
Traffic Impact Study Bluewater Galleria Albuquerque, NM

March 2025

Prepared for:

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The technical material and data contained in this document were prepared by the undersigned, whose seal as a Professional Engineer, licensed to practice in the State of New Mexico, is affixed below.

A handwritten signature in blue ink that reads "Timothy D. Simmons".

Timothy D. Simmons, PE, PTOE
03/06/2025



TABLE OF CONTENTS

SECTION	PAGE
Table of Contents	i
List of Figures	ii
1.0 EXECUTIVE SUMMARY	1
1.1 Purpose of Study.....	1
1.2 Principal Findings	1
1.3 Recommendations	1
2.0 INTRODUCTION	2
2.1 Description of Proposed Project.....	2
2.2 Project Location	2
2.3 Study Area	2
2.4 Scope of Analysis.....	2
2.5 Planned Developments or Projects in the Vicinity.....	3
3.0 STUDY AREA CONDITIONS	3
3.1 Existing Land Use & Zoning	3
3.2 Other Known Projects	3
3.3 Existing Roadway System.....	3
3.4 Transit Service	4
3.5 Bicycle & Pedestrian Facilities	4
4.0 ANALYSIS OF EXISTING CONDITIONS.....	4
4.1 Baseline Traffic Data	4
4.2 Existing Roadway Intersection Capacity	8
4.3 Crash Analysis	8
5.0 FUTURE TRAFFIC CONDITIONS	11
5.1 Background Traffic Projection	11
5.2 Proposed Site Development Characteristics	11
5.3 Site Access and Circulation.....	13
5.4 Trip Generation	13
5.5 Site Traffic Distribution and Assignment	14
6.0 TRANSPORTATION ANALYSIS	16
6.1 Traffic Operations Analysis	16
6.2 Queueing Summary	17
6.3 Assessment of Impacts	23
6.4 Mitigation Analysis	23
7.0 ACCESS DESIGN RECOMMENDATIONS.....	26
8.0 SUMMARY OF FINDINGS	27
9.0 RECOMMENDATIONS & MITIGATION MEASURES.....	27

APPENDICES

- APPENDIX A – Traffic Scoping Requirements
- APPENDIX B – Baseline Traffic Data
- APPENDIX C – Crash Data
- APPENDIX D – Forecast Traffic Data
- APPENDIX E – LOS Worksheets
- APPENDIX F – Mitigation Analysis LOS Worksheets
- APPENDIX G – Site Traffic Proportional Calculations

LIST OF TABLES

<u>Table</u>	<u>Page</u>
<i>Table 1: Summary of Crashes at Three Study Intersections</i>	9
<i>Table 2: Estimated Site Trip Generation</i>	14
<i>Table 3: Trip Distribution Summary</i>	14
<i>Table 4: Intersection Level of Service (LOS) Criteria (HCM 6th Ed.)</i>	16
<i>Table 5: Available Queuing Capacity</i>	17
<i>Table 6: LOS Summary for Baseline Conditions</i>	18
<i>Table 7: LOS Summary for Implementation NO-Build (2025)</i>	19
<i>Table 8: LOS Summary for Implementation BUILD (2025)</i>	20
<i>Table 9: LOS Summary for Horizon NO-Build (2035)</i>	21
<i>Table 10: LOS Summary for Horizon BUILD (2035)</i>	22
<i>Table 11: LOS Summary for Mitigation Scenario 1</i>	24
<i>Table 12: LOS Summary for Mitigation Scenario 2</i>	25
<i>Table 13: LOS Summary for Mitigation Scenario 3</i>	25

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
<i>Figure 1: Vicinity Map</i>	3
<i>Figure 2: Existing Roadway Network</i>	5
<i>Figure 3: AM Peak Hour Volumes (Baseline)</i>	6
<i>Figure 4: PM Peak Hour Volumes (Baseline)</i>	7
<i>Figure 5: Total Crashes at Three Study Intersections</i>	10
<i>Figure 6: Proposed Site Development Plan</i>	12
<i>Figure 7: Site Trip Assignment</i>	15

1.0 EXECUTIVE SUMMARY

1.1 Purpose of Study

This report documents the results of a Traffic Impact Study (TIS) for a proposed commercial land development located in Southwest Albuquerque, NM on Unser Blvd. between Bluewater Rd. and Los Volcanes Rd. The purpose of this TIS is to assess traffic operations associated with traffic generated by this proposed project on the adjacent transportation network, specifically Unser Blvd.

This study evaluated both the existing and proposed conditions on Unser Blvd. and was conducted in accordance with the City of Albuquerque Development Process Manual (COA DPM) Article 7-5, Traffic Studies. Study requirements were established through a traffic scoping meeting held with the COA Planning staff and New Mexico Department of Transportation (NMDOT) District 3 Traffic Engineering staff (see scoping meeting minutes, Appendix A).

1.2 Principal Findings

Key findings of this analysis are summarized as follows:

1. The Unser corridor provides commuter access to I-40 as well as local access to adjacent industrial and commercial areas. For existing (baseline) conditions, SBT traffic volumes exceed capacity at Bluewater and Los Volcanes in the PM peak and NBT in the AM at Los Volcanes. Major geometric to the Unser corridor consisting of additional through will be needed to accommodate current traffic conditions as well as background traffic growth.
2. Site-generated traffic is not expected to cause significant, adverse impacts to the adjacent roadway network, including the traffic signalized intersections along Unser, but would incrementally increase delay.
3. A tabulation of intersection traffic volumes showed the proposed site development would only contribute about 1% to 2% to these intersections (see Appendix G). Therefore, no physical modifications are recommended as part of this project but should be noted for ongoing monitoring and future implementation through the normal course of traffic operations and maintenance activities.

1.3 Recommendations

This analysis has demonstrated that significant detrimental traffic impacts associated with the proposed commercial development project are not expected to occur on the adjacent transportation system. The following recommendations are offered regarding on- and off-site access modifications.

1.3.1 On-Site Access (Project Responsibility)

1. Two access driveways are proposed on local road Silver Creek:
 - a. Primary driveway for commercial access to the retail site.
 - b. Secondary gated access to serve the self-storage facility.
2. Maintain existing northbound right-turn lane (NBL) and driveway on Unser at the south boundary of the site.
 - a. Provide right-turn channelization to prohibit left turns exiting the site with pavement markings and delineation devices.
 - b. Install no left-turn sign.
 - c. Provide adequate turning radii for commercial vehicle traffic.
3. These driveways will be designed in accordance with City of Albuquerque Development Process Manual (COA DPM) requirements.

1.3.2 Off-Site Roadway Improvements (Non-Project)

This study supports regional improvements identified in the 2040 Metropolitan Transportation Plan (MTP) including:

1. **Unser Blvd. Corridor Improvements** – from Central Ave. to Bernalillo/Sandoval Co. line; completion of 4- or 6-lane roadway and multi-modal improvements.
2. **Unser Blvd./Central Ave. Intersection Improvements** – this project widened the intersection and extended three through lanes northward about half way to the Bluewater intersection; the through travel lanes should be fully extended to I-40.
3. **Freeway Overpasses Study** – additional regional improvements that propose to analyze locations for freeway overpasses crossing of I-40 including at 118th St., Atrisco Rd. and midpoint between Unser & Coors among other locations to alleviate congestion on Unser and 98th St.

2.0 INTRODUCTION

2.1 Description of Proposed Project

The project consists of a proposed retail and self-storage facility. Construction is projected to commence in year 2024 and is slated for opening by 2025.

2.2 Project Location

The project is located in southwest Albuquerque on the east side of Unser Blvd. between Bluewater Rd. and Los Volcanes Rd. as depicted in Figure 1.

2.3 Study Area

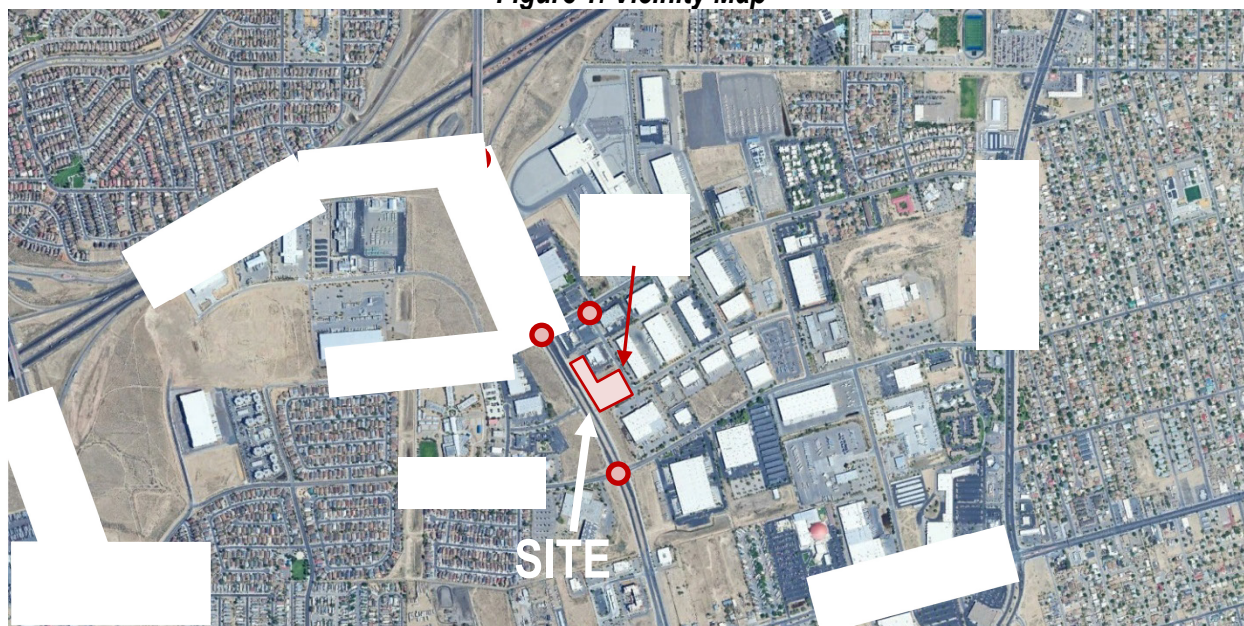
The study area encompasses the site and adjacent roadways including Unser Blvd. from Bluewater Rd. to the I-40 Eastbound Exit Ramp (I40EB Ramp). Also included in the analysis is the intersection of Silver Creek Rd. at Los Volcanes Rd. as the site will utilize this route for access.

2.4 Scope of Analysis

Primary tasks incorporated into this analysis include:

- A. **Data Collection** – including traffic volume counts, other roadway network parameters, and regional data for the traffic analysis.
- B. **Traffic Operations Analysis** – utilizing the collected data, computerized models were developed in *Synchro 12* software for analysis utilizing *Highway Capacity Manual (HCM)* procedures.
- C. **Geometric Evaluation** – consideration of safe access measures such as auxiliary lanes and/or access geometry to mitigate traffic impacts, if necessary.
- D. **Crash Tabulation** – a history of crash records was tabulated to evaluate potential safety concerns.

Figure 1: Vicinity Map



Source: Google Earth

2.5 Planned Developments or Projects in the Vicinity

Projects identified for reference in this study include a gas station with convenience market at the southwest quadrant of the Unser/Los Volcanes intersection and a commercial development at the Unser/Central intersection. No data from these projects were provided.

3.0 STUDY AREA CONDITIONS

3.1 Existing Land Use & Zoning

The site is zoned as a Business Park and is currently vacant. Adjacent land uses are developed with business park and light industrial uses as well as a gas station with convenience market located north of the site.

3.2 Other Known Projects

No pending infrastructure projects in the area were identified during the project scoping review. Three projects were found in the Mid-Region Council of Governments (MRCOG) list of projects under the 2040 Metropolitan Transportation Plan (MTP):

1. **Unser Blvd. Corridor Improvements** – from Central Ave. to Bernalillo/Sandoval Co. line; completion of 4- or 6-lane roadway and multi-modal improvements. It is unclear from the description whether this portion of Unser Blvd. is included. It is listed as a “near term” project within fiscal years 2026 through 2030.
2. **Unser Blvd./Central Ave. Intersection Improvements** – this project widened the intersection and extended three through lanes northward about half way to the Bluewater intersection.
3. **Freeway Overpasses Study** – this “late term” project proposes to analyze locations for freeway overpasses crossing I-25 and I-40 including at 118th St., Atrisco Rd. and midpoint between Unser & Coors among other locations.

3.3 Existing Roadway System

The existing study street network is shown in Figure 1 and described below. These routes are within the jurisdiction of the City of Albuquerque (COA) and with designations as shown on the Functional Classification

in the Albuquerque Metropolitan Planning Area by the Mid-Region Council of Governments (MRCOG). The study network is illustrated graphically in Figure 2.

3.3.1 Unser Blvd.

Designated as a Regional Principal Arterial, the route has a posted speed of 45 mph and consists of four travel lanes, an inverted median, curb & gutter, and concrete sidewalks. Intersection approach or spot lighting exists at the signalized intersections. Annual Average Daily Traffic (AADT) on Unser Blvd. was 33,711 in 2023. Unser is designated as a bike route and future bike lanes are proposed. Presently there are multi-use trails along Unser consisting of a 10' concrete sidewalk/trail on the east side as well as a 5' concrete sidewalk and adjacent 5' asphalt paved trail on the west side.

3.3.2 Bluewater Rd.

A Major Collector roadway with AADT in 2023 of 6,880 west of Unser, the roadway consists of 2 travel lanes, curb & gutter, and concrete sidewalks with a posted speed of 40 mph. Bluewater has marked bike lanes but there is a gap on the west approach to Unser.

3.3.3 Los Volcanes Rd.

A 2-lane Major Collector with curb & gutter and continuous sidewalks on the east side and intermittently at developed parcels on the west side. There is also a continuous two-way left-turn lane (TWLTL) east of Unser. The posted speed is 35 mph and 2023 AADT was 9,047. Bike lanes exist east of Unser.

3.3.5 Interstate 25

I-25 has 4 general purpose travel lanes plus auxiliary lanes approaching the interchange with a posted at 65 mph. The existing eastbound exit ramp terminates at a stop-controlled intersection for left turns and a sweeping free right-turn lane with an add-lane on Unser that extends to Los Volcanes.

3.4 Transit Service

Routes 92 and 94 run along Unser from the transit station at Central Ave. Currently there are no bus stops or local routes serving this portion of Unser.

3.5 Bicycle & Pedestrian Facilities

Existing bike & ped facilities are described in §3.3. Unser is designated as with a Paved Multiple Use Trail, and is also designated for a Proposed Bike Lane. The site is on the periphery of a Premium Transit Station at Unser & Coors.

4.0 ANALYSIS OF EXISTING CONDITIONS

4.1 Baseline Traffic Data

Historic traffic volumes were obtained from the NMDOT Transportation Data Management System via the MS2 web host (accessed via <https://nmdot.public.ms2soft.com/tcds/tsearch.asp?loc=nmdot>) and are summarized in Appendix B. In addition, manual turning movement counts (TMCs) were also conducted for use in analyzing traffic operations and intersection capacity for the study intersections. These were collected on September 19, 2024 during the AM peak period (0700-0900) and PM peak period (1600-1800) correlating with trip generation estimates. Because the signalized intersections along Unser comprise a coordinated network, combined peak hour periods for the corridor were established as beginning at 0715 and 1630 hours (4:45 p.m.), respectively.

Existing peak hour traffic volumes used for this analysis are presented in Figures 3 and 4, representing baseline conditions. Detailed reports of the TMC data and supporting volume counts are contained in Appendix B. Graphic exhibits depicting the roadway network and TMCs are provided in Appendix E.

Figure 2: Existing Roadway Network

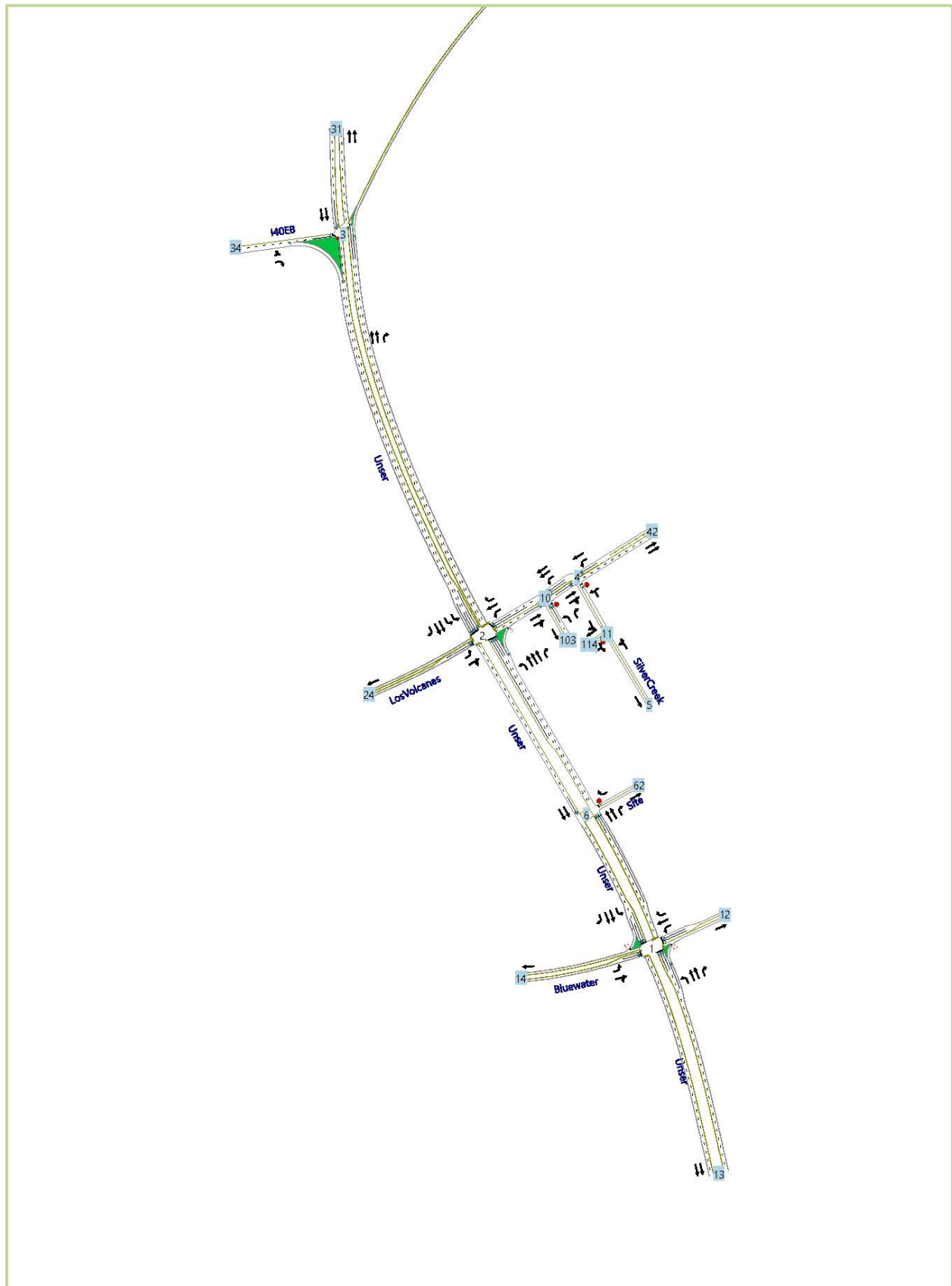


Figure 3: AM Peak Hour Volumes (Baseline)

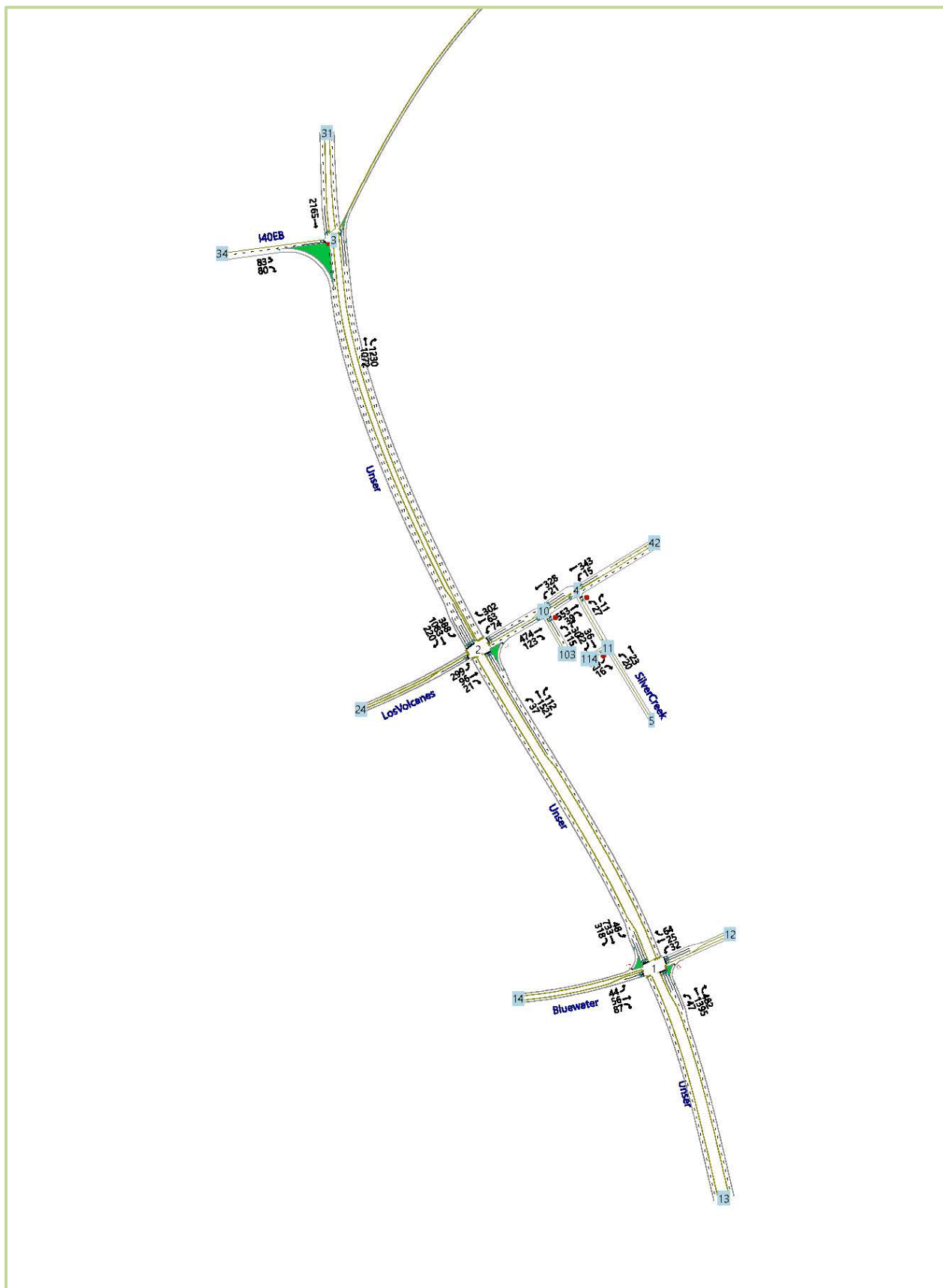
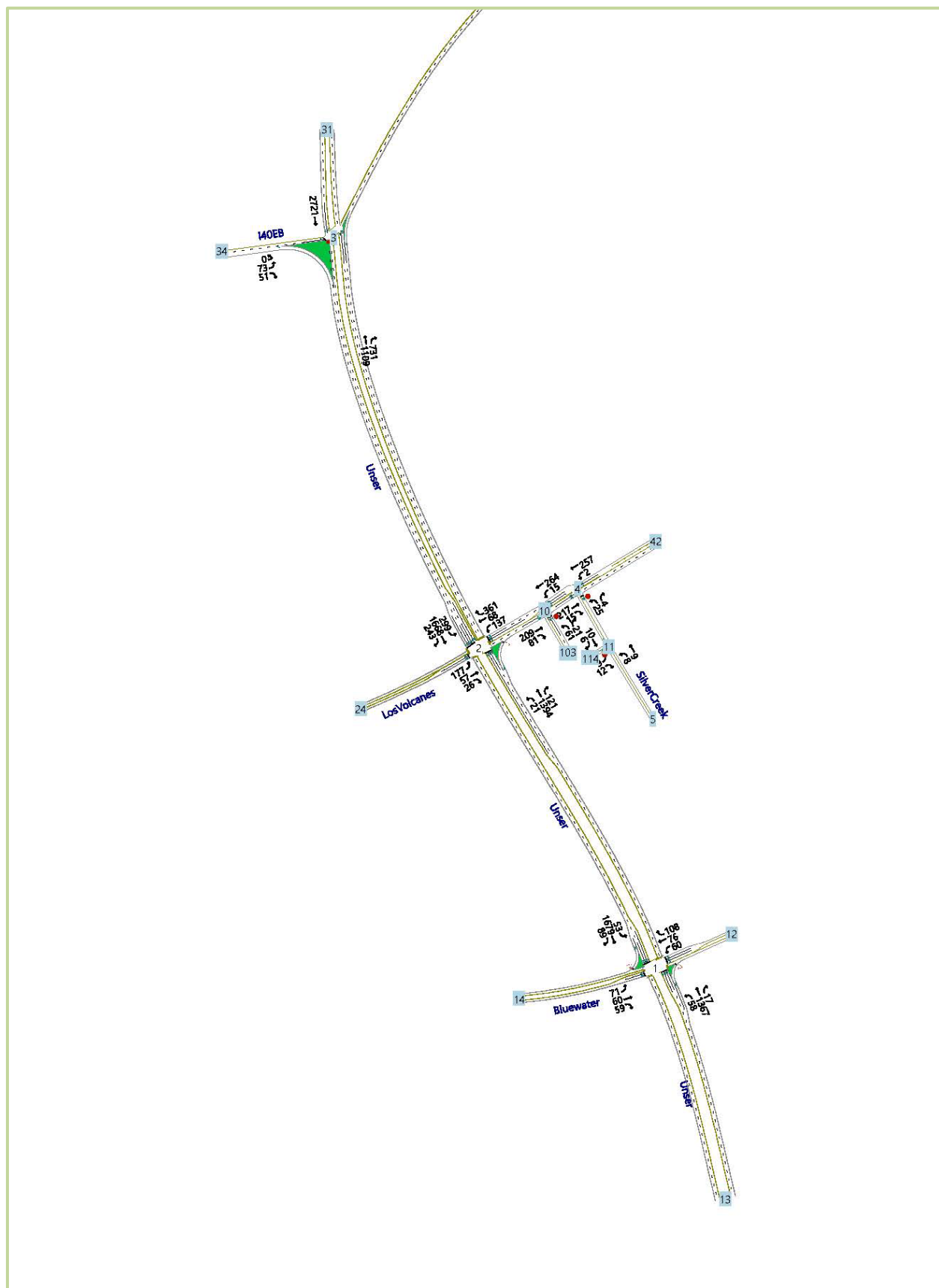


Figure 4: PM Peak Hour Volumes (Baseline)



4.2 Existing Roadway Intersection Capacity

An analysis of the study intersections was conducted for the existing baseline conditions as described in Section 6.1 of this report. These were analyzed with the existing traffic signal timing plans as provided in Appendix B. The major intersections operate at satisfactory levels of service (LOS) D or above as summarized in Table 4 (see Appendix E for LOS worksheets) with the exception of the Unser/I40EB Ramp that is LOS F.

4.3 Crash Analysis

Crash records within the study area were requested from the NMDOT Traffic Safety Division's database for the most-recent 5-year period available at the time of publication to evaluate potential safety issues at the four study intersections. The focus for this study was on a more generalized review of recurring crash patterns that could pose safety concerns relative to the proposed project and that could be addressed in the design stage of project development.

The raw crash data spreadsheets are contained in Appendix C with the most relevant columns displayed for clarity. These were tabulated in separate summary sheets by intersection to better evaluate crash classifications and contributing causes with the total for all study intersections summarized in Table 1 (it is noted that probable cause factors were discontinued from the records after 2019). Many of the records lacked suitable details on the classification or types of crashes.

Overall, the rate has been somewhat flat but there has been a slight increase in the total number of crashes through the evaluation period as illustrated in Figure 5 with the highest concentration of crashes occurring at the Los Volcanes intersection. Following is a summary of the three study intersections:

1. Top three crash classifications overall included:
 - a. Sideswipe – Same Direction (41%)
 - b. Right Angle (31%)
 - c. Sideswipe – Opposite Direction (14%)
2. The majority of the crashes occurred during daylight hours (65%), and during clear or dry conditions 94% of the time.
3. Three pedestrian and one bicycle injury crashes were recorded in this data set, amounting to 1.5% of the overall total:
 - a. Two pedestrian crashes at the Bluewater intersection in 2022, 2023 at night in the dark;
 - b. One pedestrian crash at the Los Volcanes intersection in 2022 at night in the dark;
 - c. One bicycle collision at the I40 EB Off Ramp during daylight hours.
4. One fatality was identified in this evaluation, amounting to 0.4% of the total number of crashes.

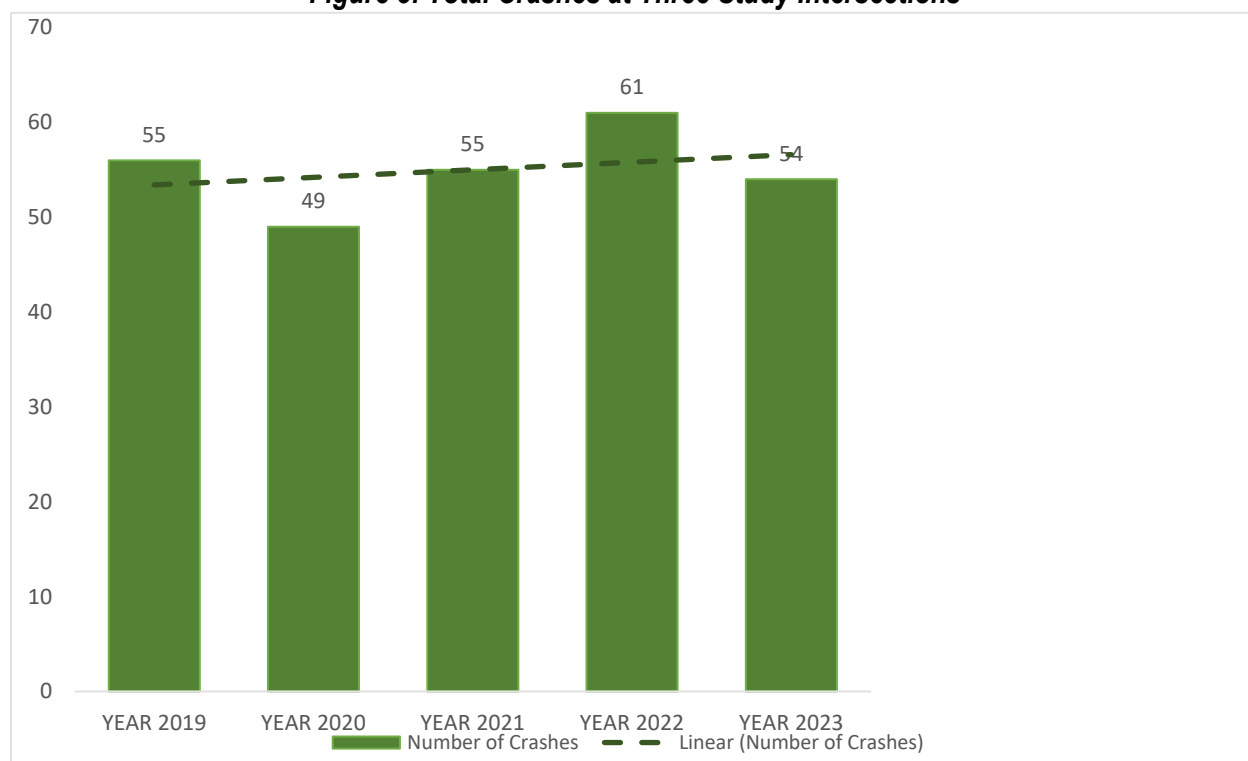
Crash summaries for the individual study intersections are tabulated in Appendix C, with specific issues identified as outlined following Figure 5.

Table 1: Summary of Crashes at Three Study Intersections

ROUTE MP # TO MP #	YEAR 2019		YEAR 2020		YEAR 2021		YEAR 2022		YEAR 2023		TOTAL	
	No. 55	20%	No. 49	18%	No. 55	20%	No. 61	22%	No. 54	20%	No. 274	% 100
CRASH SEVERITY												
Property Damage Only (PDO)	33	60	30	61	31	56	43	70	35	65	172	63
Injury/Non-Fatal	22	40	19	39	24	44	18	30	18	33	101	37
Fatal	0	0	0	0	0	0	0	0	1	2	1	0
CRASH CLASSIFICATION (ACCIDENT TYPE)												
Fixed Object	2	5	2	7	0	0	0	0	0	0	4	2
Right Angle	9	23	6	21	19	39	17	33	15	33	66	31
Rear End	3	8	5	18	0	0	1	2	0	0	9	4
Backing	0	0	0	0	0	0	0	0	0	0	0	0
Sideswipe: Same Direction	14	36	4	14	20	41	24	47	26	57	88	41
Sideswipe: Opposite Direction	4	10	6	21	10	20	6	12	4	9	30	14
Head On	0	0	0	0	0	0	0	0	0	0	0	0
Left Turn	6	15	4	14	0	0	0	0	0	0	10	5
Parked Vehicle/Parking Maneuver	0	0	0	0	0	0	0	0	0	0	0	0
Overturn	1	3	0	0	0	0	0	0	0	0	1	0
Driveway/Driveway Maneuver	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian/Bicyclist	0	0	1	4	0	0	2	4	1	2	4	2
Other	0	0	0	0	0	0	1	2	0	0	1	0
PROBABLE CAUSE ("HIGHEST CONTRIBUTING FACTOR")*												
Following Too Close												
Driver Inattention												
Excess Speed/Too Fast For Conditions												
Avoid Other Vehicle												
Improper Driving												
Failure to use Turn Signal												
Failure to Yield R.O.W.												
Disregard Traffic Control Device												
Under Influence Alcohol												
Mechanical Defect												
Pedestrian Error												
Road Defect/Construction Activity												
Other												
ROAD CONDITIONS												
Dry/Clear	39	95	41	95	51	96	50	91	43	91	224	94
Wet	1	2	0	0	1	2	1	2	0	0	3	1
Snowy/Icy	0	0	2	5	0	0	0	0	0	0	2	1
Other	1	2	0	0	1	2	4	7	4	9	10	4
LIGHTING												
Daylight	27	66	31	70	32	62	41	67	33	61	164	65
Darkness	13	32	13	30	19	37	15	25	18	33	78	31
Dawn or Dusk	1	2	0	0	1	2	5	8	3	6	10	4
SOBRIETY												
Sobriety Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Had Been Drinking/Drug	2	4	1	2	1	2	1	2	4	7	9	3
Had Not Been Drinking/Drug	53	96	52	98	58	98	64	98	53	93	280	97

*Probable cause information excluded from post-2019 records.

