	0.0	7.0
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	331	334	203	326	329	756	0	1200	865	0	1154
V/C Ratio(X)	0.40	0.60	0.61	0.30	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Avail Cap(c_a), veh/h	257	713	719	301	713	721	756	0	1200	865	0	1154
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	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	48.5	48.6	39.9	39.4	39.4	9.8	0.0	7.7	8.6	0.0	8.3
Incr Delay (d2), s/veh	1.5	1.8	1.8	0.6	4.1	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	10.1	10.3	2.7	10.5	10.7	0.4	0.0	2.4	0.7	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.6	50.3	50.4	40.4	43.4	43.7	9.9	0.0	7.9	8.6	0.0	8.7
LnGrp LOS	D	D	D	D	D	D	A		A	A		A
Approach Vol, veh/h		469			609			150			275	
Approach Delay, s/veh		49.4			43.2			8.2			8.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		92.4	8.4	29.2		92.4	8.8	28.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		9.9	5.5	15.6		9.0	5.8	20.4				
Green Ext Time (p_c), s		0.9	0.0	2.5		1.7	0.1	3.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	35.3	
HCM 7th LOS	D	

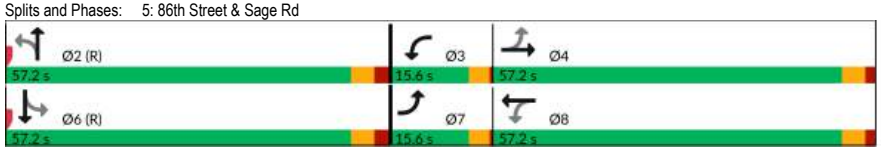
Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	415	81	544	20	100	51	130
Future Volume (vph)	65	415	81	544	20	100	51	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	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	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)	3.5	5.0	3.5	5.0	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)	38.6	28.1	40.6	30.8	78.2	78.2	78.2	78.2
Actuated g/C Ratio	0.30	0.22	0.31	0.24	0.60	0.60	0.60	0.60
v/c Ratio	0.32	0.61	0.32	0.75	0.03	0.14	0.07	0.23
Control Delay (s/veh)	31.7	47.4	31.9	49.9	13.7	11.5	13.7	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.7	47.4	31.9	49.9	13.7	11.5	13.7	12.0
LOS	C	D	C	D	B	B	B	B
Approach Delay (s/veh)		45.5		47.8		11.8		12.3
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: 0.75			
Intersection Signal Delay (s/veh): 37.4		Intersection LOS: D	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

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



HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	415	50	81	544	81	20	100	51	51	130	110
Future Volume (veh/h)	65	415	50	81	544	81	20	100	51	51	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	415	50	81	544	81	20	100	51	51	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	630	76	214	639	95	727	755	385	813	605	512
Arrive On Green	0.04	0.20	0.20	0.10	0.41	0.41	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1781	3195	383	1781	3104	461	1140	1168	596	1236	936	792
Grp Volume(v), veh/h	65	230	235	81	311	314	20	0	151	51	0	240
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1787	1140	0	1763	1236	0	1728
Q Serve(g_s), s	3.8	15.5	15.7	4.7	20.6	20.8	1.0	0.0	4.3	2.2	0.0	7.4
Cycle Q Clear(g_c), s	3.8	15.5	15.7	4.7	20.6	20.8	8.4	0.0	4.3	6.5	0.0	7.4
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.34	1.00		0.46
Lane Grp Cap(c), veh/h	164	350	355	214	366	368	727	0	1139	813	0	1116
V/C Ratio(X)	0.40	0.66	0.66	0.38	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.21
Avail Cap(c_a), veh/h	258	713	723	292	713	718	727	0	1139	813	0	1116
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	40.8	48.1	48.2	37.7	36.4	36.5	11.2	0.0	8.9	10.2	0.0	9.4
Incr Delay (d2), s/veh	1.5	2.1	2.1	1.1	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	11.4	11.6	3.6	12.3	12.5	0.5	0.0	3.1	1.1	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.4	50.2	50.3	38.8	42.0	42.2	11.2	0.0	9.1	10.3	0.0	9.9
LnGrp LOS	D	D	D	D	D	D	B		A	B		A
Approach Vol, veh/h		530			706			171			291	
Approach Delay, s/veh		49.3			41.7			9.4			10.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		89.5	9.9	30.6		89.5	8.8	31.7				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.4	6.7	17.7		9.4	5.8	22.8				
Green Ext Time (p_c), s		1.0	0.1	2.9		1.8	0.1	4.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	35.4	
HCM 7th LOS	D	