Figure 5: Total Crashes at Three Study Intersections



1. **Node 1 – Unser / Bluewater**

- Total crashes = 85: 2019 = 16, 2020 = 19, 2021 = 11, 2022 = 19, 2023 = 20.
- Top three crash classifications: Right Angle 31%, Sideswipe – Same Direction 28%, Sideswipe – Opposite Direction 21%.
- The collective number of sideswipe collisions may be indicative of narrow lanes and/or inadequate lane delineation.

2. **Node 2 – Unser / Los Volcanes**

- Total crashes = 165: 2019 = 30, 2020 = 26, 2021 = 40, 2022 = 38, 2023 = 31.
- Top three crash classifications: Sideswipe (Same Dir.) 48%, Right Angle 32%, Sideswipe (Opp. Dir.) 10%.
- This intersection exhibits similar issues to Node 1 although with higher incidences of rear-end collisions likely reflect the heavy through traffic and lengthy queues. Sideswipes in the same direction may be related to the dual left-turn lanes or unclear lane transitions. Sideswipes in opposite direction most likely relate to east-west traffic movements and could be affected by narrow lanes or poorly delineated lane transitions. All of these crash types may be exacerbated by the congested conditions at this intersection.

3. **Node 3 – Los Volcanes / I40 EB Ramp**

- Total crashes = 24: 2019 = 9, 2020 = 4, 2021 = 4, 2022 = 4, 2023 = 3.
- Top three crash classifications: Sideswipe (Same Dir.) 37%, Right Angle 26%, Sideswipe (Opp. Dir.) 21%.
- The number of right-angle collisions is moderately low considering the heavy through traffic volumes, high speed, and lengthy delays experienced by left-turning traffic from the ramp. Sideswipe incidences could be related to merging traffic for the EB-SB movement, though this has an add-lane and perhaps drivers change lanes inappropriately.

It should be noted that the crash record database typically lags 1-2 years, and data evaluated for this study is approaching 6 years old for 2019. Nevertheless, this summary and potential mitigating measures may be useful to the NMDOT D3 and COA staff in ongoing planning and engineering activities to improve safety at these study intersections.

5.0 FUTURE TRAFFIC CONDITIONS

5.1 Background Traffic Projection

This project was initiated in 2024 with construction and project opening projected to be completed by year 2025, which was established as the Implementation Year. A Horizon Year analysis typically incorporates the Implementation Year plus 10 years, thus traffic projections up to year 2035 were required.

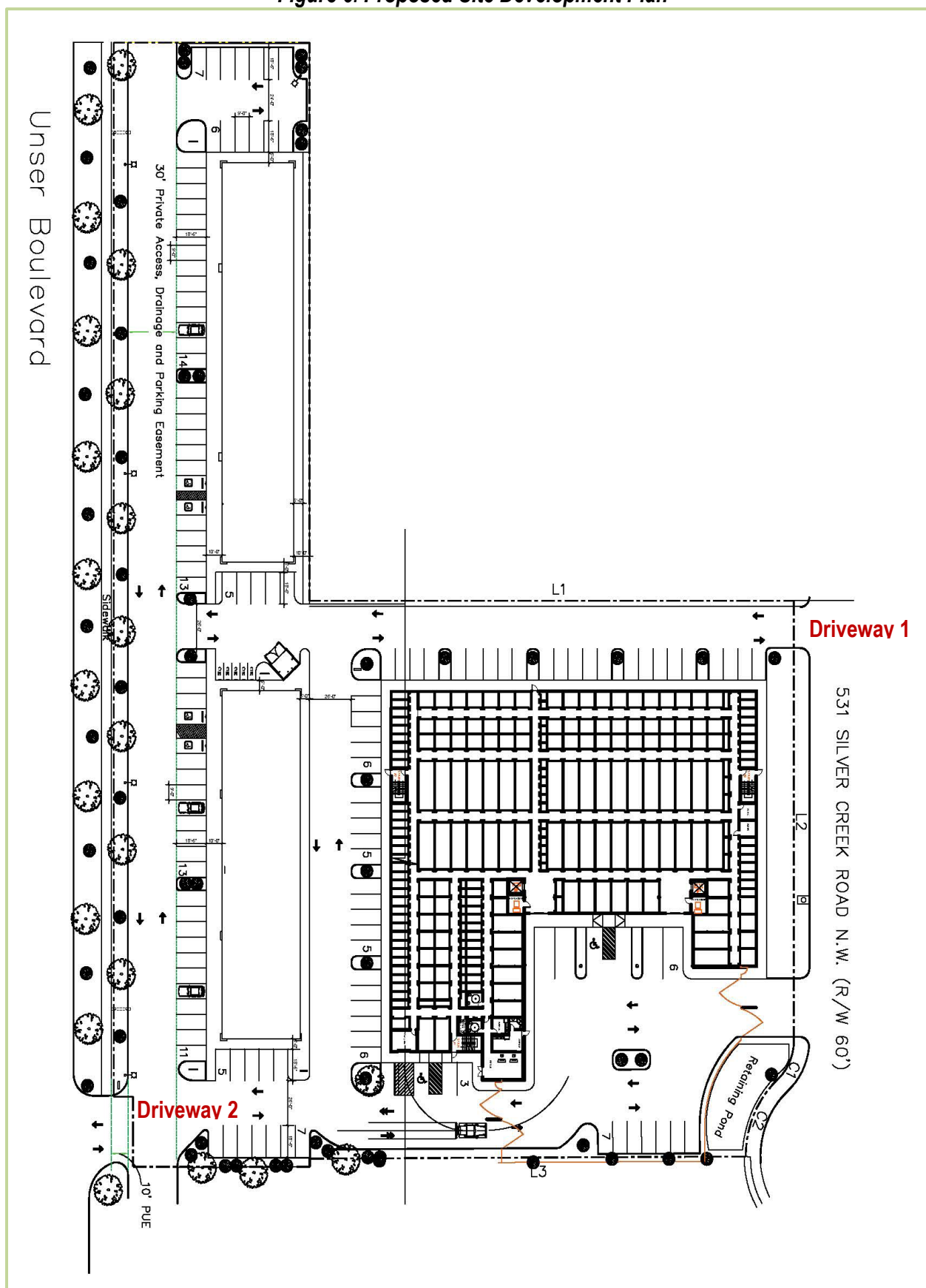
Forecast traffic volumes in year 2040 for the study area were obtained from the MRCOG travel demand forecast model (TDFM). TDFM output for the study area links by direction are presented in Appendix D; note that several columns were hidden for clarity. Forecast link volumes were then interpolated between the baseline (2016) and forecast (2040) TDFM scenarios to derive the Horizon (2035) Year forecast traffic volumes for the study roadway links, which would then be applied to the TMCs distribution percentages collected for this study in order to derive the Implementation (2025) and Horizon (2035) Year forecast turning movement volumes. All of the links in the study area showed negative growth or decline based on the TDFM development trends and resulting travel patterns. Moreover, the projected daily volumes were not proportionate to the existing AADTs in some cases. Therefore, the TDFM projected link volumes were rejected for this analysis because the southwest area of Albuquerque has experienced much growth.

Historical values from 2014 through 2023 are presented on bar charts in Appendix B for consideration of background traffic growth rates. These annual volumes were plotted graphically for trendline analysis to determine background traffic growth rates for the study network roads, yielding a variety of annual growth rates. A population estimate for Bernalillo County was prepared by the University of New Mexico (UNM) Bureau of Business and Economic Research (BBER) for the period of 2010 through 2035 which yielded a growth rate of approximately 1.0% per year over that period. While population growth may not directly equate to traffic growth, recent development activity in the vicinity suggests moderate growth potential. Therefore, an annual growth rate of 1.0% was applied to Unser and Bluewater and 2.4% for Los Volcanes west for the next 11 years to the horizon year of 2035. Using the simple interest formula $F = P(1 + i)^n$, this translates to a growth factor of $G_{11} = (1.01)^{11} = 1.12$ and **1.30** for Bluewater; Bluewater's rate is higher due to the availability of undeveloped land and current distribution center development projects. These growth factors were applied to the traffic movements by approach in the baseline traffic models to expand background traffic volumes for analysis of the forecast traffic scenarios. The resulting background traffic volumes used in this analysis are provided graphically in Appendix E in advance of the LOS worksheets and are also tabulated in the LOS summary tables in Section 6.1.

5.2 Proposed Site Development Characteristics

The project is comprised of commercial uses including a strip retail center and a self-storage facility as depicted in Figure 6. The self-storage facility will have access-controlled gates. Construction is projected to commence and full buildout is assumed to be completed by 2025.

Figure 6: Proposed Site Development Plan



5.3 Site Access and Circulation

As shown on Figure 6, access is proposed via the following site driveways.

1. **Site Driveway 1** – a new full access driveway on Silver Creek south of Los Volcanes and just north of Meridian Place where it “dog-legs” and turns eastward. This driveway is located along the north property line of the site (see Figure 6). While a second driveway is proposed at the south property boundary, it will be a gated access limited to the self-storage units and therefore wasn’t analyzed separately; rather, the northern access was analyzed as inclusive of the self-storage traffic. There will be ample depth for queuing and traffic circulation, and this driveway will be connected to internal circulation drives.
2. **Site Driveway 2** – an existing 36’ wide, half access on Unser consisting of right-in/right-out (RIRO) turning movements located at the south end of the site. This driveway also is connected with internal circulation roads as well as an existing 30’ private access easement at the west boundary and parallel to Unser. This easement runs northward and through the adjacent Maverik gas station & convenience mart. To utilize this easement, traffic would have to traverse the gas station and exit directly onto Los Volcanes or indirectly via Silver Creek to Los Volcanes. Because of congestion within the gas station lot and out-of-direction travel, it was assumed that limited amounts of traffic would utilize this easement as a diverted link trip; instead, access was concentrated at Driveway 2 which gives more conservative analysis.

Sidewalk will need to be extended across the property along Silver Creek to provide pedestrian access at Driveway 1. Sidewalk exists along Unser and will be connected at Driveway 2.

5.4 Trip Generation

Institute of Transportation Engineers Trip Generation, 11th Edition (ITE, 2021) was used to estimate traffic generated by the proposed development. The peak of the adjacent street was selected for the calculations indicative of urban/suburban traffic patterns for typical AM and PM peak periods (i.e., 7-9 a.m., 4-6 p.m., respectively).

The following steps and assumptions were applied to the data:

1. The “peak hour of the adjacent street traffic” was the criterion selected for the calculations as this would most likely be impacted by site traffic during typical AM and PM peak periods given the characteristics of the proposed land uses. In the vicinity of the site, Unser is urbanized and thus “general urban/suburban” data were selected;
2. Gross floor area (GFA) was used for the independent variable on the retail site while number of storage units was the independent variable for the self-storage facility;
3. Fitted equations were applied if available, otherwise average rates were used;
4. Internal capture trips (ICT) were calculated using the National Cooperative Highway Research Program (NCHRP) Report 684;
5. Pass-by trips were calculated by ITE methodology and deducted from the existing through traffic;
6. Transit trip reductions were not accounted for as ridership data were not readily available and no existing transit routes exist along Unser.

The calculated site traffic volume estimates are contained in Appendix D and summarized in Table 2.

Table 2: Estimated Site Trip Generation

Description	ITE Code	Quant.	Units	Daily Total	AM			PM		
					Enter	Exit	Total	Enter	Exit	Total
Mini-Warehouse	151	8.35	SU ¹	153	6	5	11	7	7	14
Strip Retail Plaza (<40k)	822	19.4	GFA ¹	1,048	27	18	45	64	64	128
Total (unadjusted)				1,201	33	23	56	71	71	142
-Internal Capture Trips					0	0	0	0	0	0
-Pass-By Trips ³					0	0	0	0	0	0
Volume Added to Adjacent Street					33	23	56	71	71	142

¹Storage Units (100s).

²Gross Floor Area, per 1,000 square feet.

³Included with driveway volumes but deducted from through traffic on adjacent street.

5.5 Site Traffic Distribution and Assignment

Socioeconomic data developed as part of the regional travel demand forecast model (TDFM) maintained by the Mid Region Council of Governments (MRCOG) were utilized to distribute site trips in proportion to the population (productions) within a 2-mile radius of the commercial property (attractions) according to the following formula:

$$Ts = (Tt) (Sp) / (Sp)$$

Ts = Development to Individual Subarea Trips

Tt = Total Trips

Sp = Subarea Population

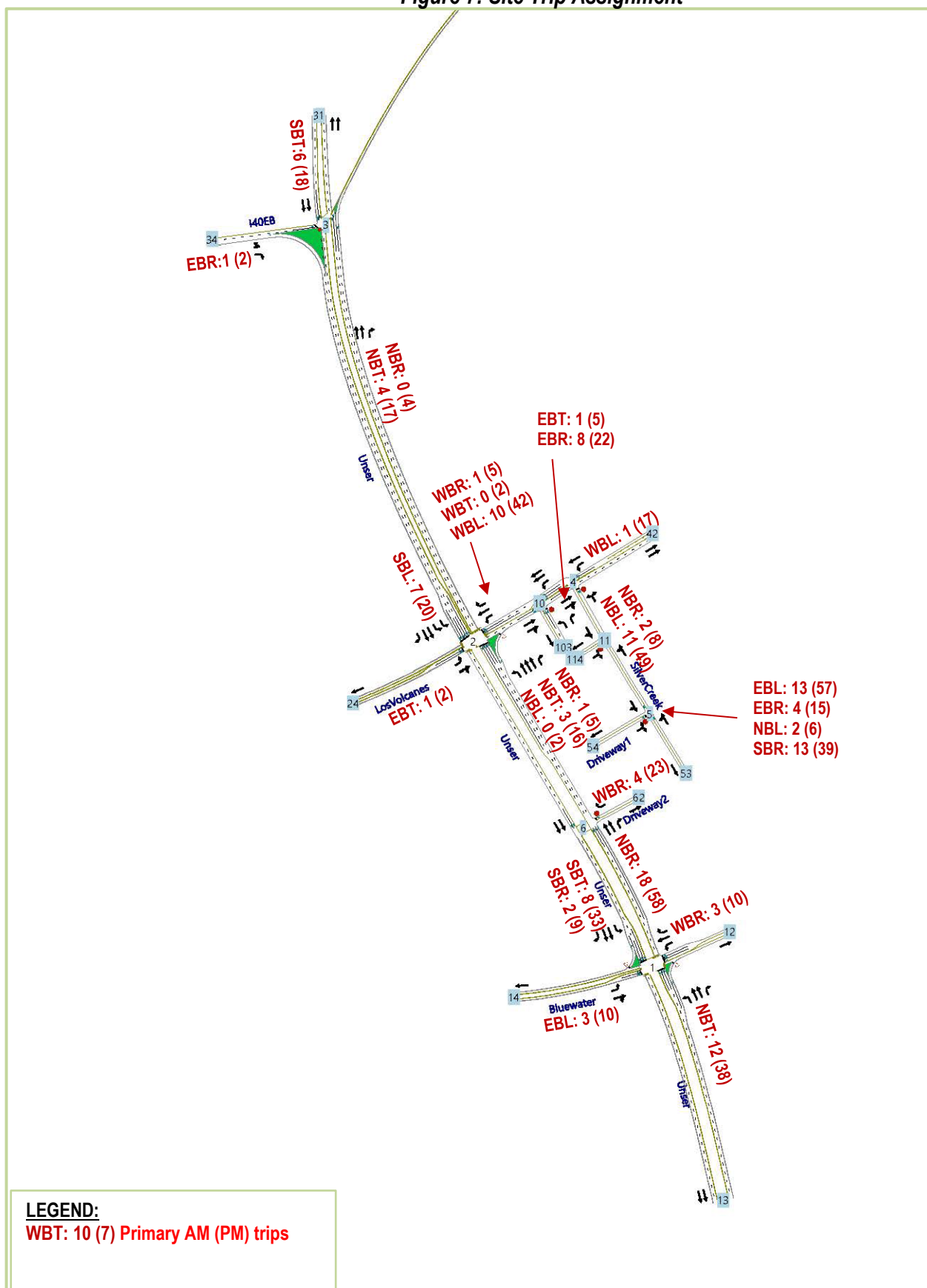
The calculations entailed the TDFM baseline (2016) and forecast (2040) populations interpolated to the implementation year (2025). The area distribution map and associated calculations are contained in Appendix D. The resulting trip distribution percentages are tabulated in Table 3.

Table 3: Trip Distribution Summary

Route and Traffic Movement	%
% from/to Unser NORTH	18%
% from/to Los Volcanes NORTHEAST	16%
% from/to Bluewater SOUTHEAST	16%
% from/to Unser SOUTH	37%
% from/to Bluewater SOUTHWEST	10%
% from/to Los Volcanes NORTHWEST	3%
Total	100%

These distribution percentages were applied to the estimated site trips in Table 2, and 70% of the proposed trips were then assigned to Driveway 1 and 30% to Driveway 2. This is because of the RIRO access limitations at Driveway 2, whereas Driveway 1 provides indirect routing to more directions. The distributed trips are shown in **red** text in Figure 7 as well as in the map views and on the "Future Volume" rows in the level of service worksheets contained in Appendix E. It should be noted that some of the trips may traverse through an intersection twice as inbound or outbound trips (e.g., traffic exiting Driveway 2 goes north while inbound traffic from the south turns right at Los Volcanes).

Figure 7: Site Trip Assignment



6.0 TRANSPORTATION ANALYSIS

6.1 Traffic Operations Analysis

Intersection “nodes” constrain the capacity of a roadway segment, and therefore the baseline capacity of the study intersections were analyzed using the *Highway Capacity Manual 7th Edition (HCM)* methodology. The Level of Service (LOS) for an intersection is determined by the computed or measured delay and is defined for each minor movement at signalized, unsignalized, and roundabout intersections. LOS is assigned a letter grade from A (best) through F (worst), as summarized in Table 4 for signalized and unsignalized intersections. Signalized intersections have higher levels of delays due to higher volumes and driver expectation of greater delays. LOS D is generally considered acceptable in urban areas with right-of-way constraints; however, COA DPM Table 7.5.88 provides additional LOS criteria by location and corridor type. The site is situated within ¼ mile of a Premium Transit Corridor and Unser ties into the West Route 66 Activity Center; thus, LOS E should be considered the threshold.

Table 4: Intersection Level of Service (LOS) Criteria (HCM 6th Ed.)

LOS ¹	Signalized Control Delay (sec/veh)	Unsignalized Control Delay (sec/veh)
A	0 – 10	0 – 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

¹For Volume-to-Capacity Ratio (V/C) ≤ 1.0; LOS = F for V/C > 1.

6.1.1 Software

Synchro 12 software package by *Trafficware Ltd.* was utilized to establish the traffic network along Unser and compute the results in HCM format. *Synchro* provides better functionality for urban traffic network analysis and was used to report unsignalized intersection LOS as well as to distribute site trips via the TIA module.

6.1.2 Traffic Model Inputs

Following is a summary of the key settings applied for this analysis:

1. Default saturated flow of 1900 pc/h/ln was utilized for the Albuquerque metro area.
2. Peak hour factors (PHF) for each intersection were used rather than a common peak hour for the corridor to replicate demand and provide a slightly conservative analysis.
3. For forecast scenarios, the HCM de facto PHF of 0.92 was applied at a minimum; however, the existing PHF was maintained if greater than 0.92 as these intersections were projected to increase.
4. Traffic signal timing settings for the signalized intersections were provided by COA Traffic Engineering staff and input into the traffic models for analysis.
 - a. The signalized intersections are currently coordinated and therefore the appropriate time-of-day plans were used for the peak analyses and set to Actuated/Coordinated operation.
 - b. Nodes 1 & 2 were treated as north-south intersections with Phase 2 = NB.
 - c. Maximum splits were set to Max1 unless otherwise noted.

- d. Pedestrian timings were input but set to actuated mode rather than recall mode as observed in the field.
- e. Coordinated phasing splits were input by time-of-day settings with the cycle lengths of 120s for AM and PM peak periods, respectively.
- 5. Lane dimensions were measured with *Google Earth*®.
- 6. Free right-turn lane volumes were recorded but were not deducted from the signalized intersections as they are crucial for simulation; the software models right-turn on red (RTOR) using a gap acceptance formula to calculate saturated flow rates for these movements.

6.1.2 Operational Analysis Results

Capacity analyses were computed using the same, systematic method so results could be compared for these alternative scenarios:

1. **Scenario 1: Baseline (2024)** – represents existing conditions prior to development of the site utilizing traffic data collected in September 2024.
2. **Scenario 2: Implementation Year NO-Build (2025)** – baseline conditions plus background traffic growth without development, representing the implementation year operating conditions.
3. **Scenario 3: Implementation Year BUILD (2025)** – existing traffic plus background traffic growth and complete development traffic.
4. **Scenario 4: Horizon NO-Build (2035)** – existing traffic conditions plus background traffic growth without development, representing the horizon year operating conditions.
5. **Scenario 6: Horizon BUILD (2035)** – forecast conditions including background traffic growth and site traffic, to assess forecast traffic operations with developed conditions.

Computed results are contained in Appendix E and summarized in Tables 6 through 10.

6.2 Queueing Summary

Queue length measurements are useful in evaluating traffic operations and for determination of turn lane storage requirements. As shown in the *HCM Guide*, “The 95th-percentile queue is defined to be the queue length (in vehicles) that has only a 5-percent probability of being exceeded during the analysis time period.” A procedure for calculating queues is provided in the HCM and computations are included in the LOS worksheets in Appendix E. A summary of available turn lane storage lengths for critical traffic queues is provided in Table 5 for relevant turning lane groups that could be impacted with site traffic in the implementation year. Based on the calculated results listed in Tables 6 through 10, queues that may require mitigation were identified at the locations listed in Table 5.

Table 5: Available Queueing Capacity

Intersection	Movement	Available Storage ¹	Remarks ²
Node 1 (Bluewater)	EBL	90' / 4	4 veh. Scenario 5PM (o.k.)
Node 1 (Bluewater)	WBR	125' / 5	Scenario 2, 3, 4, 5 PM²
Node 2 (Los Volcanes)	WBL	220' / 9	
Node 2 (Los Volcanes)	WBR	430' / 17	17 veh. Scenario 5PM (o.k.)
Node 2 (Los Volcanes)	NBL	550' / 22	
Node 2 (Los Volcanes)	NBR	110' / 4	
Node 2 (Los Volcanes)	SBL	2 x 205' / 16	16 veh. Scenario 5AM (o.k.)

¹Storage length in feet or per number of vehicles (at an average of 25' per vehicle).

²Queue Storage Ratio (RQ) exceeds 1.0 for the Scenarios listed.

Table 6: LOS Summary for Baseline Conditions

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	44	87	32	64	47	1395	48	733	71	60	60	108	58	1367	53	1679
	V/C ¹	0.12	0.30	0.11	0.19	0.14	0.85	0.39	0.45	0.20	0.23	0.19	0.31	0.32	0.86	0.44	1.08
	Queue ²	45	153	40	78	28	638	30	275	73	123	73	135	38	650	33	435
	Delay (s) ³	29.6	30.7	35.6	35.4	14.0	29.4	24.1	18.3	28.9	28.6	35.9	37.7	16.1	31.9	24.6	46.0
	LOS	C	C	D	D	B	C	C	B	C	C	D	D	B	C	C	F
	Intersection Delay, LOS: 26.2 C									38.3 D							
2: Unser / Los Volcanes	Volume	299	96	74	302	37	1521	388	1083	177	57	137	361	21	1394	299	1668
	V/C ¹	0.71	0.24	0.20	0.66	0.80	0.91	0.95	0.74	0.44	0.19	0.31	0.74	0.62	0.84	0.85	1.16
	Queue ²	78	128	83	323	70	658	315	495	183	93	140	388	38	588	230	1368
	Delay (s) ³	36.4	32.1	33.2	37.6	82.8	59.7	81.0	29.6	27.9	32.6	28.1	35.8	75.0	54.3	64.9	114.0
	LOS	D	C	C	D	F	E	F	C	C	C	C	D	E	D	E	F
	Intersection Delay, LOS: 46.3 D									71.3 E							
3: Unser / I40 EB	Volume	0	80	0	0	0	1230	0	2165	73	51	0	0	0	1109	0	2721
	V/C ¹	0.00	16.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delay (s) ³	0.00	80.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LOS		F								A						
	Intersection Delay, LOS: ##### -									0.0							
4: Silver Creek / Los Volcanes	Volume	0	553	15	343	27	11	0	0	0	217	2	257	25	4	0	0
	V/C ¹	0.14	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
	Queue ²	13	0	3	0	0	0	0	0	0	0	0	0	5	0	0	0
	Delay (s) ³	0.0	0.0	10.3	0.0	17.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LOS			B		C						A		B			
	Intersection Delay, LOS: 0.8 -									0.7 --							

NOTES:

1. v/c = volume-to-capacity ratio for traffic movement
2. 95th percentile queue in feet
3. Control Delay measured in seconds per vehicle
(only critical movement LOS at unsignalized intersections is tabulated).

Table 7: LOS Summary for Implementation NO-Build (2025)

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	44	88	32	65	47	1409	48	740	72	61	61	109	59	1381	54	1696
	V/C ¹	0.12	0.30	0.11	0.19	0.14	0.85	0.40	0.46	0.20	0.24	0.19	0.32	0.28	0.87	0.45	1.09
	Queue ²	45	155	40	78	28	648	30	275	73	125	75	138	38	663	33	475
	Delay (s) ³	29.6	30.7	35.7	35.4	14.0	29.9	24.6	18.4	28.9	28.6	36.0	37.8	13.8	32.7	25.2	50.9
	LOS	C	C	D	D	B	C	C	B	C	C	D	D	B	C	C	F
	Intersection Delay, LOS: 26.5 C									40.8 D							
2: Unser / Los Volcanes	Volume	306	97	75	305	38	1536	392	1094	181	58	138	365	22	1408	302	1685
	V/C ¹	0.73	0.25	0.20	0.66	0.80	0.93	0.96	0.75	0.45	0.19	0.31	0.74	0.63	0.86	0.85	1.19
	Queue ²	218	130	83	323	73	668	325	503	185	93	140	390	40	598	233	1443
	Delay (s) ³	37.2	32.0	33.0	37.5	82.5	61.2	83.5	30.2	27.7	32.3	27.9	35.7	75.1	55.5	65.1	124.0
	LOS	D	C	C	D	F	E	F	C	C	C	C	D	E	E	E	F
	Intersection Delay, LOS: 47.3 D									75.3 E							
3: Unser / I40 EB	Volume	0	81	0	0	0	1242	0	2187	74	52	0	0	0	1120	0	2748
	V/C ¹	0.00	17.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	370	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delay (s) ³	0.00	8637.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LOS		F								A						
	Intersection Delay, LOS: #####									0.0							
4: Silver Creek / Los Volcanes	Volume	0	559	15	343	27	11	0	0	0	219	2	260	25	4	0	0
	V/C ¹	0.00	0.00	0.03	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
	Queue ²	0	0	3	0	13	0	0	0	0	0	0	0	5	0	0	0
	Delay (s) ³	0.0	0.0	10.3	0.0	17.5	0.0	0.0	0.0	0.0	0.0	8.4	0.0	12.6	0.0	0.0	0.0
	LOS			B		C		F				A		B			
	Intersection Delay, LOS: 0.8 --									0.7 --							

NOTES:

1. v/c = volume-to-capacity ratio for traffic movement
2. 95th percentile queue in feet
3. Control Delay measured in seconds per vehicle
(only critical movement LOS at unsignalized intersections is tabulated).

Table 8: LOS Summary for Implementation BUILD (2025)

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	47	88	32	68	47	1421	48	748	82	61	61	119	59	1419	54	1729
	V/C ¹	0.12	0.30	0.11	0.20	0.15	0.86	0.41	0.46	0.23	0.23	0.19	0.35	0.57	0.91	0.48	1.12
	Queue ²	48	155	40	83	28	663	30	280	83	123	75	150	40	713	35	588
	Delay (s) ³	29.5	30.6	35.5	35.6	14.2	30.7	25.2	18.6	28.6	28.2	36.0	38.4	30.3	36.0	27.0	64.4
	LOS	C	C	D	D	B	C	C	B	C	C	D	D	C	D	C	F
	Intersection Delay, LOS: 27.0 C									48.6 D							
2: Unser / Los Volcanes	Volume	306	98	85	306	38	1539	399	1094	181	60	180	370	24	1424	322	1685
	V/C ¹	0.73	0.25	0.22	0.66	0.80	0.93	0.97	0.75	0.45	0.21	0.39	0.73	0.65	0.89	0.86	1.20
	Queue ²	93	133	93	325	73	673	335	505	185	98	183	393	43	613	248	1468
	Delay (s) ³	37.1	32.5	32.7	37.4	82.5	61.6	87.3	30.2	27.8	34.2	27.3	34.9	75.4	57.9	66.6	128.0
	LOS	D	C	C	D	F	E	F	C	C	C	C	C	E	E	E	F
	Intersection Delay, LOS: 47.8 D									77.0 E							
3: Unser / I40 EB	Volume	0	82	0	0	0	1242	0	2193	74	54	0	0	0	1137	0	2766
	V/C ¹	0.00	17.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	373	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delay (s) ³	0.00	8784.90		52.60	9.80	12.80	15.00	5.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LOS		F								A						
	Intersection Delay, LOS: #####									0.0							
4: Silver Creek / Los Volcanes	Volume	0	560	20	343	38	13	0	0	0	224	19	260	74	12	0	0
	V/C ¹	0.00	0.00	0.04	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.21	0.00	0.00	0.00
	Queue ²	0	0	3	0	18	0	0	0	0	0	3	13	20	0	0	0
	Delay (s) ³	0.0	0.0	10.4	0.0	18.9	0.0	0.0	0.0	0.0	0.0	8.6	0.0	14.6	0.0	0.0	0.0
	LOS			B		C						A		B			
	Intersection Delay, LOS: 1.1 --									2.3 --							
5: Silver Creek / Driveway 1	Volume	13	4	0	0	2	43	0	52	57	15	0	0	6	17	0	39
	V/C ¹	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	3	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
	Delay (s) ³	9.1	0.0	0.0	0.0	7.4	0.0	0.0	0.0	9.2	0.0	0.0	0.0	7.4	0.0	0.0	0.0
	LOS	A				A	A			A				A	A		
	Intersection Delay, LOS: 1.3 --									4.5 --							
6: Unser / Site	Volume	0	0	0	4	0	1518	0	1201	0	0	0	23	0	1562	0	1892
	V/C ¹	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
	Queue ²	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
	Delay (s) ³	0.0	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	0.0	0.0	0.0	0.0
	LOS				C								C				
	Intersection Delay, LOS: 0.0									0.1							

NOTES:

1. v/c = volume-to-capacity ratio for traffic movement
2. 95th percentile queue in feet
3. Control Delay measured in seconds per vehicle
(only critical movement LOS at unsignalized intersections is tabulated).

Table 9: LOS Summary for Horizon NO-Build (2035)

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	48	97	35	72	52	1550	53	814	79	67	67	120	65	1519	59	1666
	V/C ¹	0.13	0.33	0.12	0.21	0.18	0.95	0.52	0.51	0.23	0.25	0.21	0.35	0.60	0.97	0.58	1.22
	Queue ²	48	173	43	88	33	808	38	310	80	135	83	153	45	845	40	925
	Delay (s) ³	29.5	30.9	36.5	35.8	14.7	39.5	29.6	19.5	28.7	28.5	36.4	38.4	30.4	45.7	29.0	102.7
	LOS	C	C	D	D	B	D	C	B	C	C	D	D	C	D	C	F
	Intersection Delay, LOS: 32.2 C									70.3 E							
2: Unser / Los Volcanes	Volume	389	123	83	336	48	1690	431	1203	230	74	152	402	28	1549	332	1854
	V/C ¹	0.92	0.30	0.21	0.69	0.79	1.08	1.05	0.88	0.53	0.21	0.32	0.75	0.70	1.09	0.87	1.44
	Queue ²	205	165	88	353	88	905	393	628	215	113	148	420	53	845	255	2228
	Delay (s) ³	58.9	31.2	31.0	35.9	77.2	101.8	109.3	39.4	25.0	29.8	26.0	34.6	76.9	104.3	67.4	238.3
	LOS	E	C	C	D	E	F	F	D	C	C	C	C	E	F	E	F
	Intersection Delay, LOS: 68.0 E									#### F							
3: Unser / I40 EB	Volume	0	89	0	0	0	1366	0	2406	81	57	0	0	0	1232	0	3023
	V/C ¹	0.00	33.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	410	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delay (s) ³	0.0	16646.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LOS		F								A						
	Intersection Delay, LOS: ####									0.0							
4: Silver Creek / Los Volcanes	Volume	0	615	17	377	30	12	0	0	0	241	2	286	28	4	0	0
	V/C ¹	0.00	0.00	0.03	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00
	Queue ²	0	0	3	0	15	0	0	0	0	0	0	0	8	0	0	0
	Delay (s) ³	0.0	0.0	10.7	0.0	19.3	0.0	0.0	0.0	0.0	0.0	8.5	0.0	13.1	0.0	0.0	0.0
	LOS			B		C						A		B			
	Intersection Delay, LOS: 0.9 --									0.8 --							

NOTES:

1. v/c = volume-to-capacity ratio for traffic movement
2. 95th percentile queue in feet
3. Control Delay measured in seconds per vehicle
(only critical movement LOS at unsignalized intersections is tabulated).

Table 10: LOS Summary for Horizon BUILD (2035)

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	51	97	35	75	52	1562	53	822	89	67	67	130	65	1557	59	1899
	V/C ¹	0.14	0.33	0.12	0.22	0.18	0.96	0.53	0.51	0.25	0.25	0.21	0.38	0.60	1.01	0.60	1.25
	Queue ²	53	173	43	90	33	833	38	315	90	135	83	168	45	933	40	1063
	Delay (s) ³	29.4	30.7	36.3	35.9	14.9	41.7	29.9	19.8	28.5	28.1	36.4	39.1	30.4	54.6	29.4	118.7
	LOS	C	C	D	D	B	D	C	B	C	C	D	D	C	F	C	F
	Intersection Delay, LOS: 33.5 C									81.0 F							
2: Unser / Los Volcanes	Volume	389	124	93	337	48	1693	438	1203	230	76	194	407	30	1565	352	1854
	V/C ¹	0.92	0.30	0.24	0.69	0.79	1.09	1.07	0.88	0.53	0.23	0.40	0.75	0.72	1.13	0.88	1.45
	Queue ²	203	168	98	353	88	913	405	628	218	120	188	420	55	915	273	2255
	Delay (s) ³	58.7	31.7	30.7	35.8	77.2	103.2	114.2	39.5	25.6	31.5	25.3	33.9	77.7	120.8	69.2	243.9
	LOS	EB	C	C	D	E	F	F	D	C	C	C	C	E	F	E	F
	Intersection Delay, LOS: 68.9 E									#### F							
3: Unser / I40 EB	Volume	0	90	0	0	0	1366	0	2412	81	59	0	0	0	1249	0	3041
	V/C ¹	0.00	33.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	410	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Delay (s) ³	0.0	16927.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LOS		F								A						
	Intersection Delay, LOS: ####									0.0							
4: Silver Creek / Los Volcanes	Volume	0	616	22	377	41	14	0	0	0	246	19	286	77	12	0	0
	V/C ¹	0.00	0.00	0.04	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.23	0.00	0.00	0.00
	Queue ²	0	0	3	0	23	0	0	0	0	0	3	0	23	0	0	0
	Delay (s) ³	0.0	0.0	10.9	0.0	21.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	15.4	0.0	0.0	0.0
	LOS			B		C						A		C			
	Intersection Delay, LOS: 1.2 --									2.3 --							
5: Silver Creek / Driveway 1	Volume	13	4	0	0	2	47	0	58	57	15	0	0	6	19	0	39
	V/C ¹	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Queue ²	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
	Delay (s) ³	9.1	0.0	0.0	0.0	7.4	0.0	0.0	0.0	9.2	0.0	0.0	0.0	7.4	0.0	0.0	0.0
	LOS	A				A	A			A				A	A		
	Intersection Delay, LOS: 1.2 --									4.4 --							
6: Unser / Site	Volume	0	0	0	4	0	1670	0	1320	0	0	0	23	0	1718	0	2077
	V/C ¹	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
	Queue ²	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
	Delay (s) ³	0.0	0.0	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	0.0	0.0	0.0	0.0
	LOS				C								C				
	Intersection Delay, LOS: 0.0									0.1							

NOTES:

1. v/c = volume-to-capacity ratio for traffic movement
2. 95th percentile queue in feet
3. Control Delay measured in seconds per vehicle
(only critical movement LOS at unsignalized intersections is tabulated).

6.3 Assessment of Impacts

Conclusions drawn from the results of these capacity analyses include:

1. Node 1 – Unser/Bluewater

- a. Intersection LOS satisfactory at LOS E or above through Scenario 4 (see §6.1).
- b. SBT lane group is LOS F and $v/c > 1$ during PM peak for all Scenarios. This is due to the sheer volume of southbound traffic that exceeds the “rule-of-thumb” value of 600 vehicles per lane per hour green (vplph) of green time. For the 2 SBT lanes, this would equate to 1,200 vphpl whereas the Scenario 1 Baseline PM peak volume is over 1,600 vph, exceeding the threshold capacity by 2/3 of a lane.
- c. NBT also exceeds capacity in Scenario 5 PM peak.

2. Node 2 – Unser/Los Volcanes

- a. Intersection LOS satisfactory at LOS E or above through Scenario 3 (see §6.1).
- b. SBT lane group is LOS F and $v/c > 1$ during PM peak for all Scenarios. This is due to the sheer volume of southbound traffic that exceeds the “rule-of-thumb” value of 600 vehicles per lane per hour green (vplph) of green time. For the 2 SBT lanes, this would equate to 1,200 vphpl whereas the Scenario 1 Baseline PM peak volume is over 1,600 vph, exceeding the threshold capacity by 2/3 of a lane.
- c. NBL & SBL lane groups are LOS F for Scenario 1 and beyond.
- d. NBT lane group is LOS F and $v/c > 1$ during PM peak Scenario 4 and beyond.

3. Node 3 – Unser/I-40 EB Off Ramp

- a. EBL experiences excessive delays for all scenarios due to the heavy NB and SB through traffic volumes in the PM peak.
- b. The baseline AM Peak EBL volume exceeds the minimum threshold of 75 vph for Traffic Signal Warrant 3, Peak Hour (70% Factor) per Figure 4C-4 of the MUTCD.
- c. The EBR operates at LOS A as it has a free right-turn with an add-lane operation and ample distance for weaving in advance of the Los Volcanes intersection.
- d. The NBR I-40 On-Ramp operates in a “free flow” condition as it has a dedicated lane and, while significant volumes use this ramp in the AM Peak, the baseline traffic volume of 1,230 vehicles is well below the ideal capacity of 2,200 vph for the ramp roadway.

4. Node 4 – Silver Creek/Los Volcanes – critical movement NBL operates LOS C in the AM Peak for all Scenarios.

5. Node 5 – Silver Creek/Driveway 1 – critical movement at LOS A for all Build Scenarios.

6. Node 6 – Unser/Driveway 2 – WBR at LOS C for all Build Scenarios.

Because intersection and/or lane group LOS fell below acceptable levels for some scenarios, mitigation measures were evaluated to resolve operational deficiencies as described in Section 6.4.

6.4 Mitigation Analysis

Based upon the results summarized in Tables 6 through 10, additional scenarios were analyzed to evaluate mitigation measures that could address operational deficiencies at the two signalized intersections. These scenarios are described below and summarized in Tables 11–13 (see Appendix F for LOS worksheets).

1. Mitigation Scenario 1 (MIT1) – Signal Timing Optimization. Signalized intersections at Nodes 1 and 2 are coordinated, thus signal timing and offset optimization was run for the Implementation Build Scenario 3 to evaluate whether the corridor operations could be improved. Following is a summary of this scenario.
 - a. Optimized network cycle lengths & splits:
 - i. Ran signal network optimizer from 100s to 150s keeping pedestrian phasing as actuated.
 - ii. *AM Peak Period*: optimized network cycle length (for lowest delay) C = 110; intersection LOS improved but some lane groups failed.
 - iii. *PM Peak Period*: optimized network cycle length C = 140s but one v/c ratio exceeded 1.0 and some lane groups failed.
 - b. Horizon analysis was not conducted as conditions would worsen due to background traffic growth.

Table 11: LOS Summary for Mitigation Scenario 1

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	47	88	32	68	47	1421	48	748	82	61	61	119	59	1419	54	1729
	V/C ¹	0.21	0.43	0.25	0.34	0.11	0.74	0.31	0.40	0.57	0.44	0.62	0.74	0.26	0.66	0.32	0.82
	Queue ²	30	93	28	50	10	318	10	50	145	188	140	220	25	478	23	50
	Delay (s) ³	42.2	36.8	53.4	40.6	7.9	17.5	15.0	5.1	64.4	50.9	89.8	71.2	6.5	14.3	12.6	3.4
	LOS	D	D	D	D	A	B	B	A	E	D	F	F	A	B	B	A
	Intersection Delay, LOS:							16.4	B							15.4	B
2: Unser / Los Volcanes	Volume	306	98	85	306	38	1539	399	1094	181	60	180	370	24	1424	322	1685
	V/C ¹	0.78	0.35	0.31	0.93	0.77	0.83	0.87	0.67	0.70	0.62	0.70	1.31	0.69	0.57	0.84	0.83
	Queue ²	220	75	55	290	35	100	165	270	280	163	280	908	50	10	260	738
	Delay (s) ³	43.4	37.1	40.5	68.8	71.3	13.1	58.7	21.7	58.9	69.0	58.4	214.3	86.6	0.9	64.5	23.3
	LOS	D	D	D	E	E	B	E	C	E	E	E	F	F	A	E	C
	Intersection Delay, LOS:							28.0	C							38.3	D

2. Mitigation Scenario 2 (MIT2) – Unser Six-Lane Section. A hypothetical analysis that added a through lane in each direction of Unser NB and SB and re-optimization of the signal network. Results are as follows.
 - a. Ran signal network optimizer from 100s to 150s keeping pedestrian phasing on recall (i.e., maintaining pedestrian crossing intervals per phase).
 - b. Optimized network C = 150s
 - i. *AM Peak Period*: intersection and all lane groups at LOS D or better.
 - ii. *PM Peak Period*: intersection LOS D but 3 of the 4 left-turn lane groups failed.
 - c. Multiple optimization scenarios were run but some left-turns continued to fail as most green time was allocated to the very heavy through traffic.

Table 12: LOS Summary for Mitigation Scenario 2

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	47	88	32	68	47	1421	48	748	82	61	610	119	59	1419	54	1729
	V/C ¹	0.14	0.31	0.15	0.20	0.14	0.56	0.31	0.30	0.30	0.26	0.26	0.36	0.46	0.56	0.34	0.70
	Queue ²	38	113	30	58	18	288	20	243	130	168	108	170	50	428	40	815
	Delay (s) ³	44.2	39.6	53.1	42.3	15.0	21.8	17.8	35.6	49.5	39.0	54.3	44.7	27.8	21.9	18.0	50.5
	LOS	D	D	D	D	B	C	B	D	D	D	D	D	C	C	B	D
	Intersection Delay, LOS:								28.0	C						37.9	D
2: Unser / Los Volcanes	Volume	306	98	85	306	38	1539	399	1094	181	60	180	370	24	1424	322	1685
	V/C ¹	0.79	0.26	0.25	0.65	0.79	0.84	0.90	0.47	0.59	0.23	0.48	0.74	0.71	0.71	0.88	0.70
	Queue ²	115	95	68	265	48	575	228	228	148	133	238	483	55	633	298	565
	Delay (s) ³	52.7	40.9	43.4	47.5	95.5	95.1	78.5	24.7	47.5	46.4	39.6	42.8	95.9	46.7	80.3	27.7
	LOS	D	D	D	D	F	E	E	C	D	D	D	D	F	D	F	C
	Intersection Delay, LOS:								49.3	D						40.1	D

3. Mitigation Scenario 3 (MIT3) – Optimized Six-Lane Section. Mitigation Scenario 2 signal timing was further optimized (C = 150s_ without pedestrian recall cycling per phase, but instead pedestrian phasing would revert to synchronize with the network cycle over subsequent cycles yielding the following results.
- Intersection LOS improved and no lane groups exceeded a v/c ratio of 1.0.
 - AM Peak Period: all lane groups at LOS D or better.
 - PM Peak Period: 2 left-turn lane groups failed though the turning volumes were low.
 - Most green time was allocated to the very heavy through traffic. Consideration of dual-left turns on cross-streets may alleviate the left-turn issue but is beyond the scope of this analysis as the cross-streets may not have sufficient right-of-way to accommodate dual left-turn departure lanes.

Table 13: LOS Summary for Mitigation Scenario 3

Node	Lane Group	AM Peak								PM Peak							
		EB		WB		NB		SB		EB		WB		NB		SB	
		L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
1: Unser / Bluewater	Volume	47	88	32	68	47	1421	48	748	82	61	61	119	59	1419	54	1729
	V/C ¹	0.14	0.31	0.14	0.20	0.14	0.57	0.31	0.30	0.30	0.26	0.26	0.36	0.46	0.56	0.34	0.70
	Queue ²	38	113	30	58	20	293	20	243	130	168	108	170	50	428	40	815
	Delay (s) ³	43.4	38.8	52.1	41.5	15.5	22.5	18.4	36.2	49.5	39.0	54.3	44.7	27.8	21.9	18.0	50.5
	LOS	D	D	D	D	B	C	B	D	D	D	D	D	C	C	B	D
	Intersection Delay, LOS:								28.4	C						37.9	D
2: Unser / Los Volcanes	Volume	306	98	85	306	38	1539	399	1094	181	60	180	370	24	1424	322	1685
	V/C ¹	0.80	0.26	0.25	0.65	0.79	0.84	0.88	0.47	0.49	0.24	0.44	0.81	0.71	0.74	0.86	0.72
	Queue ²	118	95	70	265	48	575	218	228	238	133	238	533	55	645	285	588
	Delay (s) ³	53.4	41.2	43.7	47.8	95.4	65.3	71.8	24.4	38.7	47.1	38.3	53.5	95.9	49.3	73.8	29.9
	LOS	D	D	D	D	F	E	E	C	D	D	D	D	F	D	E	C
	Intersection Delay, LOS:								48.7	D						41.6	D

7.0 ACCESS DESIGN RECOMMENDATIONS

As illustrated in the Conceptual Site Plan (Figure 6), two access points are proposed to provide ample circulation and queueing space on site for the retail businesses as well as the self-storage facility.

7.1 Site Access Improvements

7.1.1 Driveway 1 – Construct a full, commercial access per COA standards at Silver Creek.

1. As described in §5.3, this driveway will be near the north property boundary.
2. A second, gate-controlled access should be provided for access to the self-storage facility at the south end of the property.
3. Sidewalk will be needed along the property frontage with appropriate access ramps for the driveway crossings.

7.1.2 Driveway 2 – Maintain the existing 36' commercial access to Unser at the south end of the property.

1. Maintain the existing 450' northbound right turn lane into this driveway.
2. Sidewalk exists along the property frontage with access ramps at the driveway.
3. Turning templates should be checked during site design to ensure that adequate turning radii are provided for the design vehicle.
4. A concern was raised that measures should be taken to prevent exiting left turns from this driveway.
 - a. The Unser median is not raised but inverted for drainage management, thus raised curbs don't exist to prevent median crossings.
 - b. Because this driveway is existing, construction of a raised island within the driveway may not be feasible.
 - c. Provision of right-turn channelization should therefore be effected through the use of pavement markings and delineation devices, ensuring adequate turning radii are provided for the design vehicles.
5. Provision of a two-way access along the west property boundary as depicted on the proposed site plan (Figure 6) will facilitate access to adjacent businesses and potentially reduce some off-site traffic.

7.2 Off-Site Modifications

7.2.1 I-40 EB Off Ramp.

A median refuge is available to accommodate a two-stage left turn, but the high volumes and speed of the through traffic allows for few acceptable gaps and results in excessive delay for the left-turning traffic. As noted in §6.3, the baseline volumes met the Traffic Signal Warrant #3 for Peak Hour Volume. A traffic signal warrant study is recommended to evaluate whether the EBL intersection should be signalized.

7.2.2 Unser Widening.

As described in §6.3, through traffic volumes on Unser exceed the capacity for two lanes and leads to operational deficiencies under baseline traffic conditions. Per §3.2, MPO project #465.1 "Unser Blvd. Corridor Improvements Future Stages" has been funded to improve Unser to a "uniform 4 and/or 6 lane roadway facility" in the short term horizon. The portion of Unser from Central to I-40 should be addressed with this

project to widen the corridor to 6 through lanes, address intersection operations, and incorporate proposed multi-modal improvements. This should include traffic signal retimings to reflect the expanded corridor.

8.0 SUMMARY OF FINDINGS

Key findings of this analysis are summarized as follows:

1. The Unser corridor provides commuter access to I-40 as well as local access to adjacent industrial and commercial areas. For existing (baseline) conditions, SBT traffic volumes exceed capacity at Bluewater and Los Volcanes in the PM peak and NBT in the AM at Los Volcanes. Major geometric to the Unser corridor consisting of additional through will be needed to accommodate current traffic conditions as well as background traffic growth.
2. Site-generated traffic is not expected to cause significant, adverse impacts to the adjacent roadway network, including the traffic signalized intersections along Unser, but would incrementally increase delay.
3. A tabulation of intersection traffic volumes showed the proposed site development would only contribute about 1% to 2% to these intersections (see Appendix G). Therefore, no physical modifications are recommended as part of this project but should be noted for ongoing monitoring and future implementation through the normal course of traffic operations and maintenance activities.

9.0 RECOMMENDATIONS & MITIGATION MEASURES

This analysis has demonstrated that significant detrimental traffic impacts associated with the proposed commercial development project are not expected to occur on the adjacent transportation system. The following recommendations are offered regarding on- access modifications for which the project will be responsible and off-site improvements that will not be a part of this proposed development project.

9.1 On-Site Access (Project Responsibility)

1. Two access driveways are proposed on local road Silver Creek:
 - a. Primary driveway for commercial access to the retail site.
 - b. Secondary gated access to serve the self-storage facility.
2. Maintain existing northbound right-turn lane (NBL) and driveway on Unser at the south boundary of the site.
 - a. Provide right-turn channelization to prohibit left turns exiting the site with pavement markings and delineation devices.
 - b. Install no left-turn sign.
 - c. Provide adequate turning radii for commercial vehicle traffic.
3. These driveways will be designed in accordance with City of Albuquerque Development Process Manual (COA DPM) requirements.

9.2 Off-Site Roadway Improvements (Non-Project)

This study supports regional improvements identified in the 2040 Metropolitan Transportation Plan (MTP) including:

1. **Unser Blvd. Corridor Improvements** – from Central Ave. to Bernalillo/Sandoval Co. line; completion of 4- or 6-lane roadway and multi-modal improvements.

2. **Unser Blvd./Central Ave. Intersection Improvements** – this project widened the intersection and extended three through lanes northward about half way to the Bluewater intersection; the through travel lanes should be fully extended to I-40.
3. **Freeway Overpasses Study** – additional regional improvements that propose to analyze locations for freeway overpasses crossing of I-40 including at 118th St., Atrisco Rd. and midpoint between Unser & Coors among other locations to alleviate congestion on Unser and 98th St.

APPENDIX A

Traffic Scoping Requirements



City of Albuquerque

Planning Department
Development Review Services Division

Traffic Scoping Form (REV 05/2024)

K10D023L

Project Title: Bluewater Galleria

Zone Atlas Page: K-10 DFT/DHO #: PR-2024-009917 BP #: _____

Development Street Address: 531 Silver Creek Rd. N.W.

(If no City Address include a Vicinity Map with site highlighted and legible street names)

Applicant: THE Group Contact: Ron Hensley

Address: 300 Branding Iron Rd. SE

Phone#: 505-410-1622 E-mail: ron@thegroup.cc

Development Information

Build out/Implementation Year: 2024

Existing Use: Vacant

Describe Proposed Development and Uses:

15 Retail commercial units.

Days and Hours of Operation (if known): _____

Facility

Building Size (sq. ft.): 19,400

Number of Residential Units: _____

Number of Commercial Units: 15

Traffic Considerations

Expected Number of Daily Visitors/Patrons (if known):* _____

Expected Number of Employees (if known):* _____

Expected Number of Delivery Trucks/Buses per Day (if known):* _____

Trip Generations during PM/AM Peak Hour and ITE # (if known):* 20 pm / 73 pm ITE# 820

Driveway(s) Located on: Street Name Access easement adjacent to Unser Blvd. via existing Unser access

Adjacent Roadway(s) Posted Speed: Street Name Unser Speed 45

Street Name _____ Speed _____

** If these values are not known, assumptions will be made by City staff. Depending on the assumptions, a full TIS may be required.*

Roadway Information (adjacent to site)

Comprehensive Plan Corridor Designation (e.g. Main Street, Major Transit, N/A): N/A
<https://cabq.maps.arcgis.com/apps/webappviewer/index.html?id=53bf716981b14d25a31e7a2549c2d61b>

Comprehensive Plan Center Designation (e.g. urban center, Downtown, N/A): N/A
<https://cabq.maps.arcgis.com/apps/webappviewer/index.html?id=53bf716981b14d25a31e7a2549c2d61b>

Street Functional Classification (e.g. Principal Arterial, Collector): Regional Principal Arterial
<https://cabq.maps.arcgis.com/apps/webappviewer/index.html?id=53bf716981b14d25a31e7a2549c2d61b>

Jurisdiction of roadway (NMDOT, City, County): City / NMDOT

Adjacent Roadway(s):

Name: Unser Traffic Volume: 30,930 Volume-to-Capacity Ratio (v/c): 0.63

Name: _____ Traffic Volume: _____ Volume-to-Capacity Ratio (v/c): _____

Traffic Volume and V/C Ratio: <https://www.mrcog-nm.gov/623/Traffic-Flow-Maps-and-Busiest-Intersecti> and <https://mrcog-nm.gov/574/Transportation-Analysis-and-Querying-App>

Adjacent Transit Service(s): _____ Nearest Transit Stop(s): 0.27 miles
<https://www.cabq.gov/gis/advanced-map-viewer>

Is site within 660 feet of Premium Transit?: No
<https://cabq.maps.arcgis.com/apps/webappviewer/index.html?id=53bf716981b14d25a31e7a2549c2d61b>

Current/Proposed Bicycle Infrastructure: Proposed Bike Lane

Bikeways: <https://mrcog-nm.gov/544/Long-Range-System-maps>

Current/Proposed Sidewalk and buffer Infrastructure: Existing 12' Trail with 7' buffer
Sidewalk and buffer width : DPM Table 7.2.29

Submit by email to Traffic Engineer Curtis Cherne: ccherne@cabq.gov. Email or call 505-924-3986 for information.

For City Personnel Use:

TIS Determination

Note: Changes made to development proposals / assumptions, from the information provided above, will result in a new TIS determination.

Traffic Impact Study (TIS) Required: Yes [☒] No [☐]

Thresholds Met? Yes [☒] No [☐]

Mitigating Reasons for Not Requiring TIS and/or Notes:

ITE 822 Strip Retail Plaza < 40K
Peak hour adjacent traffic
Trips:
AM 46
PM 128

Curtis Cherne

TRAFFIC ENGINEER

7-1-24

DATE

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Timothy D. Simmons, P.E., PTOE
Civil Transformations Inc.
2929 Coors Blvd. NW, Suite 309
Albuquerque, NM 87120

MEETING DATE: September 6, 2024

ATTENDEES: Curtis Cherne, COA; Margaret Haynes, NMDOT-D3; T. Simmons

PROJECT: Bluewater Galleria, Zone Atlas #K-10 **K10D023L**

REQUESTED CITY ACTION: ☐ Zone Change ☒ Site Development Plan

☐ Subdivision ☐ Building Permit ☐ Site Plan Amendment

☐ Curb Cut Permit ☐ Conditional Use ☐ Annexation

ASSOCIATED APPLICATION: 19,400 s.f. commercial retail strip mall adjacent to Unser and a 3-story enclosed self-storage unit adjacent to Silver Creek Rd. NW (see proposed site plan).

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.
LU 151 – Mini-Warehouse
LU 822 – Strip Retail Plaza (<40k)

2. Appropriate study area:
Signalized Intersections;
 - a. Intersection 1 – Unser/Bluewater
 - b. Intersection 2 – Unser/Los Volcanes

Unsignalized Intersections;

- a. Intersection 1 – Los Volcanes/Silver Creek
- b. Intersection 2 – Unser/I-40 E-N Ramp

Driveway Intersections: Maverick site drives (2).

3. Intersection turning movement counts
Study Time – 7-9 a.m. peak hour, 4-6 p.m. peak hour
Consultant to provide for all intersections listed above.
Include pedestrian and cyclists.
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.
2 mile radius – commercial;

6. Basis for trip distribution.

For larger projects: In addition to the information for smaller projects the distribution is to be determined using the most recently-approved socioeconomic forecasts from MRCOG and will be based upon a 2-mile radius around the site.

7. Traffic Assignment. Logical routing on the major street system and Silver Creek Rd.
8. Proposed developments which are under review that are to be Included in the analyses.
Projects in the area include:
 - a. Project 1 – Quick Trip @ SE Quadrant of Unser/Los Volcanes intersection.
 - b. Project 2 – Location (DRB # or Hyd #)
9. Method of intersection capacity analysis - operational in Synchro for network analysis.
10. Traffic conditions for analysis:
 - a. Existing analysis - year 2024;
 - b. Implementation year without proposed development – 2025
 - c. Implementation year with proposed development – 2025
 - d. Horizon year without proposed development – 2035
 - e. Horizon year with proposed development – 2035
11. Background traffic growth.
Projections interpolated from 2040 MTP forecast link volumes.
12. Planned (programmed) traffic improvements.
List planned CIP improvements in study area and projected project implementation year:
 - a. Project – Location (Implementation Year)
13. Items to be included in the study:
 - a. Intersection analysis.
 - b. Signal progression – Utilize existing COA timing plans.
 - c. Arterial LOS analysis;
 - d. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
 - e. Transportation system impacts.
 - f. Other mitigating measures.
 - g. Crash analysis – Unser from Bluewater to Los Volcanes 5-year tabulation.
 - h. Weaving analyses __ yes X no; Location(s):
 - i. Recommended street, intersection and signal improvements.
 - j. Transportation Infrastructure proposed to be built with this project: list and exhibit.
 - k. Pedestrian Facility and Safety section: This section will provide a narrative on existing and proposed pedestrian facilities, elaborate on pedestrian involved crashes

and propose mitigation as necessary, and include a statement how this project affects or improves pedestrian safety by minimizing conflict points, providing pedestrian refuges, narrowing entrances, signal timing, etc..

- I. Bicycle facility and safety section: This section will provide a narrative on existing and proposed bicycle facilities, elaborate on cyclist involved crashes and propose mitigation as necessary and include whether cycling facilities are required/required to be upgraded per the MRCOG Long Range Bicycle System Map.

14. Other:

SUBMITTAL REQUIREMENTS:

1. Number of copies of report required
 - a. 1 digital copy
2. Submittal Fee – \$1300 for up to 3 reviews plus technology fee
 - a. Submit the TIS along with a DTIS to Planning Development Review Services email PLNDRS@cabq.gov.

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 505-924-3986.

Curtis A Cherne

Curtis Cherne, P.E.
Senior Engineer
City of Albuquerque, Planning Dept.
Transportation Development Section

9-26-24

Date

C: TIS Meeting Attendees



SITE THRESHOLD ASSESSMENT (STH)

A Site Threshold Assessment (STH) is required of all developing or redeveloping properties that directly or indirectly access a state highway.

District No.: _____

Project No.: _____

Date: _____

Applicant Name: _____

Business Name: _____

Address: _____

SITE DESCRIPTION

☐ Residential	Building Size (SF) _____	Dwelling Unit _____
☐ Retail	Parcel Size (ac) _____	Rooms _____
☐ Office	Roadway Frontage (ft) _____	Beds _____
☐ Industrial	Parking Spaces _____	Students _____
☐ Institutional	Employees _____	Seats _____
☐ Lodging	Other: _____	Fuel Pumps _____
☐ Restaurant		Courts _____
☐ Convenience/Gas		Storage Units _____
☐ Other: _____		

The STH examines existing roadway volumes and anticipated site trip generation for the purpose of determining if additional analyses are required. If the site characteristics and the trip generation estimate for a proposed development do not satisfy the requirements for a STA or a TIA as determined by the District Traffic Engineer, the STH should be approved and the traffic study requirement for the proposed development will be complete. If additional analysis is required based on the results of the STH, the District Traffic Engineer should indicate to the applicant the level of analysis that is required.

TRIP GENERATION

Option A (Commercial Access)

ITE Trip Generation Land Use Category: _____

AM Peak Hour Trips Entering: _____

Exiting: _____

PM Peak Hour Trips Entering: _____

Exiting: _____

Option B (Residential Access)

Daily Trips Entering: _____

Exiting: _____

FOR OFFICIAL USE ONLY

EXISTING ROADWAY DATA

Highway No.: _____

Site Mile Post: _____

Highway ADT: _____

Count Year: _____

Number of Lanes (two way): _____

Function Class: _____

EXCEEDS THRESHOLD ☐ Yes ☐ No ☐ STA Required ☐ TIA Required

Thresholds:

STA: 25 to 99 Peak Hour Total Trips AND more than 1,000 Vehicles per Lane per Day on adjacent Highway

TIA: 100 or more Peak Hour Total Trips

OTHER REQUIREMENT BASIS/DTE COMMENTS: _____

APPENDIX B

Baseline Traffic Data

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

Turning Movement Counts
Bluewater Galleria

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 1

Groups Printed- Cars - Trucks

Start Time	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	26	167	14	0	207	7	5	3	1	16	6	410	17	2	435	10	15	11	0	36	694
07:15	12	193	18	0	223	5	1	11	0	17	13	462	13	2	490	8	14	8	0	30	760
07:30	14	199	16	1	230	10	11	20	0	41	11	449	11	1	472	16	8	18	0	42	785
07:45	20	308	19	0	347	16	9	16	0	41	23	460	13	0	496	18	13	22	0	53	937
Total	72	867	67	1	1007	38	26	50	1	115	53	1781	54	5	1893	52	50	59	0	161	3176
08:00	2	33	257	16	308	1	4	7	4	16	0	24	433	20	477	2	21	17	18	58	859
08:15	2	29	203	12	246	2	10	4	8	24	0	27	405	30	462	1	19	18	2	40	772
08:30	3	27	207	13	250	2	11	15	2	30	0	15	309	10	334	1	13	9	7	30	644
08:45	3	33	198	7	241	1	9	5	6	21	1	15	307	17	340	1	14	9	2	26	628
Total	10	122	865	48	1045	6	34	31	20	91	1	81	1454	77	1613	5	67	53	29	154	2903
*** BREAK ***																					
16:00	17	413	20	0	450	15	15	17	0	47	13	318	7	1	339	27	15	10	2	54	890
16:15	16	372	24	1	413	18	16	12	0	46	23	316	9	0	348	22	17	9	0	48	855
16:30	11	420	11	0	442	16	27	21	0	64	17	314	4	0	335	29	8	9	0	46	887
16:45	15	406	20	0	441	16	15	20	0	51	12	337	3	1	353	17	10	9	0	36	881
Total	59	1611	75	1	1746	65	73	70	0	208	65	1285	23	2	1375	95	50	37	2	184	3513
17:00	15	428	18	0	461	22	24	27	1	74	15	301	5	0	321	18	19	10	0	47	903
17:15	17	436	18	0	471	14	21	11	0	46	15	320	6	0	341	15	20	10	0	45	903
17:30	6	409	16	0	431	8	14	13	0	35	16	409	3	0	428	21	11	16	0	48	942
17:45	21	347	60	1	429	9	13	10	0	32	10	300	2	0	312	17	17	5	0	39	812
Total	59	1620	112	1	1792	53	72	61	1	187	56	1330	16	0	1402	71	67	41	0	179	3560
Grand Total	200	4220	1119	51	5590	162	205	212	22	601	175	4477	1547	84	6283	223	234	190	31	678	13152
Apprch %	3.6	75.5	20	0.9		27	34.1	35.3	3.7		2.8	71.3	24.6	1.3		32.9	34.5	28	4.6		
Total %	1.5	32.1	8.5	0.4	42.5	1.2	1.6	1.6	0.2	4.6	1.3	34	11.8	0.6	47.8	1.7	1.8	1.4	0.2	5.2	
Cars	158	4079	1114	51	5402	153	200	185	22	560	173	4352	1530	84	6139	217	229	184	31	661	12762
% Cars	79	96.7	99.6	100	96.6	94.4	97.6	87.3	100	93.2	98.9	97.2	98.9	100	97.7	97.3	97.9	96.8	100	97.5	97
Trucks	42	141	5	0	188	9	5	27	0	41	2	125	17	0	144	6	5	6	0	17	390
% Trucks	21	3.3	0.4	0	3.4	5.6	2.4	12.7	0	6.8	1.1	2.8	1.1	0	2.3	2.7	2.1	3.2	0	2.5	3

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 2

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

07:30	14	199	16	1	230	10	11	20	0	41	11	449	11	1	472	16	8	18	0	42	785
07:45	20	308	19	0	347	16	9	16	0	41	23	460	13	0	496	18	13	22	0	53	937
08:00	2	33	257	16	308	1	4	7	4	16	0	24	433	20	477	2	21	17	18	58	859
08:15	2	29	203	12	246	2	10	4	8	24	0	27	405	30	462	1	19	18	2	40	772
Total Volume	38	569	495	29	1131	29	34	47	12	122	34	960	862	51	1907	37	61	75	20	193	3353
% App. Total	3.4	50.3	43.8	2.6		23.8	27.9	38.5	9.8		1.8	50.3	45.2	2.7		19.2	31.6	38.9	10.4		
PHF	.475	.462	.482	.453	.815	.453	.773	.588	.375	.744	.370	.522	.498	.425	.961	.514	.726	.852	.278	.832	.895
Cars	25	528	492	29	1074	25	33	42	12	112	34	920	857	51	1862	34	59	75	20	188	3236
% Cars	65.8	92.8	99.4	100	95.0	86.2	97.1	89.4	100	91.8	100	95.8	99.4	100	97.6	91.9	96.7	100	100	97.4	96.5
Trucks	13	41	3	0	57	4	1	5	0	10	0	40	5	0	45	3	2	0	0	5	117
% Trucks	34.2	7.2	0.6	0	5.0	13.8	2.9	10.6	0	8.2	0	4.2	0.6	0	2.4	8.1	3.3	0	0	2.6	3.5

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45

16:45	15	406	20	0	441	16	15	20	0	51	12	337	3	1	353	17	10	9	0	36	881
17:00	15	428	18	0	461	22	24	27	1	74	15	301	5	0	321	18	19	10	0	47	903
17:15	17	436	18	0	471	14	21	11	0	46	15	320	6	0	341	15	20	10	0	45	903
17:30	6	409	16	0	431	8	14	13	0	35	16	409	3	0	428	21	11	16	0	48	942
Total Volume	53	1679	72	0	1804	60	74	71	1	206	58	1367	17	1	1443	71	60	45	0	176	3629
% App. Total	2.9	93.1	4	0		29.1	35.9	34.5	0.5		4	94.7	1.2	0.1		40.3	34.1	25.6	0		
PHF	.779	.963	.900	.000	.958	.682	.771	.657	.250	.696	.906	.836	.708	.250	.843	.845	.750	.703	.000	.917	.963
Cars	45	1653	71	0	1769	58	73	69	1	201	57	1346	16	1	1420	70	59	44	0	173	3563
% Cars	84.9	98.5	98.6	0	98.1	96.7	98.6	97.2	100	97.6	98.3	98.5	94.1	100	98.4	98.6	98.3	97.8	0	98.3	98.2
Trucks	8	26	1	0	35	2	1	2	0	5	1	21	1	0	23	1	1	1	0	3	66
% Trucks	15.1	1.5	1.4	0	1.9	3.3	1.4	2.8	0	2.4	1.7	1.5	5.9	0	1.6	1.4	1.7	2.2	0	1.7	1.8

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 3

Groups Printed- Cars

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	24	156	13	0	193	7	4	3	1	15	6	397	16	2	421	10	15	7	0	32	661
07:15	10	183	18	0	211	5	1	8	0	14	13	453	12	2	480	8	14	8	0	30	735
07:30	7	189	16	1	213	9	10	19	0	38	11	435	11	1	458	15	7	18	0	40	749
07:45	18	294	18	0	330	16	9	14	0	39	23	448	13	0	484	18	13	22	0	53	906
Total	59	822	65	1	947	37	24	44	1	106	53	1733	52	5	1843	51	49	55	0	155	3051
08:00	0	24	257	16	297	0	4	7	4	15	0	17	431	20	468	1	20	17	18	56	836
08:15	0	21	201	12	234	0	10	2	8	20	0	20	402	30	452	0	19	18	2	39	745
08:30	0	19	207	13	239	1	11	10	2	24	0	7	307	10	324	1	12	9	7	29	616
08:45	0	17	198	7	222	0	8	3	6	17	1	5	306	17	329	0	13	9	2	24	592
Total	0	81	863	48	992	1	33	22	20	76	1	49	1446	77	1573	2	64	53	29	148	2789
*** BREAK ***																					
16:00	14	406	20	0	440	15	15	17	0	47	13	315	6	1	335	26	15	10	2	53	875
16:15	13	361	24	1	399	18	16	12	0	46	22	307	6	0	335	22	17	9	0	48	828
16:30	10	414	11	0	435	15	26	15	0	56	17	307	3	0	327	29	8	9	0	46	864
16:45	15	398	19	0	432	15	15	19	0	49	11	333	2	1	347	16	9	8	0	33	861
Total	52	1579	74	1	1706	63	72	63	0	198	63	1262	17	2	1344	93	49	36	2	180	3428
17:00	11	423	18	0	452	22	24	26	1	73	15	297	5	0	317	18	19	10	0	47	889
17:15	13	429	18	0	460	13	20	11	0	44	15	315	6	0	336	15	20	10	0	45	885
17:30	6	403	16	0	425	8	14	13	0	35	16	401	3	0	420	21	11	16	0	48	928
17:45	17	342	60	1	420	9	13	6	0	28	10	295	1	0	306	17	17	4	0	38	792
Total	47	1597	112	1	1757	52	71	56	1	180	56	1308	15	0	1379	71	67	40	0	178	3494
Grand Total	158	4079	1114	51	5402	153	200	185	22	560	173	4352	1530	84	6139	217	229	184	31	661	12762
Apprch %	2.9	75.5	20.6	0.9		27.3	35.7	33	3.9		2.8	70.9	24.9	1.4		32.8	34.6	27.8	4.7		
Total %	1.2	32	8.7	0.4	42.3	1.2	1.6	1.4	0.2	4.4	1.4	34.1	12	0.7	48.1	1.7	1.8	1.4	0.2	5.2	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 4