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	3102	16	0	2039	16
Future Vol, veh/h	0	0	47	0	0	16	0	3102	16	0	2039	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	3102	16	0	2039	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1028	-	-	1559	-	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	*505	0	0	*193	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*505	-	-	*193	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.86	25.32	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	505	193	-	-
HCM Lane V/C Ratio	-	-	0.093	0.083	-	-
HCM Control Delay (s/veh)	-	-	12.9	25.3	-	-
HCM Lane LOS	-	-	B	D	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-	-

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	3185	16	0	2039	16
Future Vol, veh/h	0	0	47	0	0	16	0	3185	16	0	2039	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	3185	16	0	2039	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1028	-	-	1601	-	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	*505	0	0	*160	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*505	-	-	*160	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.86	29.94	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	505	160	-	-
HCM Lane V/C Ratio	-	-	0.093	0.1	-	-
HCM Control Delay (s/veh)	-	-	12.9	29.9	-	-
HCM Lane LOS	-	-	B	D	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-	-

Notes

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

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	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	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	*193	0	0	*423	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*193	-	-	*423	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	29.54	13.85	0	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	193	423	-	-
HCM Lane V/C Ratio	-	-	0.243	0.038	-	-
HCM Control Delay (s/veh)	-	-	29.5	13.8	-	-
HCM Lane LOS	-	-	D	B	-	-
HCM 95th %tile Q(veh)	-	-	0.9	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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	47
Future Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	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	2348	16	0	3187	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1617	-	-	1182	-	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	*160	0	0	*407	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*160	-	-	*407	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	36.53	14.22	0	0
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	160	407	-	-
HCM Lane V/C Ratio	-	-	0.293	0.039	-	-
HCM Control Delay (s/veh)	-	-	36.5	14.2	-	-
HCM Lane LOS	-	-	E	B	-	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-	-

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

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1160	149	62	399	123	218
Future Vol, veh/h	1160	149	62	399	123	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1160	149	62	399	123	218

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1309	0	1558	655
Stage 1	-	-	-	-	1235	-
Stage 2	-	-	-	-	324	-
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	-	-	692	-	255	*757
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %	-	-	0	-	0	0
Mov Cap-1 Maneuver	-	-	692	-	232	*757
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	799	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.44	21.03
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	692	-
HCM Lane V/C Ratio	0.611	-	-	0.09	-
HCM Ctrl Dly (s/v)	21	-	-	10.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	4.1	-	-	0.3	-

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	717	122	74	799	121	174
Future Vol, veh/h	717	122	74	799	121	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	122	74	799	121	174

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	839	0	1326	420
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	548	-
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	-	-	980	-	*414	*886
Stage 1	-	-	-	-	*606	-
Stage 2	-	-	-	-	*821	-
Platoon blocked, %	-	-	0	-	0	0
Mov Cap-1 Maneuver	-	-	980	-	*383	*886
Mov Cap-2 Maneuver	-	-	-	-	*537	-
Stage 1	-	-	-	-	*606	-
Stage 2	-	-	-	-	*759	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.76	13.85
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	699	-	-	980	-
HCM Lane V/C Ratio	0.422	-	-	0.076	-
HCM Ctrl Dly (s/v)	13.8	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0.2	-

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	129	0	1686	1335	128
Future Vol, veh/h	0	129	0	1686	1335	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	0	1686	1335	128

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	732	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	*711	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*711	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.18	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	711	-	-
HCM Lane V/C Ratio	-	0.181	-	-
HCM Ctrl Dly (s/v)	-	11.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	132	0	1524	2132	158
Future Vol, veh/h	0	132	0	1524	2132	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	0	1524	2132	158