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	7	189	16	1	213	9	10	19	0	38	11	435	11	1	458	15	7	18	0	40	749
07:45	18	294	18	0	330	16	9	14	0	39	23	448	13	0	484	18	13	22	0	53	906
08:00	0	24	257	16	297	0	4	7	4	15	0	17	431	20	468	1	20	17	18	56	836
08:15	0	21	201	12	234	0	10	2	8	20	0	20	402	30	452	0	19	18	2	39	745
Total Volume	25	528	492	29	1074	25	33	42	12	112	34	920	857	51	1862	34	59	75	20	188	3236
% App. Total	2.3	49.2	45.8	2.7		22.3	29.5	37.5	10.7		1.8	49.4	46	2.7		18.1	31.4	39.9	10.6		
PHF	.347	.449	.479	.453	.814	.391	.825	.553	.375	.718	.370	.513	.497	.425	.962	.472	.738	.852	.278	.839	.893

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45

16:45	15	398	19	0	432	15	15	19	0	49	11	333	2	1	347	16	9	8	0	33	861
17:00	11	423	18	0	452	22	24	26	1	73	15	297	5	0	317	18	19	10	0	47	889
17:15	13	429	18	0	460	13	20	11	0	44	15	315	6	0	336	15	20	10	0	45	885
17:30	6	403	16	0	425	8	14	13	0	35	16	401	3	0	420	21	11	16	0	48	928
Total Volume	45	1653	71	0	1769	58	73	69	1	201	57	1346	16	1	1420	70	59	44	0	173	3563
% App. Total	2.5	93.4	4	0		28.9	36.3	34.3	0.5		4	94.8	1.1	0.1		40.5	34.1	25.4	0		
PHF	.750	.963	.934	.000	.961	.659	.760	.663	.250	.688	.891	.839	.667	.250	.845	.833	.738	.688	.000	.901	.960

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 5

Groups Printed- Trucks

Start Time	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	2	11	1	0	14	0	1	0	0	1	0	13	1	0	14	0	0	4	0	4	33
07:15	2	10	0	0	12	0	0	3	0	3	0	9	1	0	10	0	0	0	0	0	25
07:30	7	10	0	0	17	1	1	1	0	3	0	14	0	0	14	1	1	0	0	2	36
07:45	2	14	1	0	17	0	0	2	0	2	0	12	0	0	12	0	0	0	0	0	31
Total	13	45	2	0	60	1	2	6	0	9	0	48	2	0	50	1	1	4	0	6	125
08:00	2	9	0	0	11	1	0	0	0	1	0	7	2	0	9	1	1	0	0	2	23
08:15	2	8	2	0	12	2	0	2	0	4	0	7	3	0	10	1	0	0	0	1	27
08:30	3	8	0	0	11	1	0	5	0	6	0	8	2	0	10	0	1	0	0	1	28
08:45	3	16	0	0	19	1	1	2	0	4	0	10	1	0	11	1	1	0	0	2	36
Total	10	41	2	0	53	5	1	9	0	15	0	32	8	0	40	3	3	0	0	6	114
*** BREAK ***																					
16:00	3	7	0	0	10	0	0	0	0	0	0	3	1	0	4	1	0	0	0	1	15
16:15	3	11	0	0	14	0	0	0	0	0	1	9	3	0	13	0	0	0	0	0	27
16:30	1	6	0	0	7	1	1	6	0	8	0	7	1	0	8	0	0	0	0	0	23
16:45	0	8	1	0	9	1	0	1	0	2	1	4	1	0	6	1	1	1	0	3	20
Total	7	32	1	0	40	2	1	7	0	10	2	23	6	0	31	2	1	1	0	4	85
17:00	4	5	0	0	9	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	14
17:15	4	7	0	0	11	1	1	0	0	2	0	5	0	0	5	0	0	0	0	0	18
17:30	0	6	0	0	6	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	14
17:45	4	5	0	0	9	0	0	4	0	4	0	5	1	0	6	0	0	1	0	1	20
Total	12	23	0	0	35	1	1	5	0	7	0	22	1	0	23	0	0	1	0	1	66
Grand Total	42	141	5	0	188	9	5	27	0	41	2	125	17	0	144	6	5	6	0	17	390
Apprch %	22.3	75	2.7	0		22	12.2	65.9	0		1.4	86.8	11.8	0		35.3	29.4	35.3	0		
Total %	10.8	36.2	1.3	0	48.2	2.3	1.3	6.9	0	10.5	0.5	32.1	4.4	0	36.9	1.5	1.3	1.5	0	4.4	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

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Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 6

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	2	11	1	0	14	0	1	0	0	1	0	13	1	0	14	0	0	4	0	4	33
07:15	2	10	0	0	12	0	0	3	0	3	0	9	1	0	10	0	0	0	0	0	25
07:30	7	10	0	0	17	1	1	1	0	3	0	14	0	0	14	1	1	0	0	2	36
07:45	2	14	1	0	17	0	0	2	0	2	0	12	0	0	12	0	0	0	0	0	31
Total Volume	13	45	2	0	60	1	2	6	0	9	0	48	2	0	50	1	1	4	0	6	125
% App. Total	21.7	75	3.3	0		11.1	22.2	66.7	0		0	96	4	0		16.7	16.7	66.7	0		
PHF	.464	.804	.500	.000	.882	.250	.500	.500	.000	.750	.000	.857	.500	.000	.893	.250	.250	.250	.000	.375	.868

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:00

16:00	3	7	0	0	10	0	0	0	0	0	0	3	1	0	4	1	0	0	0	1	15
16:15	3	11	0	0	14	0	0	0	0	0	1	9	3	0	13	0	0	0	0	0	27
16:30	1	6	0	0	7	1	1	6	0	8	0	7	1	0	8	0	0	0	0	0	23
16:45	0	8	1	0	9	1	0	1	0	2	1	4	1	0	6	1	1	1	0	3	20
Total Volume	7	32	1	0	40	2	1	7	0	10	2	23	6	0	31	2	1	1	0	4	85
% App. Total	17.5	80	2.5	0		20	10	70	0		6.5	74.2	19.4	0		50	25	25	0		
PHF	.583	.727	.250	.000	.714	.500	.250	.292	.000	.313	.500	.639	.500	.000	.596	.500	.250	.250	.000	.333	.787

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 7

Groups Printed- RTOR

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	8	0	8	14
07:15	0	0	5	0	5	0	0	4	0	4	0	0	2	0	2	0	0	9	0	9	20
07:30	0	0	2	0	2	0	0	1	0	1	0	0	6	0	6	0	0	3	0	3	12
07:45	0	0	1	0	1	0	0	5	0	5	0	0	4	0	4	0	0	10	0	10	20
Total	0	0	8	0	8	0	0	16	0	16	0	0	12	0	12	0	0	30	0	30	66
*** BREAK ***																					
08:15	0	0	3	0	3	0	0	6	0	6	0	0	3	0	3	0	0	4	0	4	16
08:30	0	0	1	0	1	0	0	3	0	3	0	0	1	0	1	0	0	5	0	5	10
08:45	0	0	1	0	1	0	0	6	0	6	0	0	1	0	1	0	0	5	0	5	13
Total	0	0	5	0	5	0	0	15	0	15	0	0	5	0	5	0	0	14	0	14	39
09:00	0	0	1	0	1	0	0	10	0	10	0	0	1	0	1	0	0	6	0	6	18
*** BREAK ***																					
Total	0	0	1	0	1	0	0	10	0	10	0	0	1	0	1	0	0	6	0	6	18
*** BREAK ***																					
16:00	0	0	1	0	1	0	0	9	0	9	0	0	2	0	2	0	0	2	0	2	14
16:15	0	0	3	0	3	0	0	18	0	18	0	0	0	0	0	0	0	2	0	2	23
16:30	0	0	2	0	2	0	0	7	0	7	0	0	1	1	2	0	0	12	0	12	23
16:45	0	0	2	0	2	0	0	12	0	12	0	0	0	0	0	0	0	3	0	3	17
Total	0	0	8	0	8	0	0	46	0	46	0	0	3	1	4	0	0	19	0	19	77
17:00	0	0	6	0	6	0	2	8	0	10	0	0	0	0	0	0	0	2	0	2	18
17:15	0	0	3	0	3	0	0	13	0	13	0	0	0	0	0	0	0	3	0	3	19
17:30	0	0	6	0	6	0	0	4	0	4	0	0	0	0	0	0	0	6	0	6	16
17:45	0	0	2	0	2	0	0	7	0	7	0	0	0	0	0	0	0	7	0	7	16
Total	0	0	17	0	17	0	2	32	0	34	0	0	0	0	0	0	0	18	0	18	69
Grand Total	0	0	39	0	39	0	2	119	0	121	0	0	21	1	22	0	0	87	0	87	269
Apprch %	0	0	100	0		0	1.7	98.3	0		0	0	95.5	4.5		0	0	100	0		
Total %	0	0	14.5	0	14.5	0	0.7	44.2	0	45	0	0	7.8	0.4	8.2	0	0	32.3	0	32.3	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 1_Unser-Bluewater

Site Code : 00000001

Start Date : 9/19/2024

Page No : 8

	UNSER Southbound					BLUEWATER Westbound					UNSER Northbound					BLUEWATER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	8	0	8	14
07:15	0	0	5	0	5	0	0	4	0	4	0	0	2	0	2	0	0	9	0	9	20
07:30	0	0	2	0	2	0	0	1	0	1	0	0	6	0	6	0	0	3	0	3	12
07:45	0	0	1	0	1	0	0	5	0	5	0	0	4	0	4	0	0	10	0	10	20
Total Volume	0	0	8	0	8	0	0	16	0	16	0	0	12	0	12	0	0	30	0	30	66
% App. Total	0	0	100	0		0	0	100	0		0	0	100	0		0	0	100	0		
PHF	.000	.000	.400	.000	.400	.000	.000	.667	.000	.667	.000	.000	.500	.000	.500	.000	.000	.750	.000	.750	.825

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:15

16:15	0	0	3	0	3	0	0	18	0	18	0	0	0	0	0	0	0	2	0	2	23
16:30	0	0	2	0	2	0	0	7	0	7	0	0	1	1	2	0	0	12	0	12	23
16:45	0	0	2	0	2	0	0	12	0	12	0	0	0	0	0	0	0	3	0	3	17
17:00	0	0	6	0	6	0	2	8	0	10	0	0	0	0	0	0	0	2	0	2	18
Total Volume	0	0	13	0	13	0	2	45	0	47	0	0	1	1	2	0	0	19	0	19	81
% App. Total	0	0	100	0		0	4.3	95.7	0		0	0	50	50		0	0	100	0		
PHF	.000	.000	.542	.000	.542	.000	.250	.625	.000	.653	.000	.000	.250	.250	.250	.000	.000	.396	.000	.396	.880

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

Turning Movement Counts
Bluewater Galleria

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 1

Groups Printed- Cars - Trucks

Start Time	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	46	213	12	0	271	16	4	31	2	53	5	427	32	1	465	62	16	3	0	81	870
07:15	69	231	34	0	334	12	9	68	0	89	5	499	16	0	520	68	15	4	0	87	1030
07:30	91	264	29	0	384	14	9	55	0	78	4	388	13	0	405	101	19	0	0	120	987
07:45	122	343	37	0	502	18	30	55	1	104	14	421	22	1	458	90	29	11	0	130	1194
Total	328	1051	112	0	1491	60	52	209	3	324	28	1735	83	2	1848	321	79	18	0	418	4081
08:00	106	305	43	0	454	30	15	52	0	97	14	432	38	0	484	40	33	6	1	80	1115
08:15	84	203	14	0	301	32	12	52	0	96	6	345	23	0	374	38	60	4	1	103	874
08:30	85	245	31	0	361	27	25	65	1	118	5	331	21	0	357	44	50	3	0	97	933
08:45	51	218	19	0	288	23	26	62	0	111	9	313	18	0	340	78	22	11	0	111	850
Total	326	971	107	0	1404	112	78	231	1	422	34	1421	100	0	1555	200	165	24	2	391	3772
*** BREAK ***																					
16:00	38	349	40	0	427	74	52	114	0	240	5	370	31	0	406	32	12	5	0	49	1122
16:15	82	372	51	0	505	35	32	70	1	138	5	342	25	0	372	37	5	3	0	45	1060
16:30	77	384	46	0	507	37	13	55	0	105	5	357	22	0	384	45	13	5	0	63	1059
16:45	98	425	45	0	568	30	16	73	0	119	5	375	26	0	406	39	6	5	0	50	1143
Total	295	1530	182	0	2007	176	113	312	1	602	20	1444	104	0	1568	153	36	18	0	207	4384
17:00	70	427	56	0	553	35	17	62	0	114	4	361	14	1	380	47	20	7	0	74	1121
17:15	69	406	48	0	523	22	14	53	0	89	7	382	22	0	411	36	12	2	0	50	1073
17:30	62	466	46	0	574	50	21	67	0	138	5	417	31	0	453	55	19	11	0	85	1250
17:45	71	460	49	0	580	26	17	55	0	98	3	434	27	0	464	45	22	3	0	70	1212
Total	272	1759	199	0	2230	133	69	237	0	439	19	1594	94	1	1708	183	73	23	0	279	4656
Grand Total	1221	5311	600	0	7132	481	312	989	5	1787	101	6194	381	3	6679	857	353	83	2	1295	16893
Apprch %	17.1	74.5	8.4	0		26.9	17.5	55.3	0.3		1.5	92.7	5.7	0		66.2	27.3	6.4	0.2		
Total %	7.2	31.4	3.6	0	42.2	2.8	1.8	5.9	0	10.6	0.6	36.7	2.3	0	39.5	5.1	2.1	0.5	0	7.7	
Cars	1097	5174	497	0	6768	455	297	891	5	1648	82	6086	351	3	6522	794	336	59	2	1191	16129
% Cars	89.8	97.4	82.8	0	94.9	94.6	95.2	90.1	100	92.2	81.2	98.3	92.1	100	97.6	92.6	95.2	71.1	100	92	95.5
Trucks	124	137	103	0	364	26	15	98	0	139	19	108	30	0	157	63	17	24	0	104	764
% Trucks	10.2	2.6	17.2	0	5.1	5.4	4.8	9.9	0	7.8	18.8	1.7	7.9	0	2.4	7.4	4.8	28.9	0	8	4.5

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 2

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15

07:15	69	231	34	0	334	12	9	68	0	89	5	499	16	0	520	68	15	4	0	87	1030
07:30	91	264	29	0	384	14	9	55	0	78	4	388	13	0	405	101	19	0	0	120	987
07:45	122	343	37	0	502	18	30	55	1	104	14	421	22	1	458	90	29	11	0	130	1194
08:00	106	305	43	0	454	30	15	52	0	97	14	432	38	0	484	40	33	6	1	80	1115
Total Volume	388	1143	143	0	1674	74	63	230	1	368	37	1740	89	1	1867	299	96	21	1	417	4326
% App. Total	23.2	68.3	8.5	0		20.1	17.1	62.5	0.3		2	93.2	4.8	0.1		71.7	23	5	0.2		
PHF	.795	.833	.831	.000	.834	.617	.525	.846	.250	.885	.661	.872	.586	.250	.898	.740	.727	.477	.250	.802	.906
Cars	368	1102	131	0	1601	65	61	193	1	320	33	1700	80	1	1814	283	91	12	1	387	4122
% Cars	94.8	96.4	91.6	0	95.6	87.8	96.8	83.9	100	87.0	89.2	97.7	89.9	100	97.2	94.6	94.8	57.1	100	92.8	95.3
Trucks	20	41	12	0	73	9	2	37	0	48	4	40	9	0	53	16	5	9	0	30	204
% Trucks	5.2	3.6	8.4	0	4.4	12.2	3.2	16.1	0	13.0	10.8	2.3	10.1	0	2.8	5.4	5.2	42.9	0	7.2	4.7

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 17:00

17:00	70	427	56	0	553	35	17	62	0	114	4	361	14	1	380	47	20	7	0	74	1121
17:15	69	406	48	0	523	22	14	53	0	89	7	382	22	0	411	36	12	2	0	50	1073
17:30	62	466	46	0	574	50	21	67	0	138	5	417	31	0	453	55	19	11	0	85	1250
17:45	71	460	49	0	580	26	17	55	0	98	3	434	27	0	464	45	22	3	0	70	1212
Total Volume	272	1759	199	0	2230	133	69	237	0	439	19	1594	94	1	1708	183	73	23	0	279	4656
% App. Total	12.2	78.9	8.9	0		30.3	15.7	54	0		1.1	93.3	5.5	0.1		65.6	26.2	8.2	0		
PHF	.958	.944	.888	.000	.961	.665	.821	.884	.000	.795	.679	.918	.758	.250	.920	.832	.830	.523	.000	.821	.931
Cars	235	1733	154	0	2122	131	61	231	0	423	10	1578	89	1	1678	175	70	21	0	266	4489
% Cars	86.4	98.5	77.4	0	95.2	98.5	88.4	97.5	0	96.4	52.6	99.0	94.7	100	98.2	95.6	95.9	91.3	0	95.3	96.4
Trucks	37	26	45	0	108	2	8	6	0	16	9	16	5	0	30	8	3	2	0	13	167
% Trucks	13.6	1.5	22.6	0	4.8	1.5	11.6	2.5	0	3.6	47.4	1.0	5.3	0	1.8	4.4	4.1	8.7	0	4.7	3.6

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 3

Groups Printed- Cars

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	42	205	10	0	257	14	4	24	2	44	5	418	31	1	455	61	15	1	0	77	833
07:15	68	221	30	0	319	11	8	59	0	78	5	488	15	0	508	62	12	3	0	77	982
07:30	82	249	27	0	358	13	9	43	0	65	4	378	9	0	391	97	19	0	0	116	930
07:45	118	334	32	0	484	15	29	46	1	91	11	410	21	1	443	86	27	4	0	117	1135
Total	310	1009	99	0	1418	53	50	172	3	278	25	1694	76	2	1797	306	73	8	0	387	3880
08:00	100	298	42	0	440	26	15	45	0	86	13	424	35	0	472	38	33	5	1	77	1075
08:15	74	197	11	0	282	30	12	41	0	83	6	338	21	0	365	35	57	3	1	96	826
08:30	79	236	29	0	344	26	25	59	1	111	5	322	18	0	345	42	50	2	0	94	894
08:45	42	209	14	0	265	22	25	50	0	97	9	305	16	0	330	53	19	4	0	76	768
Total	295	940	96	0	1331	104	77	195	1	377	33	1389	90	0	1512	168	159	14	2	343	3563
*** BREAK ***																					
16:00	34	342	31	0	407	67	52	104	0	223	4	365	30	0	399	28	12	5	0	45	1074
16:15	73	359	45	0	477	35	30	66	1	132	4	337	23	0	364	36	4	3	0	43	1016
16:30	60	375	38	0	473	36	12	52	0	100	3	351	19	0	373	44	13	4	0	61	1007
16:45	90	416	34	0	540	29	15	71	0	115	3	372	24	0	399	37	5	4	0	46	1100
Total	257	1492	148	0	1897	167	109	293	1	570	14	1425	96	0	1535	145	34	16	0	195	4197
17:00	46	422	47	0	515	35	15	60	0	110	3	358	13	1	375	46	20	7	0	73	1073
17:15	61	405	32	0	498	21	10	52	0	83	4	378	20	0	402	35	11	2	0	48	1031
17:30	57	460	36	0	553	49	19	65	0	133	2	411	29	0	442	50	19	10	0	79	1207
17:45	71	446	39	0	556	26	17	54	0	97	1	431	27	0	459	44	20	2	0	66	1178
Total	235	1733	154	0	2122	131	61	231	0	423	10	1578	89	1	1678	175	70	21	0	266	4489
Grand Total	1097	5174	497	0	6768	455	297	891	5	1648	82	6086	351	3	6522	794	336	59	2	1191	16129
Apprch %	16.2	76.4	7.3	0		27.6	18	54.1	0.3		1.3	93.3	5.4	0		66.7	28.2	5	0.2		
Total %	6.8	32.1	3.1	0	42	2.8	1.8	5.5	0	10.2	0.5	37.7	2.2	0	40.4	4.9	2.1	0.4	0	7.4	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 4

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	68	221	30	0	319	11	8	59	0	78	5	488	15	0	508	62	12	3	0	77	982
07:30	82	249	27	0	358	13	9	43	0	65	4	378	9	0	391	97	19	0	0	116	930
07:45	118	334	32	0	484	15	29	46	1	91	11	410	21	1	443	86	27	4	0	117	1135
08:00	100	298	42	0	440	26	15	45	0	86	13	424	35	0	472	38	33	5	1	77	1075
Total Volume	368	1102	131	0	1601	65	61	193	1	320	33	1700	80	1	1814	283	91	12	1	387	4122
% App. Total	23	68.8	8.2	0		20.3	19.1	60.3	0.3		1.8	93.7	4.4	0.1		73.1	23.5	3.1	0.3		
PHF	.780	.825	.780	.000	.827	.625	.526	.818	.250	.879	.635	.871	.571	.250	.893	.729	.689	.600	.250	.827	.908

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 17:00

17:00	46	422	47	0	515	35	15	60	0	110	3	358	13	1	375	46	20	7	0	73	1073
17:15	61	405	32	0	498	21	10	52	0	83	4	378	20	0	402	35	11	2	0	48	1031
17:30	57	460	36	0	553	49	19	65	0	133	2	411	29	0	442	50	19	10	0	79	1207
17:45	71	446	39	0	556	26	17	54	0	97	1	431	27	0	459	44	20	2	0	66	1178
Total Volume	235	1733	154	0	2122	131	61	231	0	423	10	1578	89	1	1678	175	70	21	0	266	4489
% App. Total	11.1	81.7	7.3	0		31	14.4	54.6	0		0.6	94	5.3	0.1		65.8	26.3	7.9	0		
PHF	.827	.942	.819	.000	.954	.668	.803	.888	.000	.795	.625	.915	.767	.250	.914	.875	.875	.525	.000	.842	.930

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 5

Groups Printed- Trucks

Start Time	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	4	8	2	0	14	2	0	7	0	9	0	9	1	0	10	1	1	2	0	4	37
07:15	1	10	4	0	15	1	1	9	0	11	0	11	1	0	12	6	3	1	0	10	48
07:30	9	15	2	0	26	1	0	12	0	13	0	10	4	0	14	4	0	0	0	4	57
07:45	4	9	5	0	18	3	1	9	0	13	3	11	1	0	15	4	2	7	0	13	59
Total	18	42	13	0	73	7	2	37	0	46	3	41	7	0	51	15	6	10	0	31	201
08:00	6	7	1	0	14	4	0	7	0	11	1	8	3	0	12	2	0	1	0	3	40
08:15	10	6	3	0	19	2	0	11	0	13	0	7	2	0	9	3	3	1	0	7	48
08:30	6	9	2	0	17	1	0	6	0	7	0	9	3	0	12	2	0	1	0	3	39
08:45	9	9	5	0	23	1	1	12	0	14	0	8	2	0	10	25	3	7	0	35	82
Total	31	31	11	0	73	8	1	36	0	45	1	32	10	0	43	32	6	10	0	48	209
*** BREAK ***																					
16:00	4	7	9	0	20	7	0	10	0	17	1	5	1	0	7	4	0	0	0	4	48
16:15	9	13	6	0	28	0	2	4	0	6	1	5	2	0	8	1	1	0	0	2	44
16:30	17	9	8	0	34	1	1	3	0	5	2	6	3	0	11	1	0	1	0	2	52
16:45	8	9	11	0	28	1	1	2	0	4	2	3	2	0	7	2	1	1	0	4	43
Total	38	38	34	0	110	9	4	19	0	32	6	19	8	0	33	8	2	2	0	12	187
17:00	24	5	9	0	38	0	2	2	0	4	1	3	1	0	5	1	0	0	0	1	48
17:15	8	1	16	0	25	1	4	1	0	6	3	4	2	0	9	1	1	0	0	2	42
17:30	5	6	10	0	21	1	2	2	0	5	3	6	2	0	11	5	0	1	0	6	43
17:45	0	14	10	0	24	0	0	1	0	1	2	3	0	0	5	1	2	1	0	4	34
Total	37	26	45	0	108	2	8	6	0	16	9	16	5	0	30	8	3	2	0	13	167
Grand Total	124	137	103	0	364	26	15	98	0	139	19	108	30	0	157	63	17	24	0	104	764
Apprch %	34.1	37.6	28.3	0		18.7	10.8	70.5	0		12.1	68.8	19.1	0		60.6	16.3	23.1	0		
Total %	16.2	17.9	13.5	0	47.6	3.4	2	12.8	0	18.2	2.5	14.1	3.9	0	20.5	8.2	2.2	3.1	0	13.6	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 6

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	6	7	1	0	14	4	0	7	0	11	1	8	3	0	12	2	0	1	0	3	40
08:15	10	6	3	0	19	2	0	11	0	13	0	7	2	0	9	3	3	1	0	7	48
08:30	6	9	2	0	17	1	0	6	0	7	0	9	3	0	12	2	0	1	0	3	39
08:45	9	9	5	0	23	1	1	12	0	14	0	8	2	0	10	25	3	7	0	35	82
Total Volume	31	31	11	0	73	8	1	36	0	45	1	32	10	0	43	32	6	10	0	48	209
% App. Total	42.5	42.5	15.1	0		17.8	2.2	80	0		2.3	74.4	23.3	0		66.7	12.5	20.8	0		
PHF	.775	.861	.550	.000	.793	.500	.250	.750	.000	.804	.250	.889	.833	.000	.896	.320	.500	.357	.000	.343	.637

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:00

16:00	4	7	9	0	20	7	0	10	0	17	1	5	1	0	7	4	0	0	0	4	48
16:15	9	13	6	0	28	0	2	4	0	6	1	5	2	0	8	1	1	0	0	2	44
16:30	17	9	8	0	34	1	1	3	0	5	2	6	3	0	11	1	0	1	0	2	52
16:45	8	9	11	0	28	1	1	2	0	4	2	3	2	0	7	2	1	1	0	4	43
Total Volume	38	38	34	0	110	9	4	19	0	32	6	19	8	0	33	8	2	2	0	12	187
% App. Total	34.5	34.5	30.9	0		28.1	12.5	59.4	0		18.2	57.6	24.2	0		66.7	16.7	16.7	0		
PHF	.559	.731	.773	.000	.809	.321	.500	.475	.000	.471	.750	.792	.667	.000	.750	.500	.500	.500	.000	.750	.899

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 7

Groups Printed- RTOR

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total	
07:00	0	0	13	0	13	0	0	10	0	10	0	0	8	0	8	0	0	0	0	0	0	31
07:15	0	0	10	0	10	0	0	8	0	8	0	0	2	0	2	0	0	0	0	0	0	20
07:30	0	0	23	0	23	0	0	22	0	22	0	0	6	0	6	0	0	0	0	0	0	51
07:45	0	0	28	0	28	0	0	23	0	23	0	0	2	0	2	0	0	0	0	0	0	53
Total	0	0	74	0	74	0	0	63	0	63	0	0	18	0	18	0	0	0	0	0	0	155
08:00	0	0	16	0	16	0	0	19	0	19	0	0	13	0	13	0	0	0	0	0	0	48
08:15	0	0	10	0	10	0	0	17	0	17	0	0	24	0	24	0	0	0	0	0	0	51
08:30	0	0	7	0	7	0	0	16	0	16	0	0	9	0	9	0	0	0	0	0	0	32
08:45	0	0	21	0	21	0	0	21	0	21	0	0	9	0	9	0	0	1	0	1	1	52
Total	0	0	54	0	54	0	0	73	0	73	0	0	55	0	55	0	0	1	0	1	1	183
*** BREAK ***																						
16:00	0	0	10	0	10	0	0	25	0	25	0	0	9	0	9	0	0	1	0	1	1	45
16:15	0	0	4	0	4	0	0	19	0	19	0	0	13	0	13	0	0	1	0	1	1	37
16:30	0	0	9	0	9	0	0	21	0	21	0	0	9	0	9	0	0	4	0	4	4	43
16:45	0	0	18	0	18	0	0	20	0	20	0	0	10	0	10	0	0	0	0	0	0	48
Total	0	0	41	0	41	0	0	85	0	85	0	0	41	0	41	0	0	6	0	6	6	173
17:00	0	0	11	0	11	0	0	46	0	46	0	0	6	0	6	0	0	0	0	0	0	63
17:15	0	0	8	0	8	0	0	15	0	15	0	0	10	0	10	0	0	0	0	0	0	33
17:30	0	0	11	0	11	0	0	25	0	25	0	0	2	0	2	0	0	1	0	1	1	39
17:45	0	0	11	0	11	0	0	26	0	26	0	0	10	0	10	0	0	1	0	1	1	48
Total	0	0	41	0	41	0	0	112	0	112	0	0	28	0	28	0	0	2	0	2	2	183
Grand Total	0	0	210	0	210	0	0	333	0	333	0	0	142	0	142	0	0	9	0	9	9	694
Apprch %	0	0	100	0		0	0	100	0		0	0	100	0		0	0	100	0			
Total %	0	0	30.3	0	30.3	0	0	48	0	48	0	0	20.5	0	20.5	0	0	1.3	0	1.3		

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 2_Unser-Los Volcanes

Site Code : 00000002

Start Date : 9/19/2024

Page No : 8

	UNSER Southbound					LOS VOLCANES Westbound					UNSER Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	0	23	0	23	0	0	22	0	22	0	0	6	0	6	0	0	0	0	0	51
07:45	0	0	28	0	28	0	0	23	0	23	0	0	2	0	2	0	0	0	0	0	53
08:00	0	0	16	0	16	0	0	19	0	19	0	0	13	0	13	0	0	0	0	0	48
08:15	0	0	10	0	10	0	0	17	0	17	0	0	24	0	24	0	0	0	0	0	51
Total Volume	0	0	77	0	77	0	0	81	0	81	0	0	45	0	45	0	0	0	0	0	203
% App. Total	0	0	100	0		0	0	100	0		0	0	100	0		0	0	0	0		
PHF	.000	.000	.688	.000	.688	.000	.000	.880	.000	.880	.000	.000	.469	.000	.469	.000	.000	.000	.000	.000	.958

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:15

16:15	0	0	4	0	4	0	0	19	0	19	0	0	13	0	13	0	0	1	0	1	37
16:30	0	0	9	0	9	0	0	21	0	21	0	0	9	0	9	0	0	4	0	4	43
16:45	0	0	18	0	18	0	0	20	0	20	0	0	10	0	10	0	0	0	0	0	48
17:00	0	0	11	0	11	0	0	46	0	46	0	0	6	0	6	0	0	0	0	0	63
Total Volume	0	0	42	0	42	0	0	106	0	106	0	0	38	0	38	0	0	5	0	5	191
% App. Total	0	0	100	0		0	0	100	0		0	0	100	0		0	0	100	0		
PHF	.000	.000	.583	.000	.583	.000	.000	.576	.000	.576	.000	.000	.731	.000	.731	.000	.000	.313	.000	.313	.758

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

Turning Movement Counts
Blewater Galleria

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 1

Groups Printed- Cars - Trucks

Start Time	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	0	313	1	0	314	0	0	0	0	0	0	249	285	0	534	13	0	9	0	22	870
07:15	3	461	0	0	464	0	0	0	0	0	0	225	306	0	531	29	0	21	0	50	1045
07:30	2	672	0	0	674	0	0	0	0	0	0	327	395	0	722	13	0	17	0	30	1426
07:45	0	620	0	0	620	0	0	0	0	0	1	295	263	0	559	31	0	25	0	56	1235
Total	5	2066	1	0	2072	0	0	0	0	0	1	1096	1249	0	2346	86	0	72	0	158	4576
08:00	0	412	1	0	413	0	0	0	0	0	0	225	266	0	491	10	0	17	0	27	931
08:15	0	413	0	0	413	0	0	0	0	0	0	234	227	0	461	21	0	22	0	43	917
08:30	0	363	0	0	363	0	0	0	0	0	0	213	301	1	515	19	0	10	0	29	907
08:45	0	316	0	0	316	0	0	0	0	0	0	224	259	0	483	12	0	7	0	19	818
Total	0	1504	1	0	1505	0	0	0	0	0	0	896	1053	1	1950	62	0	56	0	118	3573
*** BREAK ***																					
16:00	0	687	0	0	687	0	0	0	0	0	0	251	198	0	449	18	0	14	0	32	1168
16:15	1	628	20	0	649	0	0	0	0	0	0	292	182	0	474	26	0	15	0	41	1164
16:30	0	642	0	0	642	0	0	0	1	1	0	292	159	1	452	27	0	13	0	40	1135
16:45	0	661	0	0	661	0	0	0	1	1	0	299	168	0	467	23	0	8	0	31	1160
Total	1	2618	20	0	2639	0	0	0	2	2	0	1134	707	1	1842	94	0	50	0	144	4627
17:00	0	602	0	0	602	0	0	0	0	0	0	275	197	0	472	19	0	14	0	33	1107
17:15	0	661	0	0	661	0	0	0	0	0	0	289	172	0	461	11	0	18	0	29	1151
17:30	0	797	0	0	797	0	0	0	0	0	0	246	194	0	440	20	0	11	0	31	1268
17:45	0	707	0	0	707	0	0	0	0	0	0	204	167	0	371	14	0	9	0	23	1101
Total	0	2767	0	0	2767	0	0	0	0	0	0	1014	730	0	1744	64	0	52	0	116	4627
Grand Total	6	8955	22	0	8983	0	0	0	2	2	1	4140	3739	2	7882	306	0	230	0	536	17403
Apprch %	0.1	99.7	0.2	0		0	0	0	100		0	52.5	47.4	0		57.1	0	42.9	0		
Total %	0	51.5	0.1	0	51.6	0	0	0	0	0	0	23.8	21.5	0	45.3	1.8	0	1.3	0	3.1	
Cars	6	8671	22	0	8699	0	0	0	2	2	1	4014	3587	2	7604	294	0	165	0	459	16764
% Cars	100	96.8	100	0	96.8	0	0	0	100	100	100	97	95.9	100	96.5	96.1	0	71.7	0	85.6	96.3
Trucks	0	284	0	0	284	0	0	0	0	0	0	126	152	0	278	12	0	65	0	77	639
% Trucks	0	3.2	0	0	3.2	0	0	0	0	0	0	3	4.1	0	3.5	3.9	0	28.3	0	14.4	3.7

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 2

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15

07:15	3	461	0	0	464	0	0	0	0	0	0	225	306	0	531	29	0	21	0	50	1045
07:30	2	672	0	0	674	0	0	0	0	0	0	327	395	0	722	13	0	17	0	30	1426
07:45	0	620	0	0	620	0	0	0	0	0	1	295	263	0	559	31	0	25	0	56	1235
08:00	0	412	1	0	413	0	0	0	0	0	0	225	266	0	491	10	0	17	0	27	931
Total Volume	5	2165	1	0	2171	0	0	0	0	0	1	1072	1230	0	2303	83	0	80	0	163	4637
% App. Total	0.2	99.7	0	0		0	0	0	0		0	46.5	53.4	0		50.9	0	49.1	0		
PHF	.417	.805	.250	.000	.805	.000	.000	.000	.000	.000	.250	.820	.778	.000	.797	.669	.000	.800	.000	.728	.813
Cars	5	2108	1	0	2114	0	0	0	0	0	1	1033	1188	0	2222	82	0	63	0	145	4481
% Cars	100	97.4	100	0	97.4	0	0	0	0	0	100	96.4	96.6	0	96.5	98.8	0	78.8	0	89.0	96.6
Trucks	0	57	0	0	57	0	0	0	0	0	0	39	42	0	81	1	0	17	0	18	156
% Trucks	0	2.6	0	0	2.6	0	0	0	0	0	0	3.6	3.4	0	3.5	1.2	0	21.3	0	11.0	3.4

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45

16:45	0	661	0	0	661	0	0	0	1	1	0	299	168	0	467	23	0	8	0	31	1160
17:00	0	602	0	0	602	0	0	0	0	0	0	275	197	0	472	19	0	14	0	33	1107
17:15	0	661	0	0	661	0	0	0	0	0	0	289	172	0	461	11	0	18	0	29	1151
17:30	0	797	0	0	797	0	0	0	0	0	0	246	194	0	440	20	0	11	0	31	1268
Total Volume	0	2721	0	0	2721	0	0	0	1	1	0	1109	731	0	1840	73	0	51	0	124	4686
% App. Total	0	100	0	0		0	0	0	100		0	60.3	39.7	0		58.9	0	41.1	0		
PHF	.000	.854	.000	.000	.854	.000	.000	.000	.250	.250	.000	.927	.928	.000	.975	.793	.000	.708	.000	.939	.924
Cars	0	2651	0	0	2651	0	0	0	1	1	0	1100	709	0	1809	73	0	39	0	112	4573
% Cars	0	97.4	0	0	97.4	0	0	0	100	100	0	99.2	97.0	0	98.3	100	0	76.5	0	90.3	97.6
Trucks	0	70	0	0	70	0	0	0	0	0	0	9	22	0	31	0	0	12	0	12	113
% Trucks	0	2.6	0	0	2.6	0	0	0	0	0	0	0.8	3.0	0	1.7	0	0	23.5	0	9.7	2.4

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 3

Groups Printed- Cars

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	301	1	0	302	0	0	0	0	0	0	243	276	0	519	10	0	4	0	14	835
07:15	3	444	0	0	447	0	0	0	0	0	0	220	292	0	512	29	0	14	0	43	1002
07:30	2	657	0	0	659	0	0	0	0	0	0	312	382	0	694	13	0	17	0	30	1383
07:45	0	612	0	0	612	0	0	0	0	0	1	284	253	0	538	30	0	21	0	51	1201
Total	5	2014	1	0	2020	0	0	0	0	0	1	1059	1203	0	2263	82	0	56	0	138	4421
08:00	0	395	1	0	396	0	0	0	0	0	0	217	261	0	478	10	0	11	0	21	895
08:15	0	401	0	0	401	0	0	0	0	0	0	223	215	0	438	20	0	17	0	37	876
08:30	0	341	0	0	341	0	0	0	0	0	0	196	291	1	488	15	0	5	0	20	849
08:45	0	301	0	0	301	0	0	0	0	0	0	195	219	0	414	11	0	5	0	16	731
Total	0	1438	1	0	1439	0	0	0	0	0	0	831	986	1	1818	56	0	38	0	94	3351
*** BREAK ***																					
16:00	0	664	0	0	664	0	0	0	0	0	0	247	193	0	440	17	0	8	0	25	1129
16:15	1	608	20	0	629	0	0	0	0	0	0	289	177	0	466	26	0	10	0	36	1131
16:30	0	604	0	0	604	0	0	0	1	1	0	287	155	1	443	27	0	7	0	34	1082
16:45	0	641	0	0	641	0	0	0	1	1	0	293	164	0	457	23	0	7	0	30	1129
Total	1	2517	20	0	2538	0	0	0	2	2	0	1116	689	1	1806	93	0	32	0	125	4471
17:00	0	586	0	0	586	0	0	0	0	0	0	273	188	0	461	19	0	9	0	28	1075
17:15	0	647	0	0	647	0	0	0	0	0	0	288	168	0	456	11	0	15	0	26	1129
17:30	0	777	0	0	777	0	0	0	0	0	0	246	189	0	435	20	0	8	0	28	1240
17:45	0	692	0	0	692	0	0	0	0	0	0	201	164	0	365	13	0	7	0	20	1077
Total	0	2702	0	0	2702	0	0	0	0	0	0	1008	709	0	1717	63	0	39	0	102	4521
Grand Total	6	8671	22	0	8699	0	0	0	2	2	1	4014	3587	2	7604	294	0	165	0	459	16764
Apprch %	0.1	99.7	0.3	0		0	0	0	100		0	52.8	47.2	0		64.1	0	35.9	0		
Total %	0	51.7	0.1	0	51.9	0	0	0	0	0	0	23.9	21.4	0	45.4	1.8	0	1	0	2.7	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 4

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	3	444	0	0	447	0	0	0	0	0	0	220	292	0	512	29	0	14	0	43	1002
07:30	2	657	0	0	659	0	0	0	0	0	0	312	382	0	694	13	0	17	0	30	1383
07:45	0	612	0	0	612	0	0	0	0	0	1	284	253	0	538	30	0	21	0	51	1201
08:00	0	395	1	0	396	0	0	0	0	0	0	217	261	0	478	10	0	11	0	21	895
Total Volume	5	2108	1	0	2114	0	0	0	0	0	1	1033	1188	0	2222	82	0	63	0	145	4481
% App. Total	0.2	99.7	0	0		0	0	0	0		0	46.5	53.5	0		56.6	0	43.4	0		
PHF	.417	.802	.250	.000	.802	.000	.000	.000	.000	.000	.250	.828	.777	.000	.800	.683	.000	.750	.000	.711	.810

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45

16:45	0	641	0	0	641	0	0	0	1	1	0	293	164	0	457	23	0	7	0	30	1129
17:00	0	586	0	0	586	0	0	0	0	0	0	273	188	0	461	19	0	9	0	28	1075
17:15	0	647	0	0	647	0	0	0	0	0	0	288	168	0	456	11	0	15	0	26	1129
17:30	0	777	0	0	777	0	0	0	0	0	0	246	189	0	435	20	0	8	0	28	1240
Total Volume	0	2651	0	0	2651	0	0	0	1	1	0	1100	709	0	1809	73	0	39	0	112	4573
% App. Total	0	100	0	0		0	0	0	100		0	60.8	39.2	0		65.2	0	34.8	0		
PHF	.000	.853	.000	.000	.853	.000	.000	.000	.250	.250	.000	.939	.938	.000	.981	.793	.000	.650	.000	.933	.922

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 5

Groups Printed- Trucks

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	12	0	0	12	0	0	0	0	0	0	6	9	0	15	3	0	5	0	8	35
07:15	0	17	0	0	17	0	0	0	0	0	0	5	14	0	19	0	0	7	0	7	43
07:30	0	15	0	0	15	0	0	0	0	0	0	15	13	0	28	0	0	0	0	0	43
07:45	0	8	0	0	8	0	0	0	0	0	0	11	10	0	21	1	0	4	0	5	34
Total	0	52	0	0	52	0	0	0	0	0	0	37	46	0	83	4	0	16	0	20	155
08:00	0	17	0	0	17	0	0	0	0	0	0	8	5	0	13	0	0	6	0	6	36
08:15	0	12	0	0	12	0	0	0	0	0	0	11	12	0	23	1	0	5	0	6	41
08:30	0	22	0	0	22	0	0	0	0	0	0	17	10	0	27	4	0	5	0	9	58
08:45	0	15	0	0	15	0	0	0	0	0	0	29	40	0	69	1	0	2	0	3	87
Total	0	66	0	0	66	0	0	0	0	0	0	65	67	0	132	6	0	18	0	24	222
*** BREAK ***																					
16:00	0	23	0	0	23	0	0	0	0	0	0	4	5	0	9	1	0	6	0	7	39
16:15	0	20	0	0	20	0	0	0	0	0	0	3	5	0	8	0	0	5	0	5	33
16:30	0	38	0	0	38	0	0	0	0	0	0	5	4	0	9	0	0	6	0	6	53
16:45	0	20	0	0	20	0	0	0	0	0	0	6	4	0	10	0	0	1	0	1	31
Total	0	101	0	0	101	0	0	0	0	0	0	18	18	0	36	1	0	18	0	19	156
17:00	0	16	0	0	16	0	0	0	0	0	0	2	9	0	11	0	0	5	0	5	32
17:15	0	14	0	0	14	0	0	0	0	0	0	1	4	0	5	0	0	3	0	3	22
17:30	0	20	0	0	20	0	0	0	0	0	0	0	5	0	5	0	0	3	0	3	28
17:45	0	15	0	0	15	0	0	0	0	0	0	3	3	0	6	1	0	2	0	3	24
Total	0	65	0	0	65	0	0	0	0	0	0	6	21	0	27	1	0	13	0	14	106
Grand Total	0	284	0	0	284	0	0	0	0	0	0	126	152	0	278	12	0	65	0	77	639
Apprch %	0	100	0	0		0	0	0	0		0	45.3	54.7	0		15.6	0	84.4	0		
Total %	0	44.4	0	0	44.4	0	0	0	0	0	0	19.7	23.8	0	43.5	1.9	0	10.2	0	12.1	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 6

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	0	17	0	0	17	0	0	0	0	0	0	8	5	0	13	0	0	6	0	6	36
08:15	0	12	0	0	12	0	0	0	0	0	0	11	12	0	23	1	0	5	0	6	41
08:30	0	22	0	0	22	0	0	0	0	0	0	17	10	0	27	4	0	5	0	9	58
08:45	0	15	0	0	15	0	0	0	0	0	0	29	40	0	69	1	0	2	0	3	87
Total Volume	0	66	0	0	66	0	0	0	0	0	0	65	67	0	132	6	0	18	0	24	222
% App. Total	0	100	0	0		0	0	0	0		0	49.2	50.8	0		25	0	75	0		
PHF	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.560	.419	.000	.478	.375	.000	.750	.000	.667	.638

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:00

16:00	0	23	0	0	23	0	0	0	0	0	0	4	5	0	9	1	0	6	0	7	39
16:15	0	20	0	0	20	0	0	0	0	0	0	3	5	0	8	0	0	5	0	5	33
16:30	0	38	0	0	38	0	0	0	0	0	0	5	4	0	9	0	0	6	0	6	53
16:45	0	20	0	0	20	0	0	0	0	0	0	6	4	0	10	0	0	1	0	1	31
Total Volume	0	101	0	0	101	0	0	0	0	0	0	18	18	0	36	1	0	18	0	19	156
% App. Total	0	100	0	0		0	0	0	0		0	50	50	0		5.3	0	94.7	0		
PHF	.000	.664	.000	.000	.664	.000	.000	.000	.000	.000	.000	.750	.900	.000	.900	.250	.000	.750	.000	.679	.736

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 7

Groups Printed- Bikes

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
*** BREAK ***																					
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
*** BREAK ***																					
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	3
Apprch %	0	0	0	0		0	0	0	0		0	0	0	100		0	0	0	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	100	100	0	0	0	0		

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 3_Unser-I-40 South Ramp

Site Code : 00000003

Start Date : 9/19/2024

Page No : 8

	UNSER Southbound					I40 SOUTH RAMP Westbound					UNSER Northbound					I40 SOUTH RAMP Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	100
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 17:00

17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	100
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.000	.500

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

Turning Movement Counts
Bluewater Galleria

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 1

Groups Printed- Cars - Trucks

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	41	0	0	41	14	0	2	0	16	0	72	21	0	93	150
07:15	0	0	0	0	0	3	95	0	0	98	8	0	5	0	13	0	94	12	1	107	218
07:30	0	0	0	0	0	4	72	0	0	76	6	0	1	0	7	0	108	10	1	119	202
07:45	0	0	0	0	0	3	87	0	0	90	6	0	3	0	9	0	151	8	0	159	258
Total	0	0	0	0	0	10	295	0	0	305	34	0	11	0	45	0	425	51	2	478	828
08:00	0	0	0	0	0	5	89	1	0	95	7	0	2	0	9	0	200	9	0	209	313
08:15	0	0	0	0	0	3	121	0	0	124	11	0	2	0	13	0	142	4	0	146	283
08:30	0	0	0	0	0	1	102	0	0	103	13	0	2	0	15	0	80	5	0	85	203
08:45	0	0	0	0	0	2	105	0	0	107	5	0	2	0	7	0	87	7	0	94	208
Total	0	0	0	0	0	11	417	1	0	429	36	0	8	0	44	0	509	25	0	534	1007
*** BREAK ***																					
16:00	0	0	0	0	0	0	93	0	0	93	14	0	2	0	16	0	86	5	0	91	200
16:15	0	0	0	0	0	2	91	0	0	93	8	0	0	0	8	0	95	8	1	104	205
16:30	0	0	0	0	0	0	73	0	0	73	3	0	2	0	5	0	36	2	0	38	116
*** BREAK ***																					
Total	0	0	0	0	0	2	257	0	0	259	25	0	4	0	29	0	217	15	1	233	521
*** BREAK ***																					
Grand Total	0	0	0	0	0	23	969	1	0	993	95	0	23	0	118	0	1151	91	3	1245	2356
Apprch %	0	0	0	0	0	2.3	97.6	0.1	0		80.5	0	19.5	0		0	92.4	7.3	0.2		
Total %	0	0	0	0	0	1	41.1	0	0	42.1	4	0	1	0	5	0	48.9	3.9	0.1	52.8	
Cars	0	0	0	0	0	15	931	1	0	947	68	0	21	0	89	0	1077	69	3	1149	2185
% Cars	0	0	0	0	0	65.2	96.1	100	0	95.4	71.6	0	91.3	0	75.4	0	93.6	75.8	100	92.3	92.7
Trucks	0	0	0	0	0	8	38	0	0	46	27	0	2	0	29	0	74	22	0	96	171
% Trucks	0	0	0	0	0	34.8	3.9	0	0	4.6	28.4	0	8.7	0	24.6	0	6.4	24.2	0	7.7	7.3

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 2

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

07:45	0	0	0	0	0	3	87	0	0	90	6	0	3	0	9	0	151	8	0	159	258
08:00	0	0	0	0	0	5	89	1	0	95	7	0	2	0	9	0	200	9	0	209	313
08:15	0	0	0	0	0	3	121	0	0	124	11	0	2	0	13	0	142	4	0	146	283
08:30	0	0	0	0	0	1	102	0	0	103	13	0	2	0	15	0	80	5	0	85	203
Total Volume	0	0	0	0	0	12	399	1	0	412	37	0	9	0	46	0	573	26	0	599	1057
% App. Total	0	0	0	0	0	2.9	96.8	0.2	0		80.4	0	19.6	0		0	95.7	4.3	0		
PHF	.000	.000	.000	.000	.000	.600	.824	.250	.000	.831	.712	.000	.750	.000	.767	.000	.716	.722	.000	.717	.844
Cars	0	0	0	0	0	7	381	1	0	389	23	0	8	0	31	0	539	18	0	557	977
% Cars	0	0	0	0	0	58.3	95.5	100	0	94.4	62.2	0	88.9	0	67.4	0	94.1	69.2	0	93.0	92.4
Trucks	0	0	0	0	0	5	18	0	0	23	14	0	1	0	15	0	34	8	0	42	80
% Trucks	0	0	0	0	0	41.7	4.5	0	0	5.6	37.8	0	11.1	0	32.6	0	5.9	30.8	0	7.0	7.6

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 15:45

15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	93	0	0	93	14	0	2	0	16	0	86	5	0	91	200
16:15	0	0	0	0	0	2	91	0	0	93	8	0	0	0	8	0	95	8	1	104	205
16:30	0	0	0	0	0	0	73	0	0	73	3	0	2	0	5	0	36	2	0	38	116
Total Volume	0	0	0	0	0	2	257	0	0	259	25	0	4	0	29	0	217	15	1	233	521
% App. Total	0	0	0	0	0	0.8	99.2	0	0		86.2	0	13.8	0		0	93.1	6.4	0.4		
PHF	.000	.000	.000	.000	.000	.250	.691	.000	.000	.696	.446	.000	.500	.000	.453	.000	.571	.469	.250	.560	.635
Cars	0	0	0	0	0	2	254	0	0	256	23	0	4	0	27	0	197	8	1	206	489
% Cars	0	0	0	0	0	100	98.8	0	0	98.8	92.0	0	100	0	93.1	0	90.8	53.3	100	88.4	93.9
Trucks	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	20	7	0	27	32
% Trucks	0	0	0	0	0	0	1.2	0	0	1.2	8.0	0	0	0	6.9	0	9.2	46.7	0	11.6	6.1

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 3

Groups Printed- Cars

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	38	0	0	38	12	0	2	0	14	0	69	21	0	90	142
07:15	0	0	0	0	0	3	90	0	0	93	5	0	4	0	9	0	93	9	1	103	205
07:30	0	0	0	0	0	2	67	0	0	69	4	0	1	0	5	0	104	8	1	113	187
07:45	0	0	0	0	0	2	83	0	0	85	2	0	3	0	5	0	144	5	0	149	239
Total	0	0	0	0	0	7	278	0	0	285	23	0	10	0	33	0	410	43	2	455	773
08:00	0	0	0	0	0	3	85	1	0	89	4	0	1	0	5	0	189	7	0	196	290
08:15	0	0	0	0	0	2	119	0	0	121	9	0	2	0	11	0	134	4	0	138	270
08:30	0	0	0	0	0	0	94	0	0	94	8	0	2	0	10	0	72	2	0	74	178
08:45	0	0	0	0	0	1	101	0	0	102	1	0	2	0	3	0	75	5	0	80	185
Total	0	0	0	0	0	6	399	1	0	406	22	0	7	0	29	0	470	18	0	488	923
*** BREAK ***																					
16:00	0	0	0	0	0	0	92	0	0	92	14	0	2	0	16	0	75	2	0	77	185
16:15	0	0	0	0	0	2	89	0	0	91	7	0	0	0	7	0	89	5	1	95	193
16:30	0	0	0	0	0	0	73	0	0	73	2	0	2	0	4	0	33	1	0	34	111
*** BREAK ***																					
Total	0	0	0	0	0	2	254	0	0	256	23	0	4	0	27	0	197	8	1	206	489
*** BREAK ***																					
Grand Total	0	0	0	0	0	15	931	1	0	947	68	0	21	0	89	0	1077	69	3	1149	2185
Apprch %	0	0	0	0		1.6	98.3	0.1	0		76.4	0	23.6	0		0	93.7	6	0.3		
Total %	0	0	0	0	0	0.7	42.6	0	0	43.3	3.1	0	1	0	4.1	0	49.3	3.2	0.1	52.6	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 4

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	0	0	0	0	2	67	0	0	69	4	0	1	0	5	0	104	8	1	113	187
07:45	0	0	0	0	0	2	83	0	0	85	2	0	3	0	5	0	144	5	0	149	239
08:00	0	0	0	0	0	3	85	1	0	89	4	0	1	0	5	0	189	7	0	196	290
08:15	0	0	0	0	0	2	119	0	0	121	9	0	2	0	11	0	134	4	0	138	270
Total Volume	0	0	0	0	0	9	354	1	0	364	19	0	7	0	26	0	571	24	1	596	986
% App. Total	0	0	0	0	0	2.5	97.3	0.3	0		73.1	0	26.9	0		0	95.8	4	0.2		
PHF	.000	.000	.000	.000	.000	.750	.744	.250	.000	.752	.528	.000	.583	.000	.591	.000	.755	.750	.250	.760	.850

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 15:45

15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	92	0	0	92	14	0	2	0	16	0	75	2	0	77	185
16:15	0	0	0	0	0	2	89	0	0	91	7	0	0	0	7	0	89	5	1	95	193
16:30	0	0	0	0	0	0	73	0	0	73	2	0	2	0	4	0	33	1	0	34	111
Total Volume	0	0	0	0	0	2	254	0	0	256	23	0	4	0	27	0	197	8	1	206	489
% App. Total	0	0	0	0	0	0.8	99.2	0	0		85.2	0	14.8	0		0	95.6	3.9	0.5		
PHF	.000	.000	.000	.000	.000	.250	.690	.000	.000	.696	.411	.000	.500	.000	.422	.000	.553	.400	.250	.542	.633

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 5

Groups Printed- Trucks

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	8
07:15	0	0	0	0	0	0	5	0	0	5	3	0	1	0	4	0	1	3	0	4	13
07:30	0	0	0	0	0	2	5	0	0	7	2	0	0	0	2	0	4	2	0	6	15
07:45	0	0	0	0	0	1	4	0	0	5	4	0	0	0	4	0	7	3	0	10	19
Total	0	0	0	0	0	3	17	0	0	20	11	0	1	0	12	0	15	8	0	23	55
08:00	0	0	0	0	0	2	4	0	0	6	3	0	1	0	4	0	11	2	0	13	23
08:15	0	0	0	0	0	1	2	0	0	3	2	0	0	0	2	0	8	0	0	8	13
08:30	0	0	0	0	0	1	8	0	0	9	5	0	0	0	5	0	8	3	0	11	25
08:45	0	0	0	0	0	1	4	0	0	5	4	0	0	0	4	0	12	2	0	14	23
Total	0	0	0	0	0	5	18	0	0	23	14	0	1	0	15	0	39	7	0	46	84
*** BREAK ***																					
16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	11	3	0	14	15
16:15	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	6	3	0	9	12
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	1	0	4	5
*** BREAK ***																					
Total	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	20	7	0	27	32
*** BREAK ***																					
Grand Total	0	0	0	0	0	8	38	0	0	46	27	0	2	0	29	0	74	22	0	96	171
Apprch %	0	0	0	0		17.4	82.6	0	0		93.1	0	6.9	0		0	77.1	22.9	0		
Total %	0	0	0	0	0	4.7	22.2	0	0	26.9	15.8	0	1.2	0	17	0	43.3	12.9	0	56.1	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 6

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	0	0	0	0	0	2	4	0	0	6	3	0	1	0	4	0	11	2	0	13	23
08:15	0	0	0	0	0	1	2	0	0	3	2	0	0	0	2	0	8	0	0	8	13
08:30	0	0	0	0	0	1	8	0	0	9	5	0	0	0	5	0	8	3	0	11	25
08:45	0	0	0	0	0	1	4	0	0	5	4	0	0	0	4	0	12	2	0	14	23
Total Volume	0	0	0	0	0	5	18	0	0	23	14	0	1	0	15	0	39	7	0	46	84
% App. Total	0	0	0	0	0	21.7	78.3	0	0		93.3	0	6.7	0		0	84.8	15.2	0		
PHF	.000	.000	.000	.000	.000	.625	.563	.000	.000	.639	.700	.000	.250	.000	.750	.000	.813	.583	.000	.821	.840

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 15:45

15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	11	3	0	14	15
16:15	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	6	3	0	9	12
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	1	0	4	5
Total Volume	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	20	7	0	27	32
% App. Total	0	0	0	0	0	0	100	0	0		100	0	0	0		0	74.1	25.9	0		
PHF	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.500	.000	.000	.000	.500	.000	.455	.583	.000	.482	.533

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

Page No : 7

Groups Printed- COMBINED (Cars and Trucks)

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	41	0	0	41	14	0	2	0	16	0	72	21	0	93	150
07:15	0	0	0	0	0	3	95	0	0	98	8	0	5	0	13	0	94	12	1	107	218
07:30	0	0	0	0	0	4	72	0	0	76	6	0	1	0	7	0	108	10	1	119	202
07:45	0	0	0	0	0	3	87	0	0	90	6	0	3	0	9	0	151	8	0	159	258
Total	0	0	0	0	0	10	295	0	0	305	34	0	11	0	45	0	425	51	2	478	828
08:00	0	0	0	0	0	5	89	1	0	95	7	0	2	0	9	0	200	9	0	209	313
08:15	0	0	0	0	0	3	121	0	0	124	11	0	2	0	13	0	142	4	0	146	283
08:30	0	0	0	0	0	1	102	0	0	103	13	0	2	0	15	0	80	5	0	85	203
08:45	0	0	0	0	0	2	105	0	0	107	5	0	2	0	7	0	87	7	0	94	208
Total	0	0	0	0	0	11	417	1	0	429	36	0	8	0	44	0	509	25	0	534	1007
*** BREAK ***																					
16:00	0	0	0	0	0	0	93	0	0	93	14	0	2	0	16	0	86	5	0	91	200
16:15	0	0	0	0	0	2	91	0	0	93	8	0	0	0	8	0	95	8	1	104	205
16:30	0	0	0	0	0	0	73	0	0	73	3	0	2	0	5	0	36	2	0	38	116
*** BREAK ***																					
Total	0	0	0	0	0	2	257	0	0	259	25	0	4	0	29	0	217	15	1	233	521
*** BREAK ***																					
Grand Total	0	0	0	0	0	23	969	1	0	993	95	0	23	0	118	0	1151	91	3	1245	2356
Apprch %	0	0	0	0		2.3	97.6	0.1	0		80.5	0	19.5	0		0	92.4	7.3	0.2		
Total %	0	0	0	0	0	1	41.1	0	0	42.1	4	0	1	0	5	0	48.9	3.9	0.1	52.8	

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309

Albuquerque, NM 87120

Transforming Infrastructure Needs into Sustainable Solutions

File Name : 4_los volcanes_silver creek

Site Code : 00000004

Start Date : 9/19/2024

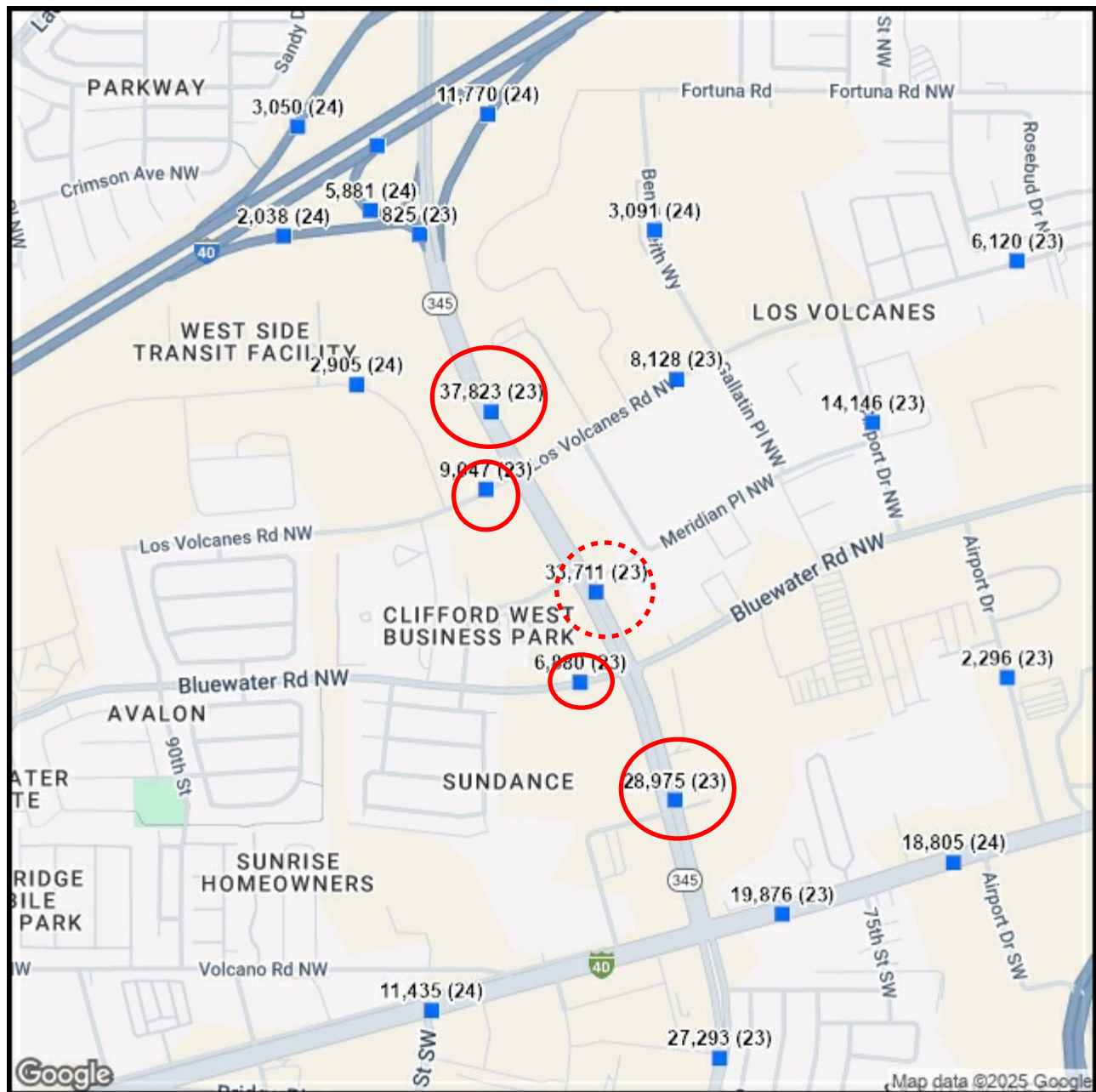
Page No : 8

	SILVER CREEK Southbound					LOS VOLCANES Westbound					SILVER CREEK Northbound					LOS VOLCANES Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	3	87	0	0	90	6	0	3	0	9	0	151	8	0	159	258
08:00	0	0	0	0	0	5	89	1	0	95	7	0	2	0	9	0	200	9	0	209	313
08:15	0	0	0	0	0	3	121	0	0	124	11	0	2	0	13	0	142	4	0	146	283
08:30	0	0	0	0	0	1	102	0	0	103	13	0	2	0	15	0	80	5	0	85	203
Total Volume	0	0	0	0	0	12	399	1	0	412	37	0	9	0	46	0	573	26	0	599	1057
% App. Total	0	0	0	0	0	2.9	96.8	0.2	0		80.4	0	19.6	0		0	95.7	4.3	0		
PHF	.000	.000	.000	.000	.000	.600	.824	.250	.000	.831	.712	.000	.750	.000	.767	.000	.716	.722	.000	.717	.844

Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 15:45

15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	93	0	0	93	14	0	2	0	16	0	86	5	0	91	200
16:15	0	0	0	0	0	2	91	0	0	93	8	0	0	0	8	0	95	8	1	104	205
16:30	0	0	0	0	0	0	73	0	0	73	3	0	2	0	5	0	36	2	0	38	116
Total Volume	0	0	0	0	0	2	257	0	0	259	25	0	4	0	29	0	217	15	1	233	521
% App. Total	0	0	0	0	0	0.8	99.2	0	0		86.2	0	13.8	0		0	93.1	6.4	0.4		
PHF	.000	.000	.000	.000	.000	.250	.691	.000	.000	.696	.446	.000	.500	.000	.453	.000	.571	.469	.250	.560	.635



0 1500 3000

Feet



TCDS Locations

- Short
- Continuous
- WIM
- Located Short
- Located Continuous
- Located WIM
- Inactive Location

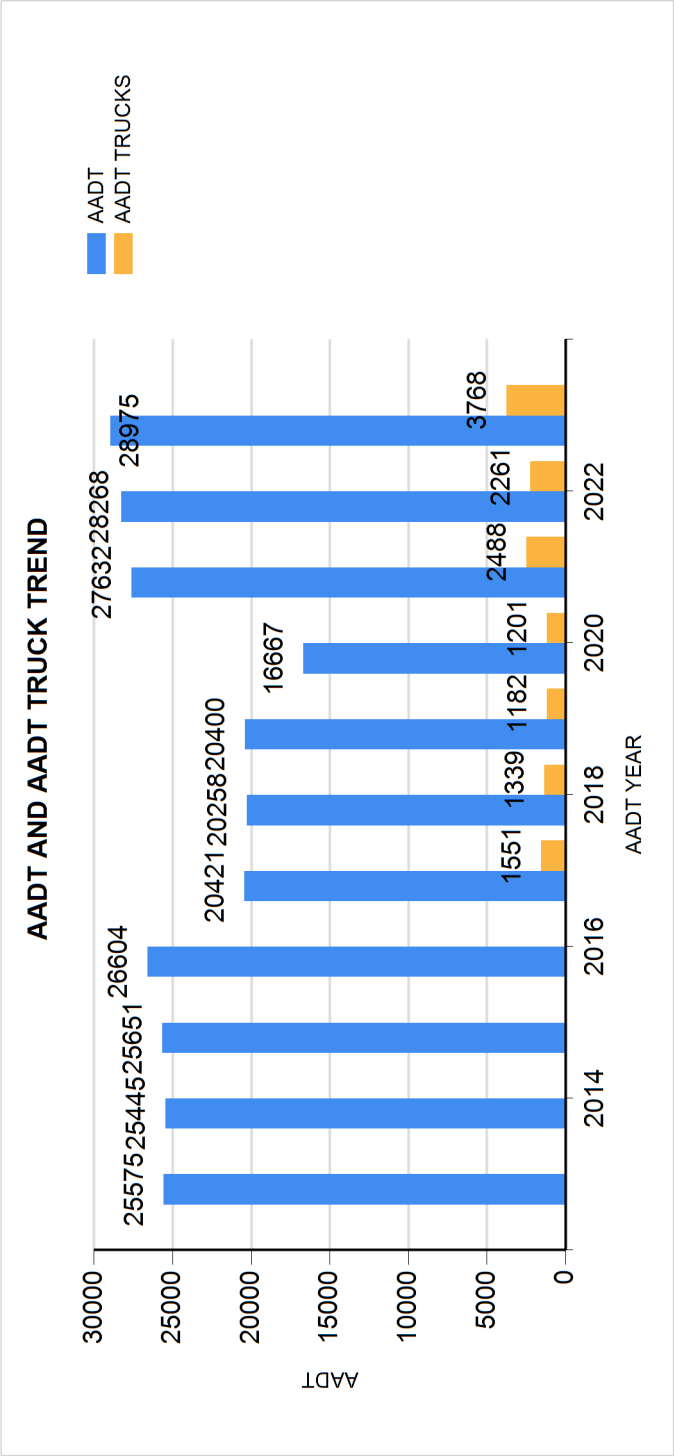


2/13/2025



AADT and AADT Trucks by Year for 1/1/2013 - 12/31/2024
Criteria: Location ID = 14490, From 1/1/1900 To 12/31/2049 12:00:00 AM