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1145	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	*589	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*589	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.87	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	589	-	-
HCM Lane V/C Ratio	-	0.224	-	-
HCM Ctrl Dly (s/v)	-	12.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	155	1686	1427	18
Future Vol, veh/h	0	18	155	1686	1427	18
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	300	-	-	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	18	155	1686	1427	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	714	1445	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	*679	654	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		0	0	-	-	-
Mov Cap-1 Maneuver	-	*679	654	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.45	1.03	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	654	-	679	-	-
HCM Lane V/C Ratio	0.237	-	0.027	-	-
HCM Ctrl Dly (s/v)	12.2	-	10.4	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	134	1524	2192	21
Future Vol, veh/h	0	18	134	1524	2192	21
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	300	-	-	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	18	134	1524	2192	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1096	2213	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	*470	254	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	-	*470	254	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.96	2.75	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	254	-	470	-	-
HCM Lane V/C Ratio	0.528	-	0.038	-	-
HCM Ctrl Dly (s/v)	34.1	-	13	-	-
HCM Lane LOS	D	-	B	-	-
HCM 95th %tile Q(veh)	2.8	-	0.1	-	-

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

Traffic Count Data Sheet

Year Counts Taken: **#VALUE!**

E-W Street: **Sage Rd**

N-S Street: **Unser Bd.**

Signalized

Speed Limit (Sage Rd)= **30** MPH

Speed Limit (Unser Bd.)= **40** MPH

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**

Signalized

Speed Limit (Sage Rd)= **35** MPH

Speed Limit (Coors Blvd)= **45** MPH

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**

Signalized

Speed Limit (Sage Rd)= **35** MPH

Speed Limit (86th St)= **30** MPH

4/27/22

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.)

	Eastbound (San Ygancio)			Westbound (San Ygnacio)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
	San Ygnacio - West Leg (Eastboun			San Ygnacio - East Leg (Westboun			Unser Blvd. - South Leg (Northbou			Unser Blvd. - North Leg (Southbound)		
2022	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	0
6:15am	0	0	0	0	0	0	0	152	0	0	65	0
6:30am	0	0	2	0	0	0	0	196	1	0	96	1
6:45am	0	0	2	0	0	0	0	247	1	0	112	1
Hourly Total	0	0	4	0	0	0	0	699	2	0	310	2
7:00am	0	0	3	0	0	0	0	298	1	0	120	0
7:15am	0	0	4	0	0	0	0	301	1	0	144	0
7:30am	0	0	8	0	0	0	0	320	2	0	177	1
7:45am	0	0	14	0	0	0	0	269	2	0	186	2
Hourly Total	0	0	**29**	0	0	0	0	1188	**6**	0	627	3
8:00am	0	0	4	0	0	0	0	260	1	0	114	2
8:15am	0	0	1	0	0	0	0	279	0	0	127	3
8:30am	0	0	2	0	0	1	0	225	0	0	157	2
8:45am	0	0	2	0	0	1	0	235	0	0	149	2
Hourly Total	0	0	9	0	0	2	0	999	1	0	547	**9**
9:00am	0	0	1	0	0	1	0	181	0	0	117	1
9:15am	0	0	0	0	0	1	0	182	0	0	113	1
9:30am	0	0	0	0	0	1	0	200	0	0	123	1
9:45am	0	0	2	0	0	1	0	173	0	0	126	2
Hourly Total	0	0	3	0	0	**4**	0	736	0	0	479	5
3:00pm	0	0	7	0	0	2	0	390	0	0	301	7
3:15pm	0	0	7	0	0	2	0	351	0	0	370	8
3:30pm	0	0	6	0	0	2	0	315	0	0	353	9
3:45pm	0	0	5	0	0	3	0	292	1	0	319	8
Hourly Total	0	0	**25**	0	0	**9**	0	1348	1	0	1343	32
4:00pm	0	0	4	0	0	2	0	321	0	0	335	7
4:15pm	0	0	4	0	0	2	0	324	1	0	405	7
4:30pm	0	0	5	0	0	2	0	315	2	0	400	7
4:45pm	0	0	4	0	0	1	0	302	1	0	397	6
Hourly Total	0	0	17	0	0	7	0	1262	**4**	0	1537	27
5:00pm	0	0	4	0	0	2	0	310	2	0	370	6
5:15pm	0	0	6	0	0	1	0	306	2	0	362	6
5:30pm	0	0	6	0	0	1	0	315	1	0	371	7
5:45pm	0	0	7	0	0	2	0	301	0	0	367	8
Hourly Total	0	0	23	0	0	6	0	1232	5	0	1470	27
6:00pm	0	0	7	0	0	2	0	315	1	0	339	8
6:15pm	0	0	6	0	0	1	0	318	0	0	340	8
6:30pm	0	0	6	0	0	1	0	288	1	0	348	10
6:45pm	0	0	5	0	0	1	0	257	0	0	309	8
Hourly Total	0	0	24	0	0	5	0	1178	2	0	1336	**34**
AM Peak			**29**			**4**			**6**			**9**
PM Peak			**25**			**9**			**4**			**34**