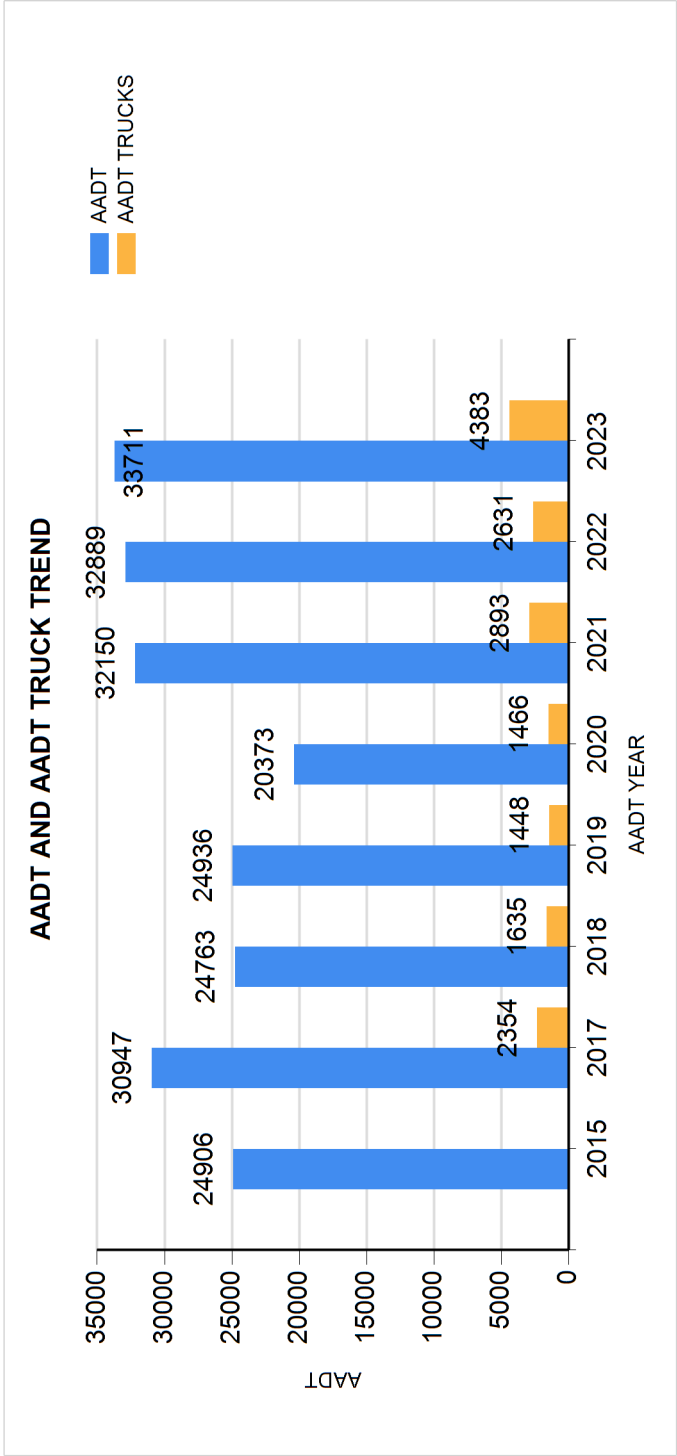
District 3 Location ID 14490 At
County 1 - BERNALILLO Located On NM-345-P
Community LRS ID NM345P LRS Point 0.1976183





AADT and AADT Trucks by Year for 1/1/2015 - 12/31/2024
Criteria: Location ID = 18499, From 1/1/1900 To 12/31/2049 12:00:00 AM

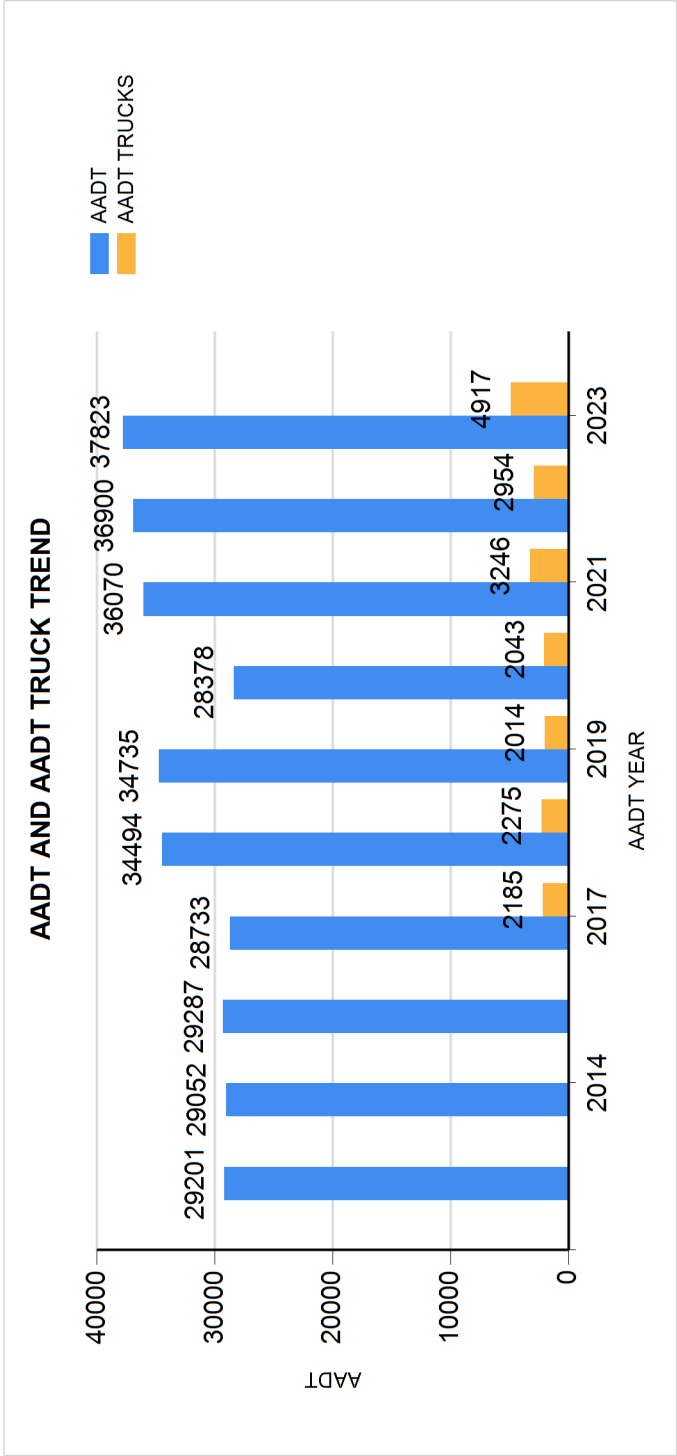
District 3 Location ID 18499 At
County 1 - BERNALILLO Located On NM-345-P LRS ID NM345P LRS Point 0.5153503
Community





AADT and AADT Trucks by Year for 1/1/2013 - 12/31/2024
Criteria: Location ID = 18500, From 1/1/1900 To 12/31/2049 12:00:00 AM

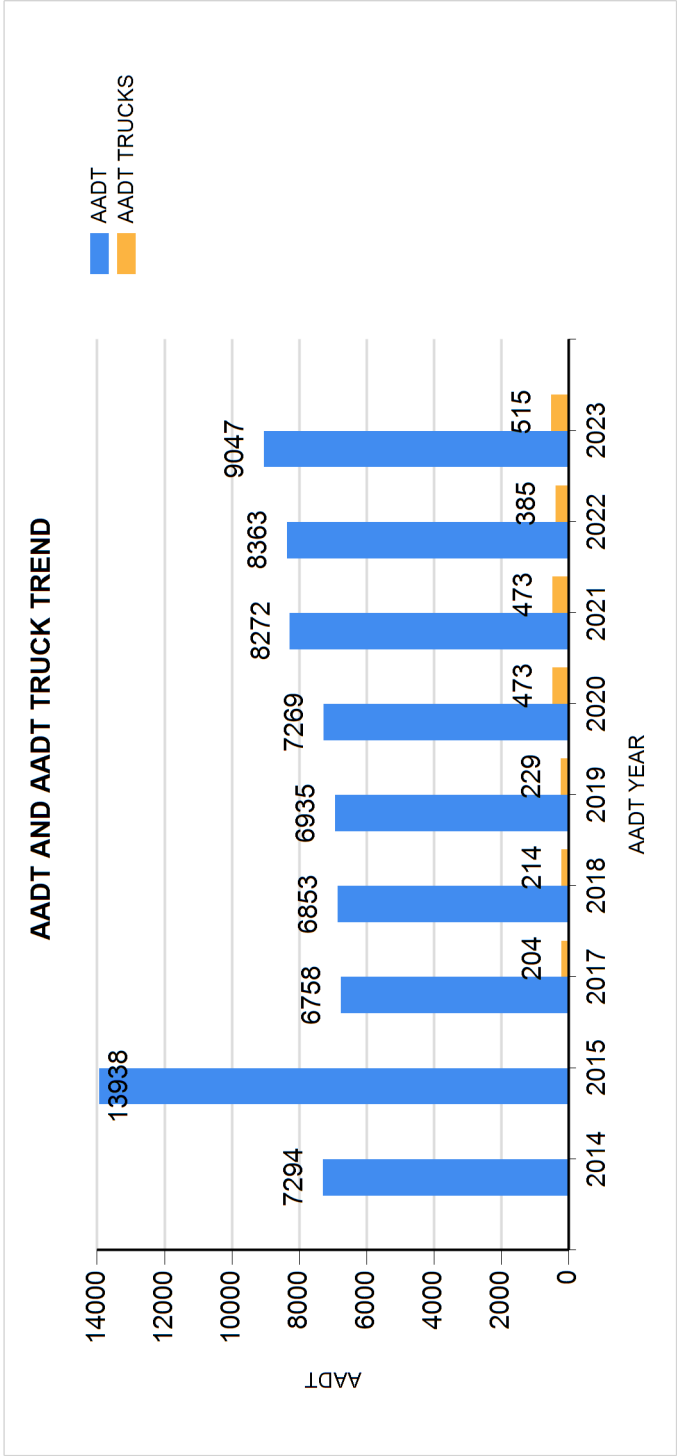
District 3 Location ID 18500 At
County 1 - BERNALILLO Located On NM-345-P LRS Point 0.8127534
Community LRS ID NM345P





AADT and AADT Trucks by Year for 1/1/2013 - 12/31/2024
Criteria: Location ID = 50484, From 1/1/1900 To 12/31/2049 12:00:00 AM

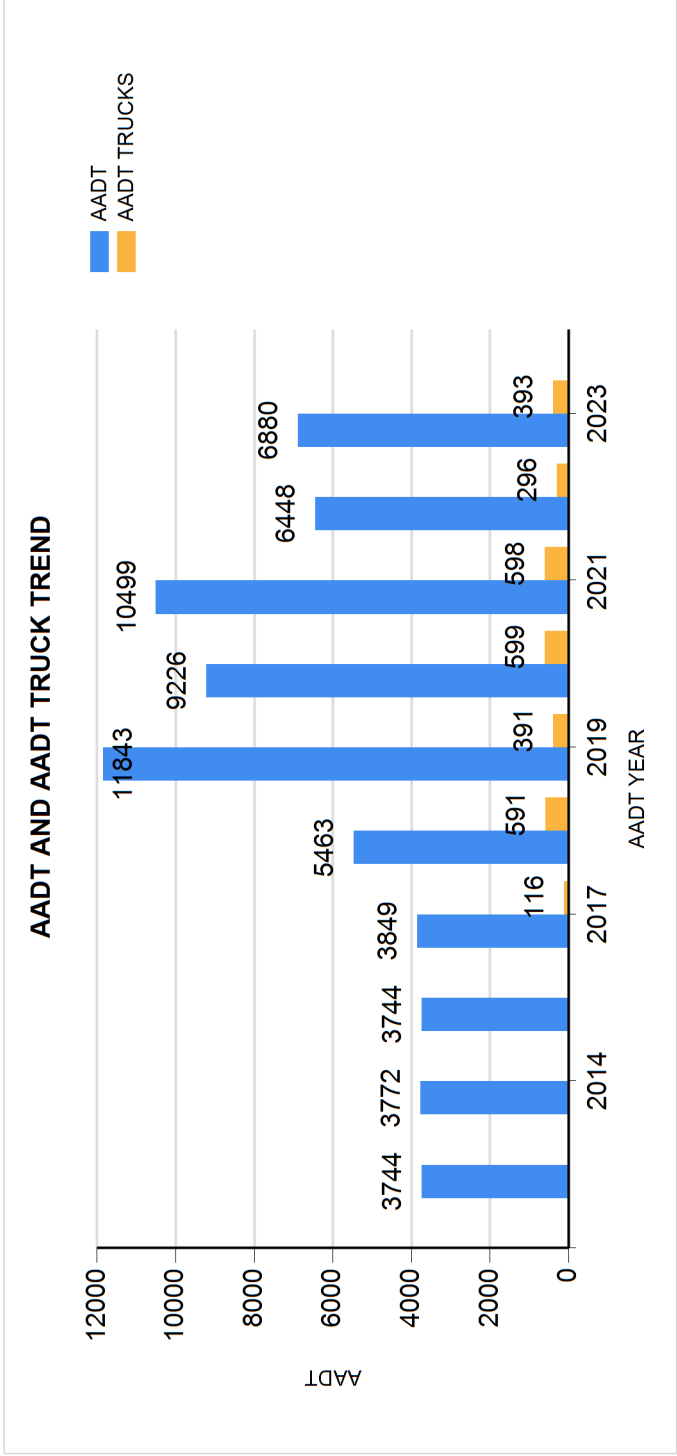
District 3
County (001) Bernalillo
Community
Location ID 50484
Located On LOS VOLCANES RD NW
LRS ID FL1038P
At
LRS Point 1.0933860





AADT and AADT Trucks by Year for 1/1/2013 - 12/31/2024
Criteria: Location ID = 34962, From 1/1/1900 To 12/31/2049 12:00:00 AM

District 3 Location ID 34962 At
County (001) Bernalillo Located On BLUEWATER RD NW LRS Point 1.1179910
Community LRS ID FL5007P



Intersection No.: 394

Centracs

1

Intersection Name: BLUEWATER - UNSER

Revision Date 05/25/2017

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	S-E	NB		EB	N-W	SB	E-N	WB
Min Grn	3	16		8	3	16	3	8
Walk:	0	7		7	0	7	0	7
Ped Clr:	0	19		31	0	21	0	31
Veh Ext:	1.5	3.0		2.0	1.5	3.0	1.5	2.0
Veh Ext2:	1.5	3.0		2.0	1.5	3.0	1.5	2.0
Max 1:	24	36		24	16	36	16	24
Max 2:	24	36		24	16	36	16	24
Max 3:								
Yellow:	3.0	4.0		4.0	3.0	4.5	3.0	4.0
Red Clr	0.5	1.0		2.0	0.5	1.0	0.5	1.5

Recall Data

Locking Memory:							
Vehicle Recall:							
Ped Recall:							
Recall To Max:		X				X	

Flash Mode: ALL RED

Start Up Mode: ALL RED

Time: 8 SEC.

First Phases: 2 & 6

Start In: GREEN

Overlap Phases:

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:	1. Intersection flash date 11/2/00.
	2. Timing sheet updated 4/4/03
	3. Timing sheet updated 11/18/03.
	4. Added E-N Left Turn Movement, 4/1/05.
	5. Yellow and Red clearance intervals changed as per new standards given by KB, 10/10/07.
	6. Pedestrian times adjusted, 12/30/11.
	7. Clearance intervals updated to NMDOT standard by BB, 10/3/13.

8. Timing sheet revised to current timing sheet, 8/31/16.
9. New Coordination Patterns implemented 05-24-2017, Lee Engineering.
9. Update Ped Clearance timings 10/17/24 HS

Intersection No.: 393

Centracs

1

Intersection Name: LOS VOLCANES - UNSER

Revision Date 05/24/2017

;

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	S-E	NB	W-S	EB	N-W	SB	E-N	WB
Min Grn	5	20	5	12	5	20	5	12
Walk:	0	7	0	7	0	7	0	7
Ped Clr:	0	18	0	32	0	23	0	43
Veh Ext:	1.5	4.0	1.5	2.0	1.5	4.0	1.5	2.0
Veh Ext2:	1.5	4.0	1.5	2.0	1.5	4.0	1.5	2.0
Max 1:	16	42	16	24	16	42	16	24
Max 2:	16	48	16	24	16	48	16	24
Max 3:								
Yellow:	3.5	4.0	3.5	3.5	3.5	4.5	3.5	3.5
Red Clr	0.5	1.0	0.5	2.0	0.5	1.0	0.8	2.0

Recall Data

Locking Memory:							
Vehicle Recall:							
Ped Recall:							
Recall To Max:		X				X	

Flash Mode: ALL RED

Start Up Mode: ALL RED

Time: 8 SEC.

First Phases: 2 & 6

Start In: GREEN

Overlap Phases:

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:	1. 12/12/03 New intersection installed.
	2. MAX II Mon-Fri from 6:30 am to 8:30 am, 6/6/2006.
	3. Yellow and Red clearance intervals changed as per new standards given by KB, 10/10/07.
	4. Pedestrian times adjusted, 12/30/11.
	5. Clearance intervals updated to NMDOT standard by BB, 10/3/13.
	6. Timng sheet revised to current timing sheet, 8/31/16.
	7. New Coordination Patterns implemented 05-24-2017, Lee Engineering.
	8. Updated Timing to match.10-17-24 HS

ASC3 COORDINATION PLAN DATA

394 - Unser Blvd & Bluewater Rd

COORDINATOR OPTIONS (MM 3-1)

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 21 (MM 3-2)

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	120s	STD (COS)	111
OFFSET VAL	63%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	15	43	0	42	12	46	11	31
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 23

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	110s	STD (COS)	131
OFFSET VAL	77%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	12	42	0	46	12	42	12	34
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

ASC3 COORDINATION PLAN DATA

COORDINATION PATTERN 25

USE SPLIT PATTERN	25	SPLIT SUM	100%
TS2 (PAT-OFF)	0-5		
CYCLE	130s	STD (COS)	151
OFFSET VAL	47%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	11	49	0	40	11	49	11	29

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)

CURRENT DATE	CURRENT DOW		CURRENT TOD	
ENA ACTION PLAN	0			
SYNC REF TIME	03:30	SYNC REF		REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE		NO
TIME RESET INPUT SET TIME		3:30:00		

ACTION PLAN 21 (MM 5-2)

PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23

PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25

PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ASC3 COORDINATION PLAN DATA

ACTION PLAN 100

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

DAY PLAN/EVENT 1 (MM 5-3)

EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	18:00
3	0	00:00

DAY PLAN/EVENT 2

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	15:00
4	23	18:30
5	100	22:00
6	0	00:00
7	0	00:00

DAY PLAN/EVENT 3

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

SCHEDULE NUMBER 1 (MM 5-4)

SCHEDULE NUMBER	1											
DAY PLAN NO	1	CLEAR ALL FIELDS										
SELECT ALL MONTHS												
DOW												
DOM												
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

ASC3 COORDINATION PLAN DATA

SCHEDULE NUMBER 2												
SCHEDULE NUMBER	2											
DAY PLAN NO	2		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

SCHEDULE NUMBER 3												
SCHEDULE NUMBER	3											
DAY PLAN NO	3		CLEAR ALL FIELDS									
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
1. January 2010 - New Coordination - Lee Engineering
 2. Cycle lengths and offsets changed for cooridor, 9/25/14
 3. New Coordination Patterns implemented 05-24-2017, Lee Engineering.
 4. Update to match controller 10/17/24 HS

ASC3 COORDINATION PLAN DATA

393 - Unser Blvd & Los Volcanes Rd

COORDINATOR OPTIONS (MM 3-1)

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 21 (MM 3-2)

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	120s	STD (COS)	111
OFFSET VAL	21%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	17	30	22	31	11	36	16	37
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 23

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	110s	STD (COS)	131
OFFSET VAL	32%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	13	31	17	39	12	32	15	41
PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

ASC3 COORDINATION PLAN DATA

COORDINATION PATTERN 25

USE SPLIT PATTERN	25	SPLIT SUM	100%
TS2 (PAT-OFF)	0-5		
CYCLE	130s	STD (COS)	151
OFFSET VAL	0%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	24	27	16	33	11	40	15	34

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)

CURRENT DATE	CURRENT DOW		CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)

PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23

PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25

PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ASC3 COORDINATION PLAN DATA

ACTION PLAN 100

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

DAY PLAN/EVENT 1 (MM 5-3)

EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	18:00
3	0	00:00

DAY PLAN/EVENT 2

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	15:00
4	23	18:30
5	100	22:00
6	0	00:00
7	0	00:00

DAY PLAN/EVENT 3

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

SCHEDULE NUMBER 1 (MM 5-4)

SCHEDULE NUMBER	1											
DAY PLAN NO	1	CLEAR ALL FIELDS										
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X	.	.	.	.	.	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

ASC3 COORDINATION PLAN DATA

SCHEDULE NUMBER 2												
SCHEDULE NUMBER		2										
DAY PLAN NO		2		CLEAR ALL FIELDS								
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

SCHEDULE NUMBER 3												
SCHEDULE NUMBER		3										
DAY PLAN NO		3		CLEAR ALL FIELDS								
SELECT ALL MONTHS				DOW				DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

- NOTES:**
1. January 2010 - New Coordination - Lee Engineering
 2. Cycle lengths and offsets changed for cooridor, 9/25/14
 3. New Coordination Patterns implemented 05-24-2017, Lee Engineering.
 4. Updated to match controller 10/17/24 HS

APPENDIX C

Crash Data

CRASH DATE	TIME OF CRASH	PRIMARY STREET	SECONDARY STREET	CRASH SEVERITY	CRASH CLASSIFICATION	CRASH ANALYSIS	FIRST HARMFUL EVENT	FIRST HARMFUL EVENT – MANNER OF CRASH	WEATHER	LIGHTING	ALCOHOL INVOLVEMENT	DRUG INVOLVEMENT	PEDESTRIAN INVOLVEMENT	PEDALCYCLE INVOLVEMENT
03/12/2019	17:00	BLUE WATER	UNSER	Property Damage Only Crash	Left Blank	Left Blank	Not Available		Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
05/19/2019	17:00	BLUEWATER	UNSER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
09/22/2019	20:13	BLUEWATER RD NW	UNSER BLVD	Injury Crash	Fixed Object	Fixed Object - Sign or Sign Post (Traffic)	Collision with Fixed Object	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
03/21/2019	16:30	BLUEWATER RD NW	UNSER BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
03/25/2019	17:41	NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
07/22/2019	17:40	UNSER BLVD	BLUEWATER RD	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/23/2019	0:38	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/28/2019	12:32	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/04/2019	14:30	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/All Others	Collision with Motor Vehicle	Not Available	Clear	Daylight	Involved	Involved	Not Involved	Not Involved
05/20/2019	16:47	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/16/2019	11:59	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/21/2019	15:18	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Raining	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/28/2019	12:45	UNSER BLVD NW	BLUE WATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/28/2019	12:50	UNSER BLVD NW	BLUE WATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
12/15/2019	19:00	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
06/19/2019	16:43	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/22/2019	7:16	LAS VOLCANES	UNSER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
08/20/2019	16:45	LOS VOLCANES RD NW	UNSER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
11/08/2019	7:36	LOS VOLCANES RD NW	UNSER BL NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/20/2019	22:17	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Turn Right/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/15/2019	12:43	LOS VOLCANES RD NW	UNSER BLVD	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/27/2019	16:33	LOS VOLCANES RD NW	UNSER BLVD	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/16/2019	15:00	LOS VOLCANOS	UNSER BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
03/29/2019	17:30	UNSER	LOS VOLCANES	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
01/20/2019	2:41	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/28/2019	18:37	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
02/06/2019	15:11	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Sideswipe Collision	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/10/2019	18:00	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Wind	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/14/2019	20:17	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/27/2019	15:05	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Rollover	Rollover - On The Road	Non-Collision	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/18/2019	7:02	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/27/2019	0:57	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Light Standard (Light Pole)	Collision with Fixed Object	Not Available	Clear	Dark-Not Lighted	Involved	Not Involved	Not Involved	Not Involved
10/22/2019	20:22	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
10/30/2019	17:30	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/07/2019	15:15	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/14/2019	10:59	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/22/2019	19:15	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/04/2019	6:43	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/19/2019	16:15	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
06/08/2019	21:30	UNSER BLVD NW	LOS VOLCANES RD SW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/04/2019	17:13	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/20/2019	22:23	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
11/05/2019	19:39	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
03/30/2019	8:38	UNSER BLVD SW	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/07/2019	19:40	UNSER LB	LOS VOLCANES	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
12/11/2019	17:30	UNSER SB	LAS VOLCANES	Property Damage Only Crash	Invalid Code	Invalid Code	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
12/20/2019	15:52	I 40 FRONTAGE RD	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/25/2019	20:50	I40 WESTBOUND EXIT RAMP	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Not Available	Clear	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
07/30/2019	14:15	UNCER AND I40	UNCER AND I40	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
10/28/2019	9:20	UNSER	I40	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
07/27/2019	9:57	UNSER BLVD	I40 OFF RAMP	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/25/2019	16:12	UNSER BLVD	INTERSTATE 40 E OFFRAMP	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/21/2019	16:30	UNSER BLVD NE	I-40 WB OFFRAMP	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Not Available	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
06/18/2019	16:57	UNSER BLVD NW NM 345	I 40 FRONTAGE RD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/09/2019	15:35	UNSER BLVD NW NM 345	I 40 FRONTAGE RD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/16/2019	17:28	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/18/2019	17:56	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/All Others	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/16/2019	9:19	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/01/2019	2:38	UNSER BLVD		Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Not Available	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/31/2019	18:55	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Not Available	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
03/29/2019	15:07	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Not Available	Invalid Code	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/16/2019	12:26	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
07/02/2019	15:57	UNSER BLVD NW NM 345		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/10/2019	17:39	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Not Available	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved

CRASH DATE	TIME OF CRASH	PRIMARY STREET	SECONDARY STREET	CRASH SEVERITY	CRASH CLASSIFICATION	CRASH ANALYSIS	FIRST HARMFUL EVENT	FIRST HARMFUL EVENT – MANNER OF CRASH	WEATHER	LIGHTING	ALCOHOL INVOLVEMENT	DRUG INVOLVEMENT	PEDESTRIAN INVOLVEMENT	PEDALCYCLE INVOLVEMENT
06/24/2020	12:35	BLUEWATER LB	UNSER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
10/12/2020	20:30	BLUEWATER RD NW	UNSER BL NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/08/2020	6:00	BLUEWATER RD NW	UNSER BLVD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Fence (Wood, Brick, Stone)	Collision with Fixed Object	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
01/08/2020	16:30	BLUEWATER RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/10/2020	11:14	BLUEWATER RD NW	UNSER BLVD SW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/12/2020	7:19	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Turn Right/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/14/2020	15:15	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/04/2020	22:20	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
07/07/2020	22:04	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	From Opposite Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/06/2020	6:00	UNSER BLVD NW	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
10/14/2020	7:30	UNSER BLVD NW	BLUEWATER RD	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
10/27/2020	13:49	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Snowing	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/03/2020	6:52	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/04/2020	12:56	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/18/2020	16:07	UNSER BLVD SW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/07/2020	18:37	UNSER BLVD SW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/17/2020	9:45	UNSER NB	BLUE WATER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
11/29/2020	17:00	UNSER NB	BLUEWATER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
12/28/2020	14:40	UNSER NB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
09/14/2020	1:37	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/07/2020	7:50	LOS VOLCANES RD NW	UNSER BLVD NW	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
11/04/2020	14:00	LOS VOLCANOS NW	UNSER NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/03/2020	18:40	UNSER	LOS VOLCANES RD	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
06/04/2020	7:12	UNSER BL NW	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/28/2020	16:50	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/18/2020	5:37	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/14/2020	10:49	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/One Left Turn	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/16/2020	1:46	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Embankment Man-made (Concrete, Wire Mesh)	Collision with Fixed Object	Left Blank	Clear	Dark-Lighted	Involved	Not Involved	Not Involved	Not Involved
05/21/2020	15:33	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/27/2020	16:17	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
07/10/2020	7:38	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
08/02/2020	14:10	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/08/2020	14:04	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/15/2020	20:10	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/23/2020	21:30	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/24/2020	8:18	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/26/2020	8:53	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/13/2020	16:01	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/26/2020	17:00	UNSER BLVD NW	LOS VOLNACES	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Snowing	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/22/2020	13:38	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/04/2020	20:23	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Left Blank	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/07/2020	9:57	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/11/2020	22:06	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/04/2020	8:41	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/22/2020	9:11	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/30/2020	6:37	I-40 EB OFFRAMP	UNSER BLVD SW	Injury Crash	Pedalcyclist	Vehicle Struck Pedalcyclist At Angle	Collision with Person	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Involved
10/11/2020	19:34	UNSER BL NW	I40 WB OFRP	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/29/2020	7:16	UNSER BLVD	I 40 FRONTAGE RD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/12/2020	15:10	UNSER BLVD NW NM 345	I-40 EB OFFRAMP	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/28/2020	10:41	LOS VOLCANES RD NW	SILVER CREEK RD	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/02/2020	16:58	LOS VOLCANES RD NW	SILVER CREEK RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/01/2020	12:57	7901 LOS VOLCANES RD NW		Property Damage Only Crash	Fixed Object	Fixed Object - Fence (Wood, Brick, Stone)	Collision with Fixed Object	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/16/2020	0:24	NM 345	IX 4154	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Left Blank	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/31/2020	15:46	UNSER BLVD NW NM 345		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved

CRASH DATE	TIME OF CRASH	PRIMARY STREET	SECONDARY STREET	CRASH SEVERITY	CRASH CLASSIFICATION	CRASH ANALYSIS	FIRST HARMFUL EVENT	FIRST HARMFUL EVENT – MANNER OF CRASH	WEATHER	LIGHTING	ALCOHOL INVOLVEMENT	DRUG INVOLVEMENT	PEDESTRIAN INVOLVEMENT	PEDALCYCLE INVOLVEMENT
08/12/2022	18:39	BLUEWATER RD NW	UNSER BLVD NW NM 345	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/05/2022	18:50	NM 345	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
05/02/2022	10:21	NM 345	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Wind	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/12/2022	8:00	UNSER	BLUE WATER	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/16/2022	8:17	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/10/2022	18:30	UNSER BLVD	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/22/2022	7:40	UNSER BLVD	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
01/08/2022	23:29	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
02/06/2022	15:51	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/28/2022	15:16	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/17/2022	18:40	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
07/12/2022	13:46	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/04/2022	18:58	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Other	Left Blank	Clear	Daylight	Involved	Not Involved	Not Involved	Not Involved
11/09/2022	17:00	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
10/22/2022	19:39	UNSER BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/10/2022	2:26	UNSER BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/09/2022	18:48	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Person	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Involved	Not Involved
05/22/2022	20:17	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
03/10/2022	18:20	UNSER BLVD SW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Cloudy	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
05/18/2022	8:13	LOS VOLCANES RD NW	8500 LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/20/2022	19:30	LOS VOLCANES RD NW	UNSER BL NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/26/2022	11:26	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/02/2022	1:17	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/24/2022	18:45	LOS VOLCANES RD NW	UNSER BLVD	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/19/2022	6:51	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/26/2022	Left Blank	LOS VOLCANES RD NW	UNSER BLVD NW	Property Damage Only Crash	Parked Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
03/17/2022	14:25	LOS VOLCANES RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Cloudy	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/16/2022	8:22	LOS VOLCANES RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/07/2022	10:00	LOS VOLVANES	UNSER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
02/27/2022	17:00	UNSER	LOS VOLCANES	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/24/2022	6:38	UNSER	LOS VOLCANES	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/25/2022	10:45	UNSER	LOS VOLCANIES	Property Damage Only Crash	Vehicle on Other Road	Vehicle On Other Roadway - Not Stated	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
05/28/2022	12:17	UNSER BL NW	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/03/2022	21:22	UNSER BL NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
02/06/2022	19:02	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
02/18/2022	8:06	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/18/2022	7:40	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dawn	Not Involved	Not Involved	Not Involved	Not Involved
02/22/2022	11:41	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/23/2022	8:50	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Cloudy	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/22/2022	17:06	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Invalid Code	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/05/2022	9:16	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/18/2022	14:03	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/28/2022	9:21	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/06/2022	4:39	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
11/25/2022	8:02	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/17/2022	20:17	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/19/2022	8:04	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/21/2022	21:21	UNSER BLVD NW	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Person	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Involved	Not Involved
03/28/2022	8:20	UNSER BLVD NW	LOS VOLCANES RD NW	Injury Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Other	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
07/29/2022	18:15	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/03/2022	21:55	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Raining	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/23/2022	20:50	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
01/20/2022	15:29	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
03/11/2022	17:30	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/05/2022	18:07	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/18/2022	15:32	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/16/2022	16:50	UNSER NB	LOS VOLCANES	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
11/15/2022	18:45	UNSER	I-40	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
02/18/2022	17:15	UNSER BLVD	I-40	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
07/22/2022	16:12	UNSER BLVD	I-40 EAST-BD FW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/21/2022	19:08	UNSER BLVD	I-40 EAST-BD FW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/26/2022	4:50	98TH NB	LOS VOLCANES RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
05/12/2022	21:23	NM 345		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
10/22/2022	20:12	NM 345		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
05/25/2022	14:52	UNSER BLVD		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/06/2022	17:08	UNSER BLVD		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dusk	Not Involved	Not Involved	Not Involved	Not Involved
12/30/2022	21:17	UNSER BLVD		Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Left Blank	Clear	Dark-Not Lighted	Involved	Not Involved	Not Involved	Not Involved