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

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

MEETING DATE: April 12, 2022

ATTENDEES: Ronald R. Bohannan 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 __X__ Site Development Plan

__X__ 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 - $Ts = (Tt) (Se / D) / (Se / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Se = Subarea Employment
D = Distance from Development to Subarea

Office/Industrial - $Ts = (Tt) (Sp / D) / (Sp / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population
D = Distance from Development to Subarea

Commercial -
$Ts = (Tt) (Sp) / (Sp)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = 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:
    a. Existing analysis __ yes _X_ no - year (N/A);
    b. Phase implementation year(s) without proposed development – 2025
    c. Phase implementation year(s) with proposed development – 2025
    d. Project completion year without proposed development – 2035
    e. Project completion year with proposed development – 2035
    f. 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:
    a. None

13. Items to be included in the study:
    a. Intersection analysis. Yes
    b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method: Not Required
    c. Arterial LOS analysis; Not Required
    d. Recommended street, intersection and signal improvements. Yes
    e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility. Yes
    f. Transportation system impacts. Yes
    g. Other mitigating measures. None.
    h. Accident analyses _X_ yes __ no; Location(s): Sage Rd. / Unser Blvd. – 5 year crash history
    i. Weaving analyses __ yes _X_ no; Location(s):

14. Other:

SUBMITTAL REQUIREMENTS:

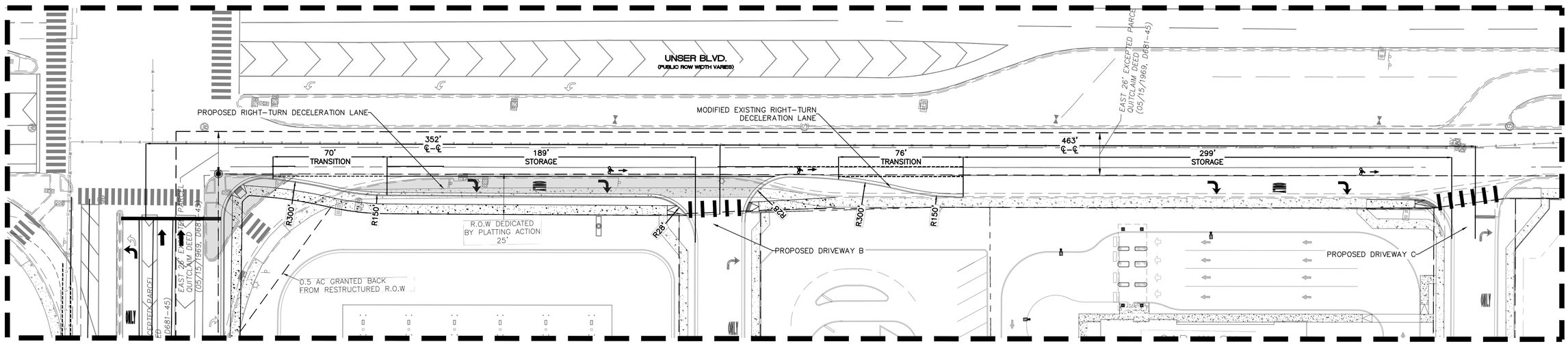
1. Number of copies of report required
    a. CoA - 1 digital copy – Yes (no paper copy)
    b. Bernalillo County – Yes (one hard copy in 3-ring binder & a digital copy)
2. CoA Submittal Fee – $1300 for up to 3 reviews

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.