CRASH DATE	TIME OF CRASH	PRIMARY STREET	SECONDARY STREET	CRASH SEVERITY	CRASH CLASSIFICATION	CRASH ANALYSIS	FIRST HARMFUL EVENT	FIRST HARMFUL EVENT – MANNER OF CRASH	WEATHER	LIGHTING	ALCOHOL INVOLVEMENT	DRUG INVOLVEMENT	PEDESTRIAN INVOLVEMENT	PEDALCYCLE INVOLVEMENT
10/08/2023	19:37	BLUEWATER RD NW	NM 345	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
05/31/2023	10:38	BLUEWATER RD NW	UNSER BL NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/23/2023	22:23	BLUEWATER RD NW	UNSER BLVD SW	Fatal Crash	Left Blank	Left Blank	Collision with Person	Intersecting Path (T-bone)	Clear	Dark-Lighted	Involved	Involved	Involved	Not Involved
10/01/2023	18:26	NM 345	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Wind	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/01/2023	11:30	UNSER	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/27/2023	valid Code	UNSER	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
10/06/2023	16:54	UNSER	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/27/2023	11:33	UNSER BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/19/2023	0:17	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/13/2023	15:47	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/04/2023	7:36	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/29/2023	19:06	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/27/2023	6:30	UNSER BLVD NW	BLUE WATER RD E	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
10/29/2023	valid Code	UNSER BLVD NW	BLUE WATER RD E	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
03/26/2023	16:35	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/21/2023	15:56	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/01/2023	21:20	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	rk-Unknown Lighting	Not Involved	Not Involved	Not Involved	Not Involved
03/26/2023	3:30	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Left Blank	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/22/2023	14:48	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/08/2023	22:00	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
01/27/2023	23:02	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
04/06/2023	17:17	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/07/2023	22:35	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/14/2023	14:41	LOS VOLCANES RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/08/2023	16:22	LOS VOLCANES RD NW	UNSER BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/18/2023	20:25	NM 345	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
12/15/2023	6:10	NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dawn	Not Involved	Not Involved	Not Involved	Not Involved
12/22/2023	14:33	NM 345	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Cloudy	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/26/2023	6:56	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/02/2023	11:31	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/28/2023	22:24	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	rk-Unknown Lighting	Not Involved	Not Involved	Not Involved	Not Involved
05/15/2023	8:24	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/23/2023	18:17	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/02/2023	7:47	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/02/2023	17:05	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
06/28/2023	22:10	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	rk-Unknown Lighting	Not Involved	Not Involved	Not Involved	Not Involved
06/29/2023	22:09	UNSER BLVD	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
09/20/2023	9:38	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Daylight	Involved	Not Involved	Not Involved	Not Involved
09/30/2023	17:18	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/12/2023	5:28	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Dawn	Not Involved	Not Involved	Not Involved	Not Involved
12/19/2023	6:51	UNSER BLVD	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/29/2023	Left Blank	UNSER BLVD NW	LOS VOLCANES RD	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved	Not Involved	Not Involved
01/01/2023	0:05	UNSER BLVD NW	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Opposite Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
05/09/2023	16:35	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/18/2023	22:30	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	rk-Unknown Lighting	Not Involved	Not Involved	Not Involved	Not Involved
07/14/2023	14:05	UNSER BLVD NW	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
12/23/2023	22:29	UNSER BLVD NW	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
03/13/2023	5:39	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Dawn	Not Involved	Not Involved	Not Involved	Not Involved
06/08/2023	22:00	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
06/19/2023	18:12	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/24/2023	14:50	UNSER BLVD NW NM 345	LOS VOLCANES RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
11/10/2023	18:12	UNSER BL NW	I 40 EB OFRP	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Involved	Not Involved	Not Involved	Not Involved
03/18/2023	13:52	UNSER BLVD	I 40 EAST OFF RAMP	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Cloudy	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
01/09/2023	8:23	UNSER BLVD	INTERSTATE 40 ON RAMP	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/31/2023	18:38	LOS VOLCANES RD NW	SILVER CREEK RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
10/02/2023	21:56	LOS VOLCANES RD NW	SILVER CREEK RD NW	Injury Crash	Left Blank	Left Blank	Collision with Person	Intersecting Path (T-bone)	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Involved
08/01/2023	19:34	SILVER CREEK RD NW	UNSER BLVD	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
02/24/2023	12:50	BLUEWATER RD NW	HUNGER	Property Damage Only Crash	Left Blank	Left Blank	Left Blank	Left Blank	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
04/14/2023	5:00	LOS VOLCANES RD NW		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Lighted	Not Involved	Not Involved	Not Involved	Not Involved
07/03/2023	17:20	LOS VOLCANES RD NW		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Intersecting Path (T-bone)	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
08/27/2023	21:45	NM 345		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Dark-Not Lighted	Not Involved	Not Involved	Not Involved	Not Involved
10/30/2023	8:39	UNSER BLVD		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Left Blank	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
09/06/2023	18:36	UNSER BLVD NW		Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved
05/02/2023	9:28	UNSER BLVD NW NM 345		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	From Same Direction	Clear	Daylight	Not Involved	Not Involved	Not Involved	Not Involved

Key:

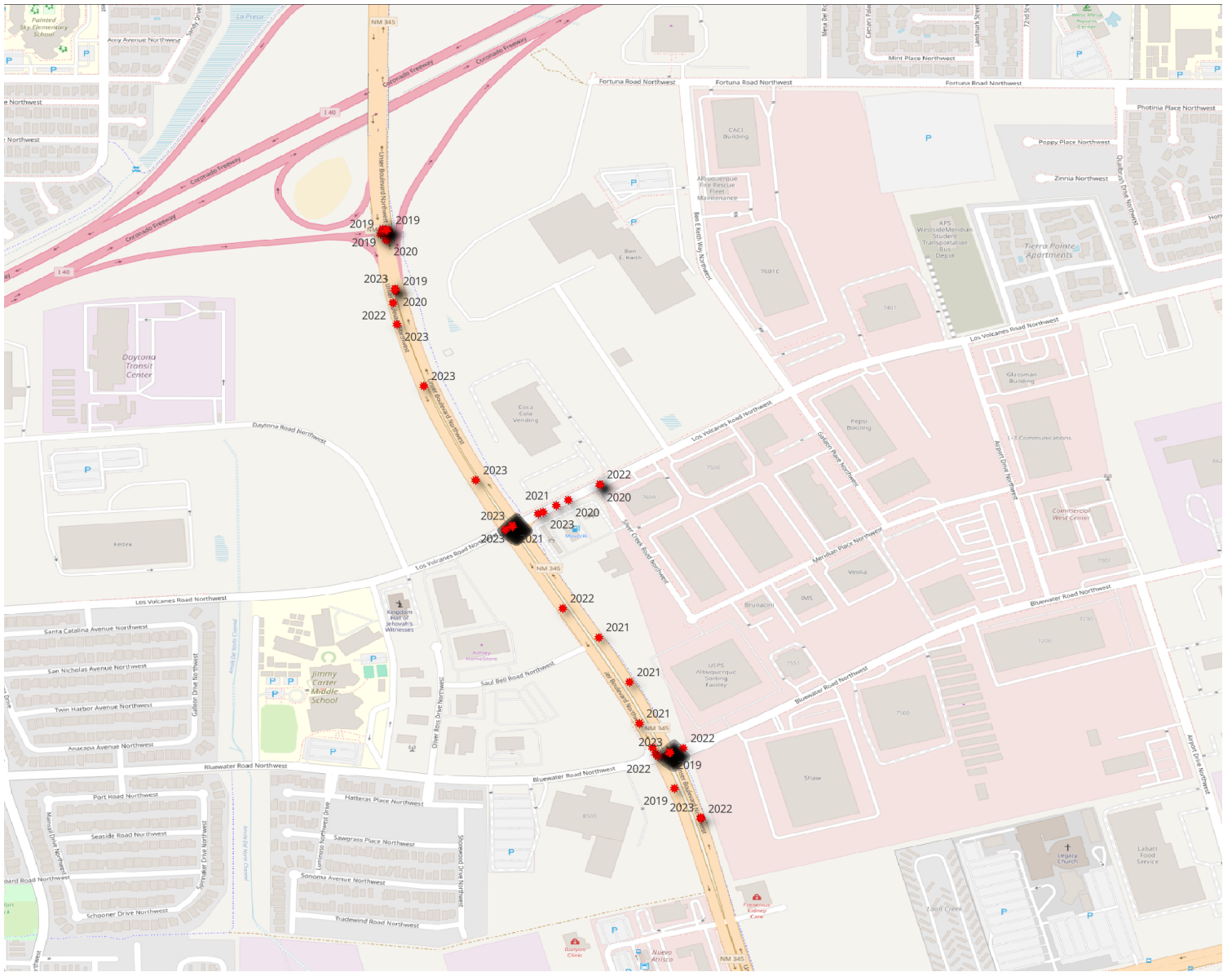
Unser/Bluewater

Unser/Los Volcanes

Unser/I-40

Los Volcanes/Silver Creek

Misc



ACCIDENT SUMMARY SHEET

INTERSECTION/SEGMENT: Bluewater Rd / Unser Blvd

ROUTE MP TO MP	YEAR 2019		YEAR 2020		YEAR 2021		YEAR 2022		YEAR 2023		TOTAL	
	No. 16	19%	No. 19	22%	No. 11	13%	No. 19	22%	No. 20	24%	No. 85	% 100
CRASH SEVERITY												
Property Damage Only (PDO)	11	69	12	63	4	36	10	53	15	75	52	61
Injury/Non-Fatal	5	31	7	37	7	64	9	47	4	20	32	38
Fatal									1	5	1	1
CRASH CLASSIFICATION (ACCIDENT TYPE)												
Fixed Object	1	10	1	10							2	3
Right Angle	2	20	1	10	4	50	6	38	5	36	18	31
Rear End	1	10	2	20							3	5
Backing											0	0
Sideswipe: Same Direction	2	20			2	25	5	31	7	50	16	28
Sideswipe: Opposite Direction	1	10	4	40	2	25	4	25	1	7	12	21
Head On											0	0
Left Turn	3	30	2	20							5	9
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian /Bicyclist							1	6	1	7	2	3
Other											0	0
PROBABLE CAUSE ("HIGHEST CONTRIBUTING FACTOR")*												
Following Too Close												
Driver Inattention												
Excess Speed/Too Fast For Conditions												
Avoid Other Vehicle												
Improper Driving												
Failure to use Turn Signal												
Failure to Yield R.O.W.												
Disregard Traffic Control Device												
Under Influence Alcohol/Drugs												
Mechanical Defect												
Pedestrian Error												
Road Defect/Construction Activity												
Other												
ROAD CONDITIONS												
Dry/Clear	11	92	11	92	9	100	16	89	14	93	61	92
Wet	1	8									1	2
Snowy/Icy			1	8							1	2
Other							2	11	1	7	3	5
LIGHTING												
Daylight	9	75	9	75	5	56	9	50	10	56	42	61
Darkness	3	25	3	25	4	44	5	28	8	44	23	33
Dawn or Dusk							4	22			4	6
SOBRIETY												
Sobriety Unknown											0	0
Had Been Drinking/Drug	1	6					1	5	1	5	3	4
Had Not Been Drinking/Drug	15	94	19	100	11	100	18	95	19	95	82	96

*Probable cause information excluded from post-2019 records.

ACCIDENT SUMMARY SHEET

INTERSECTION/SEGMENT: Los Volcanes Rd / Unser Blvd

ROUTE MP TO MP	YEAR 2019		YEAR 2020		YEAR 2021		YEAR 2022		YEAR 2023		TOTAL	
	No. 30	18%	No. 26	16%	No. 40	24%	No. 38	23%	No. 31	19%	No. 165	% 100
CRASH SEVERITY												
Property Damage Only (PDO)	15	50	15	58	23	58	30	79	18	58	101	61
Injury/Non-Fatal	15	50	11	42	17	43	8	21	13	42	64	39
Fatal											0	0
CRASH CLASSIFICATION (ACCIDENT TYPE)												
Fixed Object	1	4	1	7							2	1
Right Angle	6	26	4	29	14	38	10	30	9	31	43	32
Rear End	2	9	2	14			1	3			5	4
Backing											0	0
Sideswipe: Same Direction	11	48	3	21	16	43	18	55	17	59	65	48
Sideswipe: Opposite Direction			2	14	7	19	2	6	3	10	14	10
Head On											0	0
Left Turn	2	9	2	14							4	3
Parked Vehicle/Parking Maneuver											0	0
Overturn	1	4									1	1
Driveway/Driveway Maneuver											0	0
<i>Pedestrian</i> /Bicyclist							1	3			1	1
Other							1	3			1	1
PROBABLE CAUSE ("HIGHEST CONTRIBUTING FACTOR")*												
Following Too Close												
Driver Inattention												
Excess Speed/Too Fast For Conditions												
Avoid Other Vehicle												
Improper Driving												
Failure to use Turn Signal												
Failure to Yield R.O.W.												
Disregard Traffic Control Device												
Under Influence Alcohol/Drugs												
Mechanical Defect												
Pedestrian Error												
Road Defect/Construction Activity												
Other												
ROAD CONDITIONS												
Dry/Clear	22	96	22	96	34	94	28	90	25	96	131	94
Wet					1	3	1	3			2	1
Snowy/Icy			1	4							1	1
Other	1	4			1	3	2	6	1	4	5	4
LIGHTING												
Daylight	13	57	16	67	19	54	28	76	17	57	93	62
Darkness	10	43	8	33	15	43	8	22	10	33	51	34
Dawn or Dusk					1	3	1	3	3	10	5	3
SOBRIETY												
Sobriety Unknown											0	0
Had Been Drinking/Drug	1	3	1	4	1	3			1	3	4	2
Had Not Been Drinking/Drug	29	97	25	96	39	98	38	100	30	97	161	98

*Probable cause information excluded from post-2019 records.

ACCIDENT SUMMARY SHEET

INTERSECTION/SEGMENT: I-40 / Unser Blvd

ROUTE MP TO MP	YEAR 2019		YEAR 2020		YEAR 2021		YEAR 2022		YEAR 2023		TOTAL	
	No. 9	38%	No. 4	17%	No. 4	17%	No. 4	17%	No. 3	13%	No. 24	% 100
CRASH SEVERITY												
Property Damage Only (PDO)	7	78	3	75	4	100	3	75	2	67	19	79
Injury/Non-Fatal	2	22	1	25			1	25	1	33	5	21
Fatal											0	0
CRASH CLASSIFICATION (ACCIDENT TYPE)												
Fixed Object											0	0
Right Angle	1	17	1	25	1	25	1	50	1	33	5	26
Rear End			1	25							1	5
Backing											0	0
Sideswipe: Same Direction	1	17	1	25	2	50	1	50	2	67	7	37
Sideswipe: Opposite Direction	3	50			1	25					4	21
Head On											0	0
Left Turn	1	17									1	5
Parked Vehicle/Parking Maneuver											0	0
Overtake											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist			1	25							1	5
Other											0	0
PROBABLE CAUSE ("HIGHEST CONTRIBUTING FACTOR")*												
Following Too Close												
Driver Inattention												
Excess Speed/Too Fast For Conditions												
Avoid Other Vehicle												
Improper Driving												
Failure to use Turn Signal												
Failure to Yield R.O.W.												
Disregard Traffic Control Device												
Under Influence Alcohol/Drugs												
Mechanical Defect												
Pedestrian Error												
Road Defect/Construction Activity												
Other												
ROAD CONDITIONS												
Dry/Clear	6	100	4	100	4	100	3	100	2	67	19	95
Wet											0	0
Snowy/Icy											0	0
Other									1	33	1	5
LIGHTING												
Daylight	5	83	3	75	4	100	2	67	3	100	17	85
Darkness			1	25			1	33			2	10
Dawn or Dusk	1	17									1	5
SOBRIETY												
Sobriety Unknown											0	0
Had Been Drinking/Drug									1	33	1	4
Had Not Been Drinking/Drug	9	100	4	100	4	100	4	100	2	67	23	96

*Probable cause information excluded from post-2019 records.

ACCIDENT SUMMARY SHEET

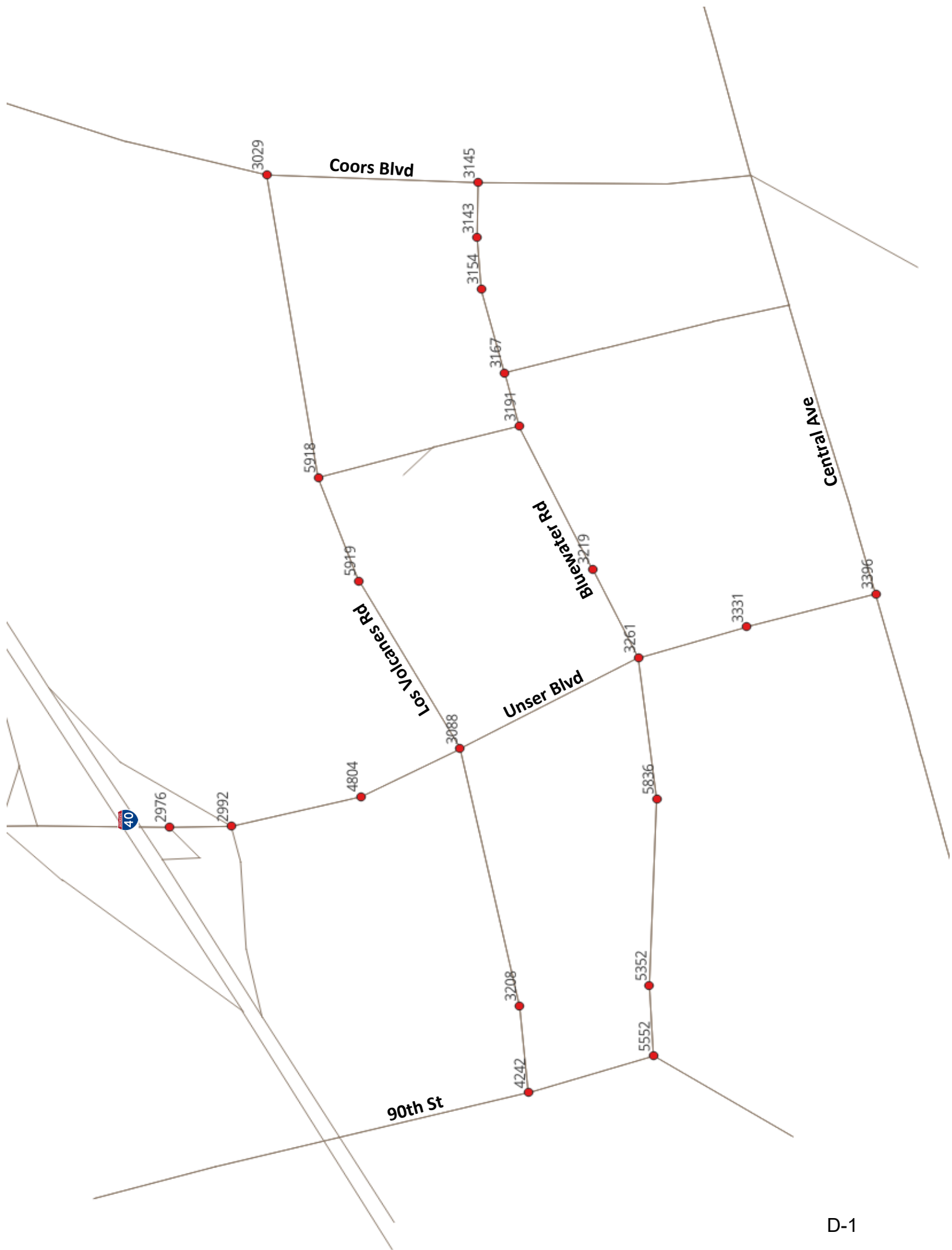
INTERSECTION/SEGMENT: Bluewater Galleria

ROUTE MP # TO MP #	YEAR 2019		YEAR 2020		YEAR 2021		YEAR 2022		YEAR 2023		TOTAL	
	No. 55	20%	No. 49	18%	No. 55	20%	No. 61	22%	No. 54	20%	No. 274	% 100
CRASH SEVERITY												
Property Damage Only (PDO)	33	60	30	61	31	56	43	70	35	65	172	63
Injury/Non-Fatal	22	40	19	39	24	44	18	30	18	33	101	37
Fatal	0	0	0	0	0	0	0	0	1	2	1	0
CRASH CLASSIFICATION (ACCIDENT TYPE)												
Fixed Object	2	5	2	7	0	0	0	0	0	0	4	2
Right Angle	9	23	6	21	19	39	17	33	15	33	66	31
Rear End	3	8	5	18	0	0	1	2	0	0	9	4
Backing	0	0	0	0	0	0	0	0	0	0	0	0
Sideswipe: Same Direction	14	36	4	14	20	41	24	47	26	57	88	41
Sideswipe: Opposite Direction	4	10	6	21	10	20	6	12	4	9	30	14
Head On	0	0	0	0	0	0	0	0	0	0	0	0
Left Turn	6	15	4	14	0	0	0	0	0	0	10	5
Parked Vehicle/Parking Maneuver	0	0	0	0	0	0	0	0	0	0	0	0
Overturn	1	3	0	0	0	0	0	0	0	0	1	0
Driveway/Driveway Maneuver	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian/Bicyclist	0	0	1	4	0	0	2	4	1	2	4	2
Other	0	0	0	0	0	0	1	2	0	0	1	0
PROBABLE CAUSE ("HIGHEST CONTRIBUTING FACTOR")*												
Following Too Close												
Driver Inattention												
Excess Speed/Too Fast For Conditions												
Avoid Other Vehicle												
Improper Driving												
Failure to use Turn Signal												
Failure to Yield R.O.W.												
Disregard Traffic Control Device												
Under Influence Alcohol												
Mechanical Defect												
Pedestrian Error												
Road Defect/Construction Activity												
Other												
ROAD CONDITIONS												
Dry/Clear	39	95	41	95	51	96	50	91	43	91	224	94
Wet	1	2	0	0	1	2	1	2	0	0	3	1
Snowy/Icy	0	0	2	5	0	0	0	0	0	0	2	1
Other	1	2	0	0	1	2	4	7	4	9	10	4
LIGHTING												
Daylight	27	66	31	70	32	62	41	67	33	61	164	65
Darkness	13	32	13	30	19	37	15	25	18	33	78	31
Dawn or Dusk	1	2	0	0	1	2	5	8	3	6	10	4
SOBRIETY												
Sobriety Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Had Been Drinking/Drug	2	4	1	2	1	2	1	2	4	7	9	3
Had Not Been Drinking/Drug	53	96	52	98	58	98	64	98	53	93	280	97

*Probable cause information excluded from post-2019 records.

APPENDIX D

Forecast Traffic Data



Bluewater Galleria																									
Traffic Impact Study																									
Forecast Link Traffic Volumes																									
STREET	A	B	ZDELAY	APPROACH	CONTROL	LEGACYCAT	NLANES	CAPACITY	FFS	TIME_PM	VC_PM	DayVol_16	AMPH_16	PMPH_16	DayVol 1640	AMPH 1640	PMPH1 640	2040 AMPH	Growth Rate ²	2035 AMPH	Growth Rate*	2025 AMPH	Growth Rate*	2040 PMPH	Growth Rate ²
Coors	3029	3145	0.07	MAJOR	SIGNAL	0	3	1000	38.4	0.69237	0.52041	15319	1091.79102	1420.6156	1311	-8	141	380	-0.4%	388	-0.4%	402	-0.4%	433	-2.0%
Los Volcanes	3029	5918	0.13		STOP	0	1	910	20	1.70967	0.16745	1099	151.44266	83.47147	287	-44	69	1675	4.8%	1439	5.3%	968	6.6%	1935	3.8%
Los Volcanes	3088	3208	0			0	1	700	28	0.9608	0.16626	1125	127.56574	76.14831	-182	-86	40	1572	3.5%	1388	3.7%	1021	4.4%	2524	2.4%
Los Volcanes	3088	3261	0.11	MAJOR	SIGNAL	0	2	1000	38.4	0.86878	0.65605	15391	1117.36646	1421.04675	1162	-13	-109	1219	0.0%	1216	0.0%	1210	0.0%	1292	0.2%
Los Volcanes	3088	4804	0			0	3	1000	38.4	0.35241	0.57209	19654	1590.2876	1789.28198	1400	-78	-73	1853	0.5%	1813	0.5%	1731	0.5%	1392	0.6%
Los Volcanes	3088	5919	0.13		STOP	0	1	910	20	1.09981	0.14005	1602	217.84468	108.12936	1100	98	19	2015	-0.8%	2099	-0.7%	2266	-0.7%	1342	-0.7%
Bluewater	3143	3145	0.18	MINOR	SIGNAL	0	1	910	24	0.40642	0.07741	560	31.60884	68.77042	246	44	2	2122	1.4%	1999	1.4%	1754	1.5%	3234	1.3%
Bluewater	3143	3154	0			0	1	910	24	0.22889	0.18682	2130	232.79802	159.66513	-139	-57	10	513	-0.4%	524	-0.4%	546	-0.4%	1013	-1.1%
Coors	3145	3029	0.07	MAJOR	SIGNAL	0	3	1000	38.4	0.64259	0.36367	12347	1100.73315	1104.8313	1839	173	-14	549	-3.1%	678	-2.8%	935	-2.4%	710	-2.3%
Coors	3145	3143	0			0	1	910	24	0.22889	0.18682	2130	232.79802	159.66513	-139	-57	10	2	-8.9%	6	-6.3%	13	-4.4%	210	29.4%
Coors	3145	3280	0			0	3	1000	38.4	0.55672	0.49512	14074	940.42792	1346.6864	1662	47	139	419	-0.3%	424	-0.3%	436	-0.3%	731	-0.1%
Bluewater	3154	3143	0			0	1	910	24	0.22642	0.07741	560	31.60884	68.77042	246	44	2	738	1.0%	705	1.0%	639	1.1%	564	1.8%
Bluewater	3154	3167	0.13		STOP	0	1	910	24	0.51148	0.18682	2130	232.79802	159.66513	-139	-57	10	2015	-0.2%	2031	-0.2%	2064	-0.2%	1342	0.2%
Bluewater	3167	3154	0			0	1	910	24	0.37737	0.07741	560	31.60884	68.77042	246	44	2	2551	3.0%	2281	3.2%	1739	3.7%	3318	1.5%
Bluewater	3167	3191	0.13		STOP	0	1	910	24	0.35708	0.10912	647	70.84281	53.90932	249	-3	45	1854	1.0%	1774	1.0%	1613	1.0%	2378	1.0%
Bluewater	3167	3233	0			0	1	700	24	0.40484	0.11004	1562	166.60245	112.53228	-382	-54	-36	737	0.9%	708	0.9%	650	0.9%	567	1.8%
Bluewater	3191	2987	0			0	1	700	20	0.42203	0.15527	1470	164.45706	93.63146	230	-1	15	40	0.7%	38	0.7%	36	0.7%	505	11.0%
Bluewater	3191	3167	0.13		STOP	0	1	910	24	0.35649	0.08073	592	32.97552	71.79418	247	44	2	2888	0.9%	2772	0.9%	2540	1.0%	2403	0.4%
Bluewater	3191	3219	0			0	1	910	24	0.68776	0.20091	1149	53.26044	138.7948	276	10	44	1966	0.9%	1885	0.9%	1725	1.0%	2264	0.7%
Los Volcanes	3208	3088	0.14	MINOR	SIGNAL	0	1	700	28	1.08889	0.08105	1101	60.176	130.06456	193	134	-73	2303	0.8%	2218	0.8%	2048	0.9%	2230	0.7%
Los Volcanes	3208	4242	0.13		STOP	0	1	550	24.5	0.54178	0.29646	0	0	0	1271	55	163	1863	1.0%	1782	1.0%	1620	1.1%	2121	1.0%
Bluewater	3219	3191	0.13		STOP	0	1	910	24	0.81003	0.09012	1089	110.66139	72.42161	263	44	10	2059	0.8%	1983	0.8%	1831	0.9%	2085	0.8%
Bluewater	3219	3261	0.14	MINOR	SIGNAL	0	1	910	24	0.59141	0.45425	3279	174.98257	387.29553	344	-25	26	1918	0.5%	1871	0.5%	1777	0.5%	2090	0.5%
Bluewater	3261	3088	0.11	MAJOR	SIGNAL	0	2	1000	38.4	0.90302	0.68733	18643	1624.31421	1536.44116	-668	-324	-162	1875	1.0%	1795	1.0%	1635	1.0%	2131	0.6%
Bluewater	3261	3219	0			0	1	910	24	0.4332	0.20421	2494	249.74385	171.58678	656	47	14	954	2.0%	879	2.1%	728	2.3%	1931	1.1%
Bluewater	3261	3331	0			0	2	1000	38.4	0.43879	0.67603	13884	1011.67108	1231.26477	2277	154	121	1411	1.7%	1315	1.7%	1123	1.9%	1402	1.7%
Bluewater	3261	5836	0			0	1	700	28	0.61853	0.6487	1614	33.20167	251.14253	1989	151	203	1789	0.9%	1714	0.9%	1563	0.9%	1986	1.9%
Unser	3331	3261	0.11	MAJOR	SIGNAL	0	2	1000	38.4	0.56338	0.69811	16072	1326.84436	1282.92395	1102	-31	113	1815	0.9%	1738	0.9%	1585	0.9%	2013	1.9%
Unser	3331	3396	0.13	MAJOR	SIGNAL	0	2	1000	38.4	0.64192	0.67603	13884	1011.67108	1231.26477	2277	154	121	1840	1.0%	1762	1.0%	1606	0.9%	2040	1.9%
Central	3396	3331	0			0	2	1000	38.4	0.52894	0.69811	16072	1326.84436	1282.92395	1102	-31	113	1866	1.0%	1787	1.0%	1628	0.9%	2067	1.9%
90th	4242	3208	0			0	1	550	24.5	0.38023	0.13636	0	0	0	1597	234	75	1892	1.0%	1811	1.0%	1649	0.9%	2094	1.8%
90th	4242	5552	0			0	1	700	28	0.467	0.30592	0	0	0	2486	292	214	1918	1.1%	1835	1.0%	1671	0.9%	2121	1.8%
Unser	4804	2992	0.03	MAJOR	SIGNAL	0	3	1000	38.4	0.47931	0.66695	21356	1657.71973	2053.95093	227	-333	-53	1943	1.1%	1860	1.0%	1693	0.9%	2148	1.8%
Unser	4804	3088	0.11	MAJOR	SIGNAL	0	3	1000	38.4	0.43928	0.47096	15812	1270.09875	1392.47876	3017	83	20	1969	1.1%	1884	1.1%	1714	0.9%	2175	1.8%
Bluewater	5352	5552	0			0	1	750	28	0.28106	0.46889	1359	35.38311	146.1826	1109	84	205	1995	1.2%	1908	1.1%	1736	0.9%	2202	1.8%
Bluewater	5352	5836	0			0	1	700	28	0.68345	0.20194	1894	299.7374	99.16898	28	-37	42	2020	1.2%	1933	1.1%	1758	0.9%	2230	1.7%
90th	5552	4242	0.13		STOP	0	1	700	28	0.62092	0.47977	0	0	0	2701	253	336	2046	1.2%	1957	1.1%	1779	0.9%	2257	1.7%
90th	5552	5352	0			0	1	750	28	0.26521	0.22765	1595	160.54231	101.86377	683	128	69	2072	1.3%	1981	1.2%	1801	0.9%	2284	1.7%
Bluewater	5836	3261	0.14	MINOR	SIGNAL	0	1	700	28	0.68572	0.34996	1894	299.7374	99.16898	1645	97	146	2098	1.3%	2006	1.2%	1822	1.0%	2311	1.7%
Bluewater	5836	5352	0			0	1	700	28	0.7267	0.45421	1614	33.20167	251.14253	499	64	67	2123	1.3%	2030	1.2%	1844	1.0%	2338	1.7%
Los Volcanes	5918	3029	0.18	MINOR	SIGNAL	0	1	910	20	1.74696	0.06638	610	42.2012	71.97085	345	41	-12	2149	1.4%	2054	1.2%	1866	1.0%	2365	1.6%
Los Volcanes	5918	5919	0.13		STOP	0	1	910	20	0.70478	0.11801	364	24.00397	46.56348											

¹ Source: Mid Region Council of Governments (MRCOG); highlighted calculations derived by Civil Transformations Inc.

² Annual growth rate from 2016 to horizon year

PROJECT: Bluewater Galleria TIA
Background Traffic Projection - Unser Blvd. from Central Ave. to Bluewater Rd.

YEAR	AADT* 2014-2023	TRENDLINE
2014	25445	22829
2015	25651	23096
2016	26604	23364
2017	20421	23631
2018	20258	23898
2019	20400	24166
2020	16667	24433
2021	27632	24700
2022	28268	24968
2023	28975	25235
2024		25502
2025		25770
2026		26037
2027		26304
2028		26572
2029		26839
2030		27106
2031		27374
2032		27641
2033		27908
2034		28176
2035		28443

	3530	5614	growth
	392.22	1354.43	rate

G₁ = 1.45% 2014-2023 AADT compounded annual rate**

G₂ = 1.12% 2014-2023 Trendline compounded annual rate

G₃ = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

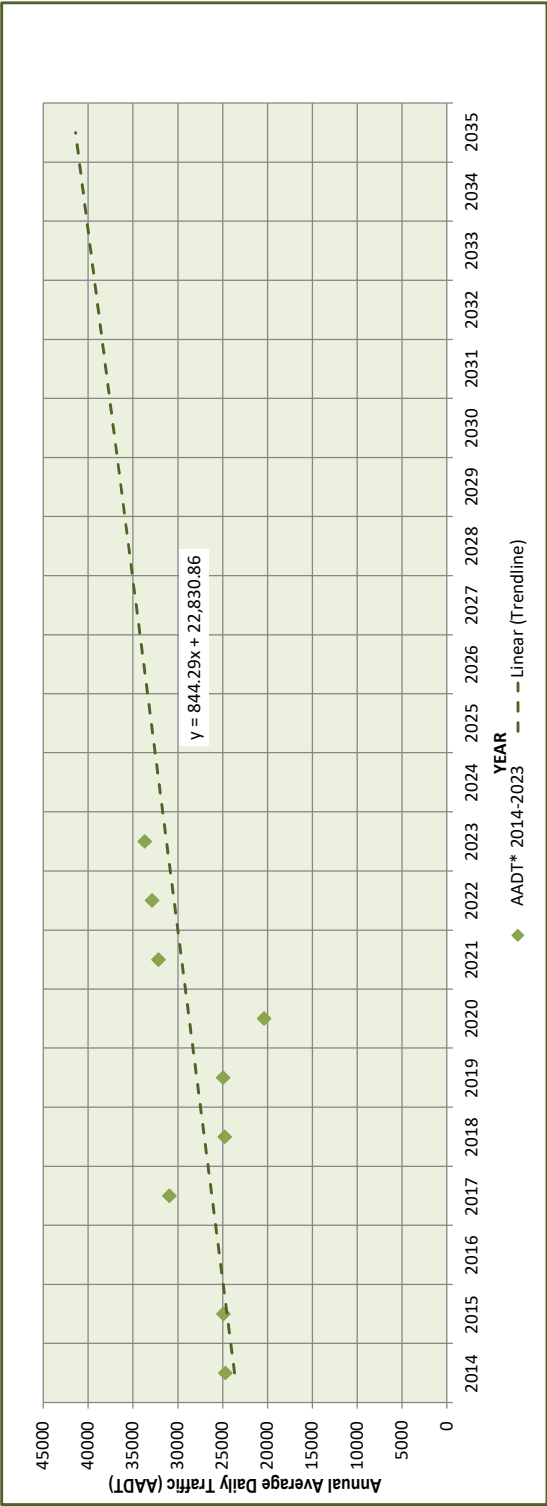
Use 1% / year traffic growth rate for NM345 GF_{1,1}= 1.12 Growth Factor to Year 2035

Comments:

**Major disparity between AADT counts and TDFM projection for 2040; therefore, this trendline analysis used to project traffic volumes to horizon year.

***Source:**

2014-2023 = NMDOT Traffic Monitoring Program: "AADT and AADT Trucks by Year" accessed via <https://nmdot.public.ms2soft.com/tcds/tsearch.asp?loc=nmdot> (LRS ID NM345P, Location ID #14490)



PROJECT: Bluewater Galleria TIA
Background Traffic Projection - Unser Blvd. from Bluewater Rd. to Los Volcanes Rd.