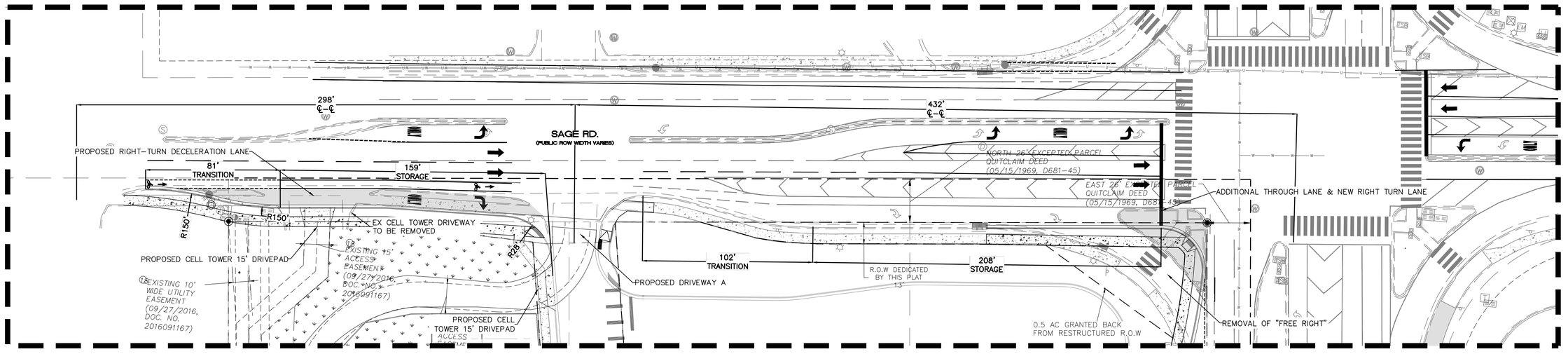
MP P.E. 4/14/2022

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

via: email
C: TIS Task Force Attendees, file



DRIVEWAY B & C EXHIBIT
1:30



DRIVEWAY A & SERVICE TOWER EXHIBIT
1:30

ENGINEER'S SEAL	SAGE AND UNSER DEVELOPMENT ALBUQUERQUE, NM	DRAWN BY MR
	MITIGATION EXHIBITS	DATE 1/30/2025
		DRAWING
	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	SHEET #
RONALD R. BOHANNAN P.E. #7868		JOB # 2024029

ENGINEER'S SEAL	SW CORNER SAGE AND UNSER RIO RANCHO, NM	DRAWN BY AH
	PAVEMENT EXHIBIT	DATE 2-27-23
		DRAWING
	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrowestllc.com	SHEET #
RONALD R. BOHANNAN P.E. #7868		JOB #

Current DRC
Project Number: **N/A**

FIGURE 12

Date Submitted: **03-17-2025**
Date Site Plan Approved: **04-02-2025**
Date Preliminary Plat Approved: **N/A**
Date Preliminary Plat Expires: **N/A**
DFT Project No.: **PR-2020-004014**
DFT Application No.: **SI-2024-00747**

INFRASTRUCTURE LIST

(Rev. 2-16-18)

EXHIBIT "A"

TO SUBDIVISION IMPROVEMENTS AGREEMENT

DEVELOPMENT FACILITATION TEAM (DFT) REQUIRED INFRASTRUCTURE LIST

UNSER AND SAGE

PROPOSED NAME OF PLAT AND/OR SITE DEVELOPMENT PLAN

TRS 483 484 & 485 UNIT NO 7 ATRISCO GRANT CONT 15.000 AC

TR D-2 PLAT FOR TRACTS D-1, D-2, D-3 & D-4 ALBUQUERQUESOUTH UNIT 1 BEING A REPLAT OF TRACT D ALBUQUERQUESOUTH UNIT 1 CONT 2.6205 AC

EXISTING LEGAL DESCRIPTION PRIOR TO PLATTING ACTION

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This Listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non-essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Financially Guaranteed DRC #	Constructed Under DRC #	Size	Type of Improvement	Location	From	To	Construction Certification: Private Inspector	Private P.E.	City Cnst Engineer
		VARIES 17' TO 0'	Right Turn lane Paving 6' Sidewalk (South side) ADA Ramps (south side) Curb & Gutter (south Side)	SAGE RD SW	532' WEST OF UNSER BLVD	390' WEST OF UNSER BLVD	/	/	/
		VARIES 14' TO 0'	Right Turn Lanes	SAGE RD SW	337' WEST OF UNSER BLVD	UNSER BLVD	/	/	/
		6'	Sidewalk (south side) ADA Ramps (south side) Curb & Gutter (south Side)	SAGE RD SW	131' WEST OF UNSER BLVD	UNSER BLVD	/	/	/
		VARIES 10' TO 0'	Right Turn lane Paving ADA Ramps (West side) 6' Sidewalk (West side) Curb & Gutter (West Side)	UNSER BLVD SW	SAGE RD	289' SOUTH OF SAGE RD	/	/	/
		VARIES 17' TO 0'	Right Turn lane Paving 6' Sidewalk (West side) Curb & Gutter (West Side)	UNSER BLVD SW	318' SOUTH OF SAGE RD	434' SOUTH OF SAGE RD	/	/	/
		28' FC-FC	Major Local Paving, Curb & Gutter 6' Sidewalk (Both Sides)	ROADWAY A	SAGE RD	UNSER BLVD	/	/	/
		30' FC-FC	Major Local Paving, Curb & Gutter 6' Sidewalk	ROADWAY B	ROADWAY A	UNSER BLVD	/	/	/

Financially Guaranteed DRC #	Constructed Under DRC #	Size	Type of Improvement	Location	From	To	Construction Certification: Private Inspector	Private P.E.	City Cnst Engineer
		8"	Waterline	ROADWAY A	EXISTING WL 91' NORTH OF SAGE RD/ ROADWAY A	EXISTING WL 25' EAST OF UNSER BLVD/ ROADWAY A	/	/	/
		8"	Waterline	ROADWAY A	ROADWAY A	ALL PROPOSED CUL-DE-SAC	/	/	/
		8"	Sanitary Sewer Line	ROADWAY A	170' SOUTH OF SAGE RD/ ROADWAY A	150' WEST OF UNSER BLVD/ ROADWAY A	/	/	/
		55'	Mast Arm Reloctaion Pedestrian Pole Reloction	SW UNSER BLVD/ SAGE RD			/	/	/
		Type "D"	Drop Inlet Reloction	SAGE RD SW	58' WEST OF UNSER BLVD		/	/	/
			Street Light Relocations				/	/	/
							/	/	/
							/	/	/
							/	/	/
							/	/	/
							/	/	/

(Rev. 2-16-18)

listing. The Items listed below are subject to the standard SIA requirements.

Financially Guaranteed DRC #	Constructed Under DRC #	Size	Type of Improvement	Location	From	To	Construction Certification: Private Inspector	Private P.E.	City Cnst Engineer
			Engineer's Certification for Grading & Drainage is required for release of Financial Guarantee				/	/	/
							/	/	/

Approval of Creditable Items:

Impact Fee Admistrator Signature **Date**

Approval of Creditable Items:

City User Dept. Signature **Date**

NOTES

If the site is located in a floodplain, then the financial guarantee will not be released until the LOMR is approved by FEMA.

Street lights per City rquirements.

1 Water and sanitary sewer utilities will include all necessary appurtenances (manholes, valves, fire hydrants, etc..)

2 Pavement will include all necessary striping.

3 Signals and street Lights will include all necessary appurtenances

AGENT / OWNER

RONALD R. BOHANNAN, PE
NAME (print)

TIERRA WEST LLC
FIRM

#VALUE!
SIGNATURE - date

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

PLANNING- date

PARKS & RECREATION - date

TRANSPORTATION DEVELOPMENT - date

AMAFCA - date

UTILITY DEVELOPMENT - date

CODE ENFORCEMENT - date

CITY ENGINEER - date

HYDROLOGY-date

DESIGN REVIEW COMMITTEE REVISIONS

REVISION	DATE	DRC CHAIR	USER DEPARTMENT	AGENT /OWNER

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