YEAR	AADT* 2014-2023	TRENDLINE
2014	24706	23675
2015	24906	24519
2016		25364
2017	30947	26208
2018	24763	27052
2019	24936	27897
2020	20373	28741
2021	32150	29585
2022	32889	30429
2023	33711	31274
2024		32118
2025		32962
2026		33807
2027		34651
2028		35495
2029		36340
2030		37184
2031		38028
2032		38872
2033		39717
2034		40561
2035		41405
	9005 1000.56	17730 1971.68
		growth rate

G₁ = 3.51% 2014-2023 AADT compounded annual rate**

G₂ = 3.14% 2014-2023 Trendline compounded annual rate

G₃ = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

Use 1% / year traffic growth rate for NM345 **GF_{1,1} = 1.12 Growth Factor to Year 2035**

Comments:

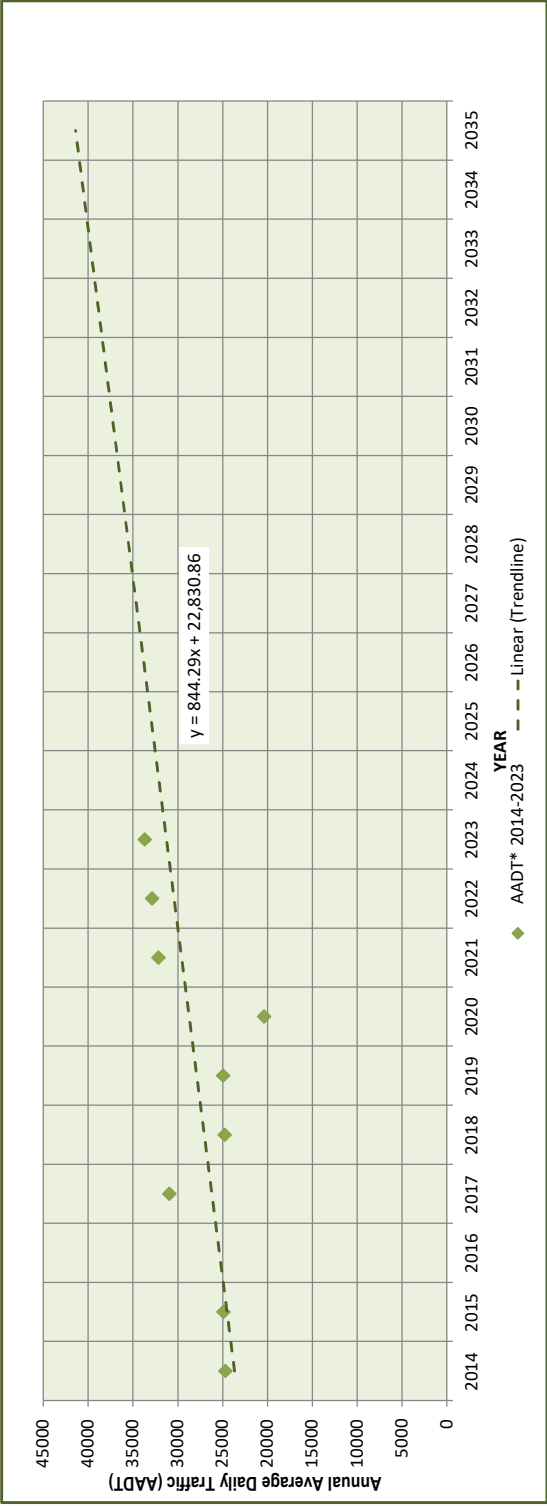
**Major disparity between AADT counts and TDFM projection for 2040; therefore, this trendline analysis is used to project traffic volumes to horizon year. Growth rate of 1% consistent w/LID 14490 & BBER population projections.

***Source:**

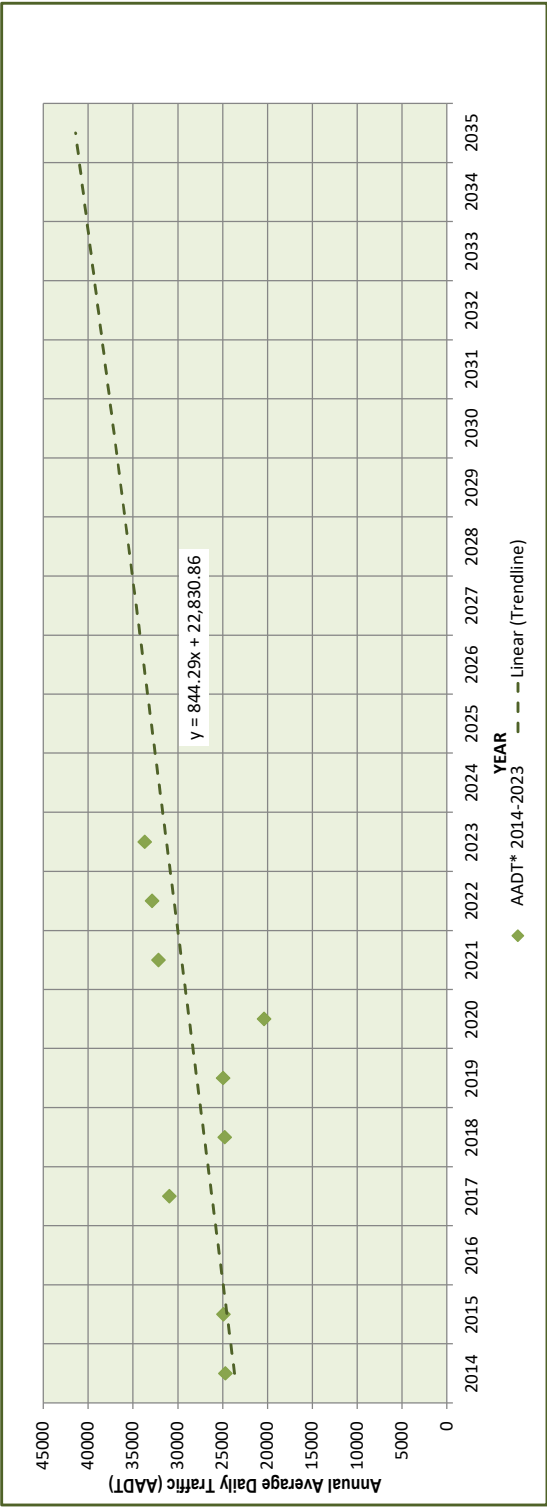
2014-2023 = NMDOT Traffic Monitoring Program: "AADT and AADT Trucks by Year"

accessed via <https://nmdot.public.ms2soft.com/tcds/tsearch.asp?loc=nmdot>

(LRS ID NM345P, Location ID #18499)



PROJECT: Bluewater Galleria TIA
Background Traffic Projection - Unser Blvd. from Los Volcanes Rd. to I-40



YEAR	AADT* 2014-2023	TRENDLINE
2014	29052	28163
2015	29287	29140
2016		30117
2017	28733	31094
2018	34494	32070
2019	34735	33047
2020	28378	34024
2021	36070	35001
2022	36900	35978
2023	37823	36954
2024		37931
2025		38908
2026		39885
2027		40862
2028		41838
2029		42815
2030		43792
2031		44769
2032		45746
2033		46722
2034		47699
2035		48676

$G_1 =$ 2.97% 2014-2023 AADT compounded annual rate**
 $G_2 =$ 3.06% 2014-2023 Trendline compounded annual rate
 $G_3 =$ 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

Use 1% / year traffic growth rate for NM345 **GF₁₁ = 1.12 Growth Factor to Year 2035**

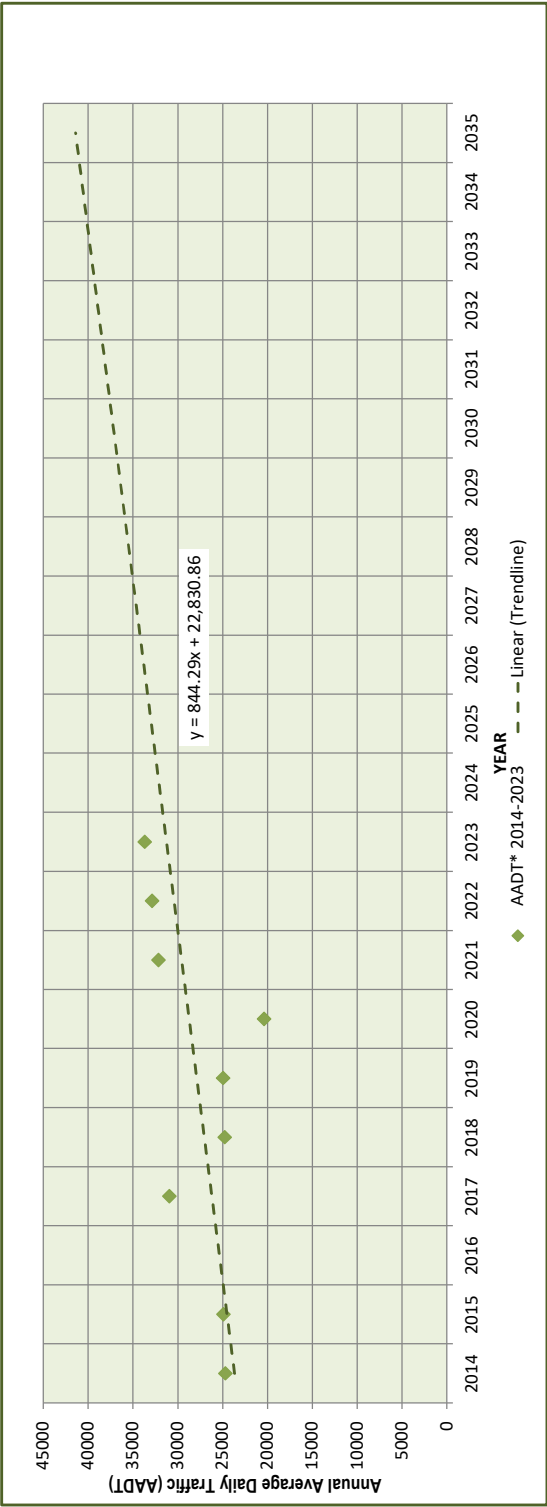
Comments:

**Major disparity between AADT counts and TDFM projection for 2040; therefore, this trendline analysis used to project traffic volumes to horizon year. Growth rate of 1% consistent w/LID 14490 & BBER population projections.

***Source:**

2014-2023 = NMDOT Traffic Monitoring Program: "AADT and AADT Trucks by Year"
 accessed via <https://nmdot.public.ms2soft.com/tcds/tsearch.asp?loc=nmdot>
 (LRS ID NM345P, Location ID #18500)

PROJECT: Bluewater Galleria TIA
Background Traffic Projection - Bluewater Rd. West of Unser Blvd.



YEAR	AADT* 2014-2023	TRENDLINE
2014	3772	4088
2015	3744	4668
2016		5248
2017	3849	5827
2018	5463	6407
2019	11843	6987
2020	9226	7567
2021	10499	8147
2022	6448	8726
2023	6880	9306
2024		9886
2025		10466
2026		11046
2027		11626
2028		12205
2029		12785
2030		13365
2031		13945
2032		14525
2033		15104
2034		15684
2035		16264
	3108	12176
	345.33	774.47
		rate

$G_1 = 6.91\%$ 2014-2023 AADT compounded annual rate**
 $G_2 = 9.57\%$ 2014-2023 Trendline compounded annual rate
 $G_3 = 1.02\%$ 2010-2035 UNM/BBER population projection for Bernalillo County

Use 1% / year traffic growth rate for Bluewater **GF₁₁ = 1.12 Growth Factor to Year 2035**

Comments:

**Major disparity between AADT counts and TDFM projection for 2040; therefore, this trendline analysis used to project traffic volumes to horizon year. Variable AADTs do not lead to a positive trend; lands adjacent to Bluewater are mostly and therefore background population projection rate will be applied.

***Source:**

2014-2023 = NMDOT Traffic Monitoring Program: "AADT and AADT Trucks by Year" accessed via <https://nmdot.public.ms2soft.com/tcads/tsearch.asp?loc=nmdot> (LRS ID FL5007P, Location ID #34962)

PROJECT: Bluewater Galleria TIA
Background Traffic Projection - Los Volcanes Rd. West of Unser Blvd.

YEAR	AADT*	TRENDLINE
2014	7294	
2015	13938	
2016		
2017	6758	6440
2018	6853	6841
2019	6935	7242
2020	7269	7642
2021	8272	8043
2022	8363	8444
2023	9047	8845
2024		9246
2025		9647
2026		10048
2027		10448
2028		10849
2029		11250
2030		11651
2031		12052
2032		12453
2033		12854
2034		13254
2035		13655

1753	7215	growth
194.78	758.63	rate

$G_1 = 2.42\%$ 2014-2023 AADT compounded annual rate**

$G_2 = 5.43\%$ 2017-2023 Trendline compounded annual rate

$G_3 = 1.02\%$ 2010-2035 UNM/BBER population projection for Bernalillo County

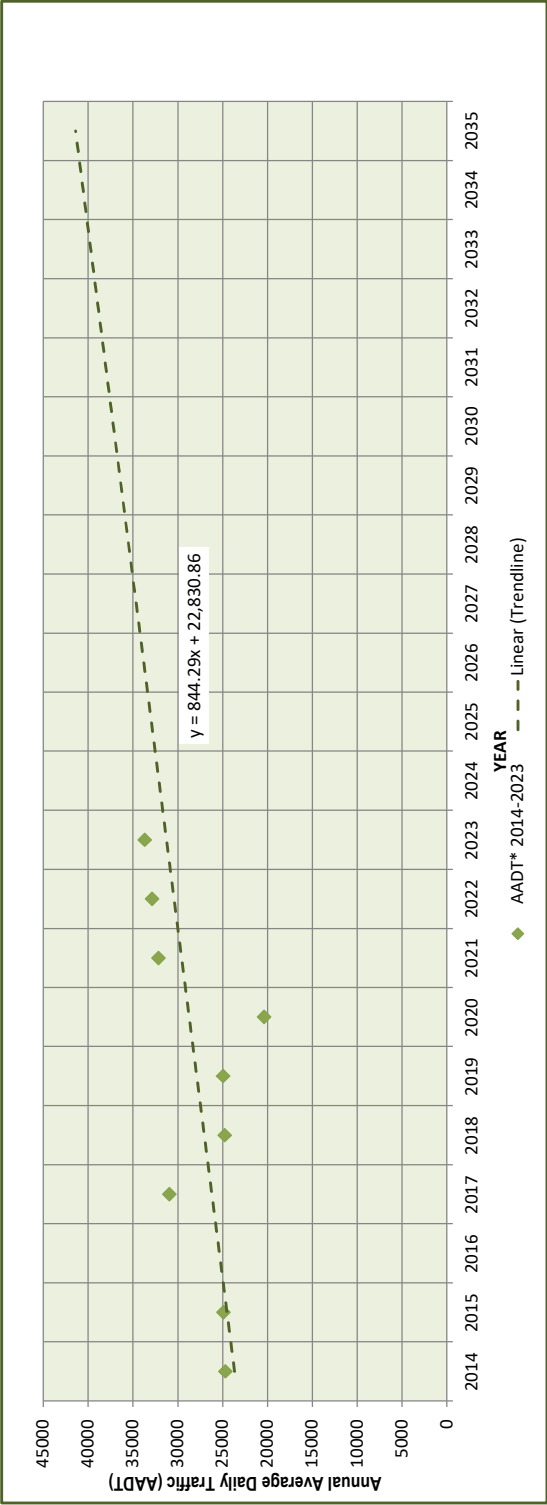
Use 2.4% / year traffic growth rate for Los Volcanes **GF₁₁ = 1.30 Growth Factor to Year 2035**

Comments:

**Major disparity between AADT counts and TDFM projection for 2040; therefore, this trendline analysis used to project traffic volumes to horizon year. AADTs from 2017 provide a positive trend and will be applied in this projection given available undeveloped lands adjacent to Los Volcanes.

***Source:**

2014-2023 = NMDOT Traffic Monitoring Program: "AADT and AADT Trucks by Year" accessed via <https://nmdot.public.ms2soft.com/tcads/tsearch.asp?loc=nmdot> (LRS ID FL1038P, Location ID #50484)



Mini-Warehouse (151)

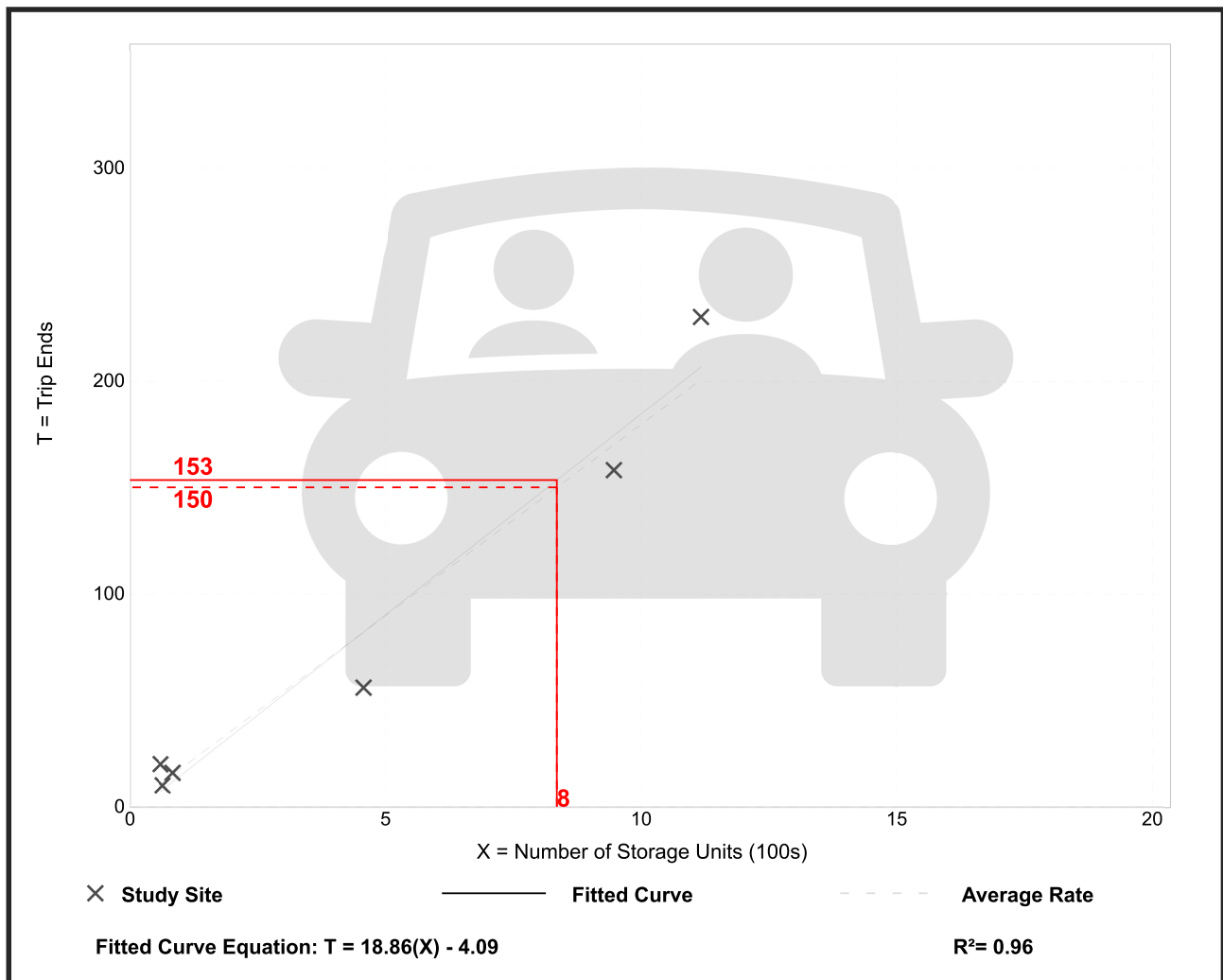
Vehicle Trip Ends vs: Storage Units (100s)
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
17.96	12.25 - 33.33	4.13

Data Plot and Equation



Mini-Warehouse (151)

Vehicle Trip Ends vs: Storage Units (100s)

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

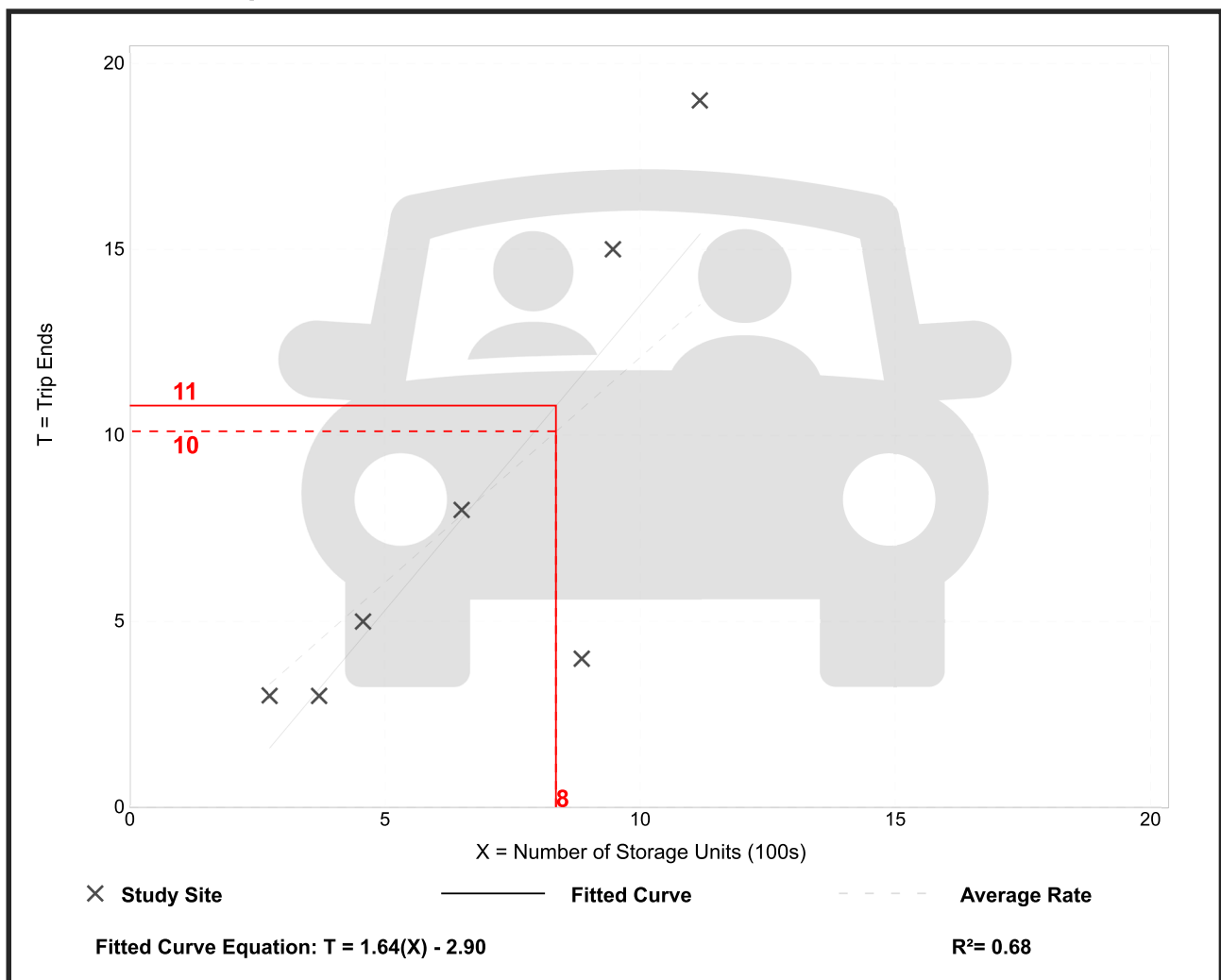
Avg. Num. of Storage Units (100s): 7

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
1.21	0.45 - 1.70	0.49

Data Plot and Equation



Mini-Warehouse (151)

Vehicle Trip Ends vs: Storage Units (100s)

**On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.**

Setting/Location: General Urban/Suburban

Number of Studies: 9

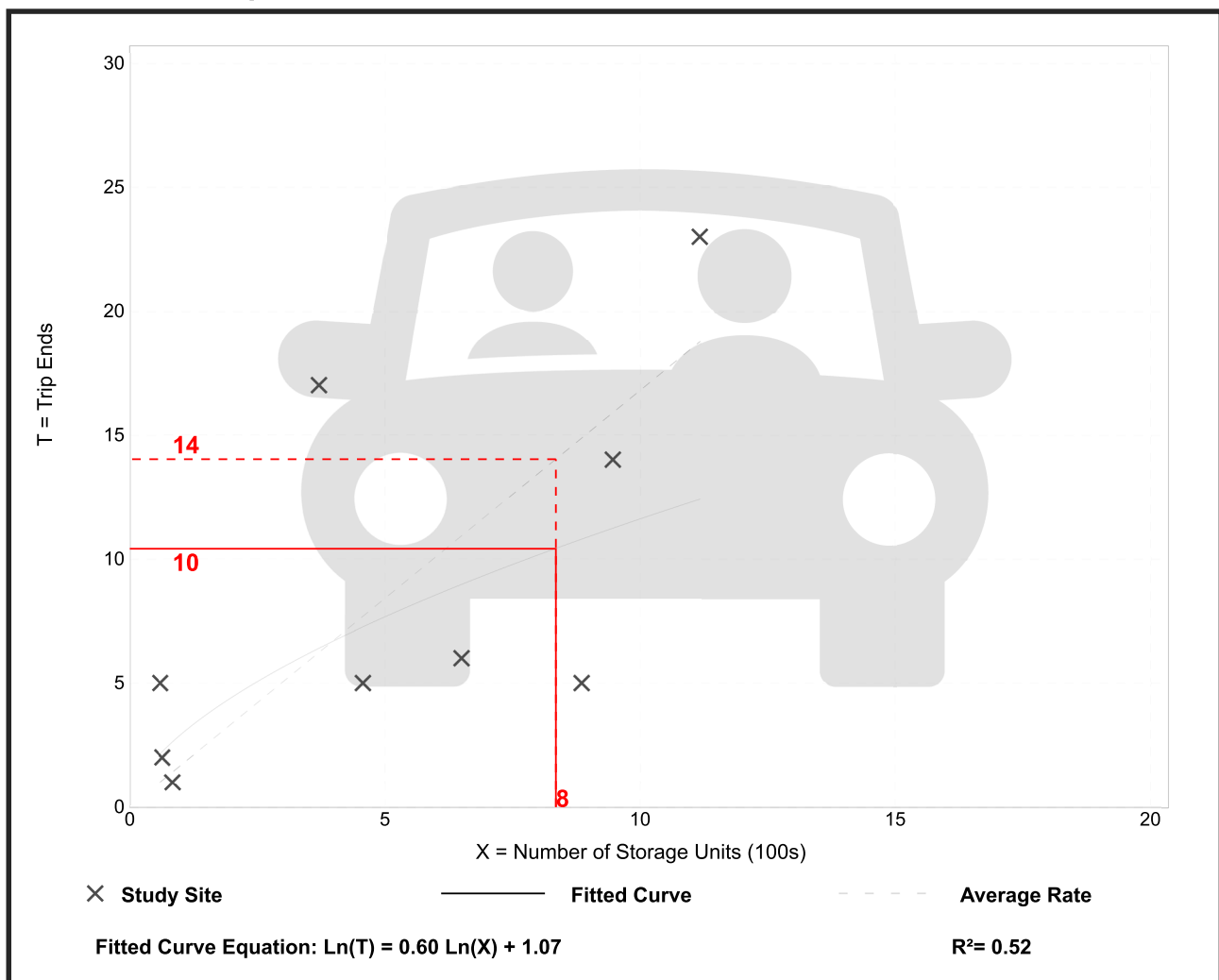
Avg. Num. of Storage Units (100s): 5

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
1.68	0.56 - 8.33	1.37

Data Plot and Equation



Strip Retail Plaza (<40k)

(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

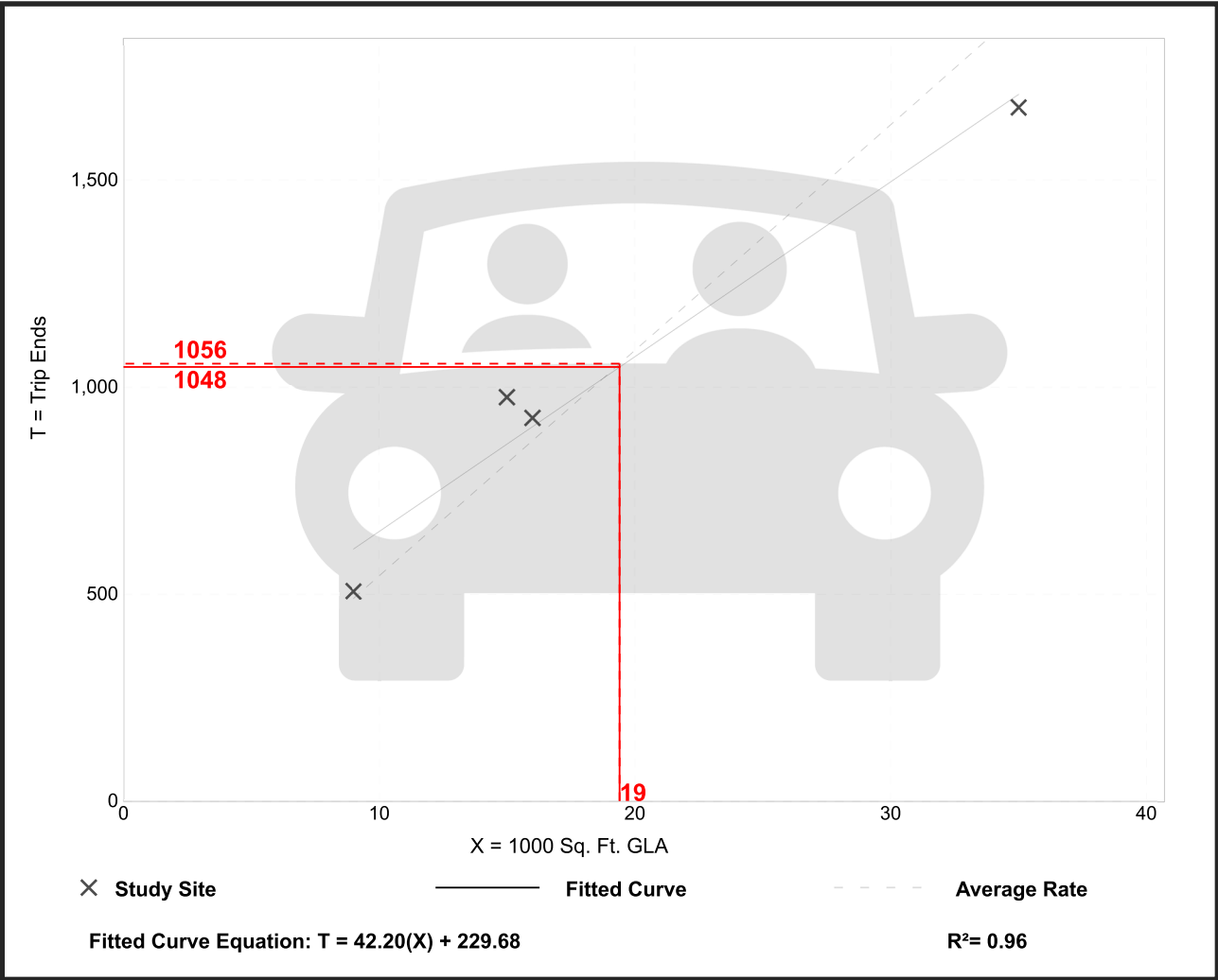
Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)

(822)

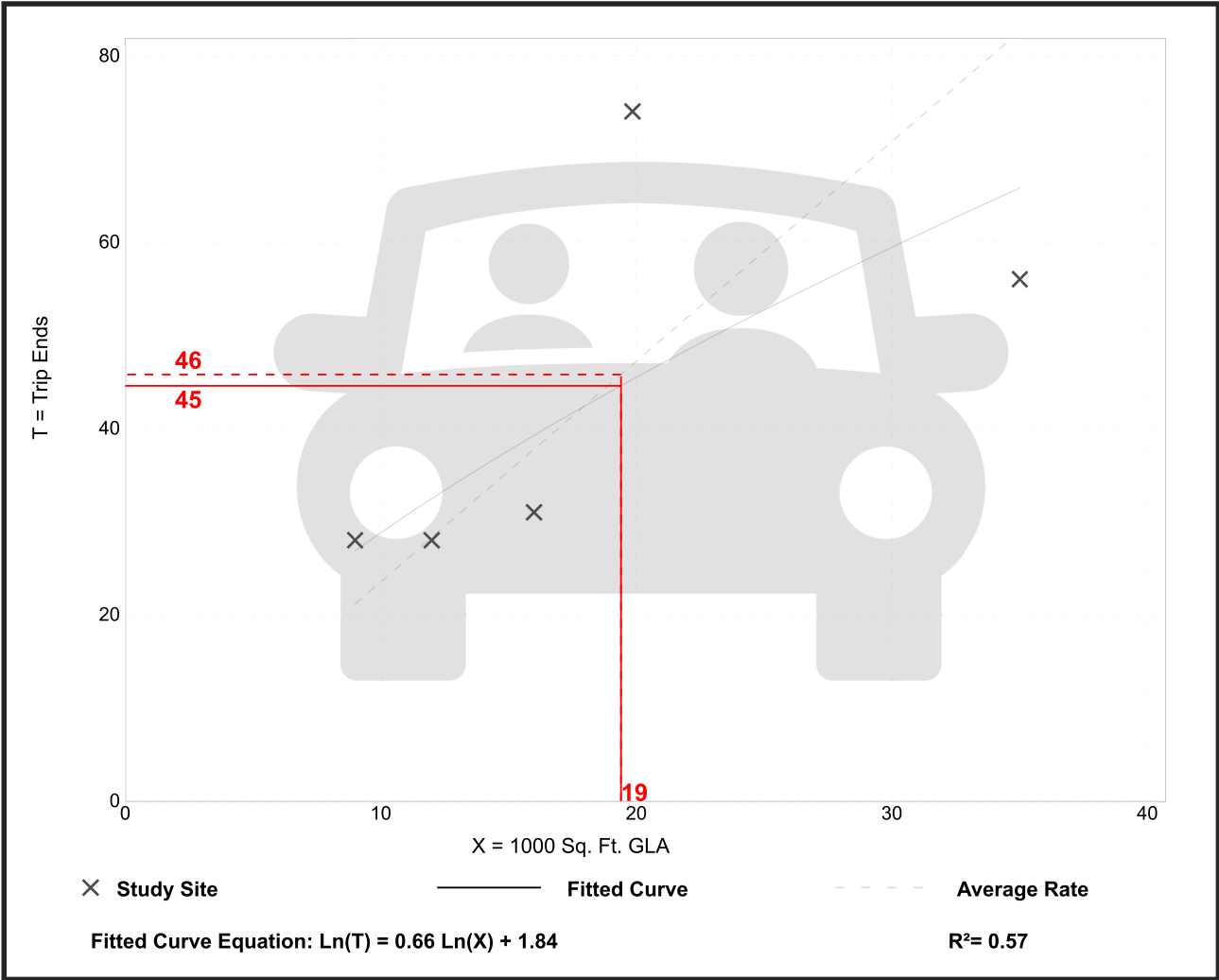
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)

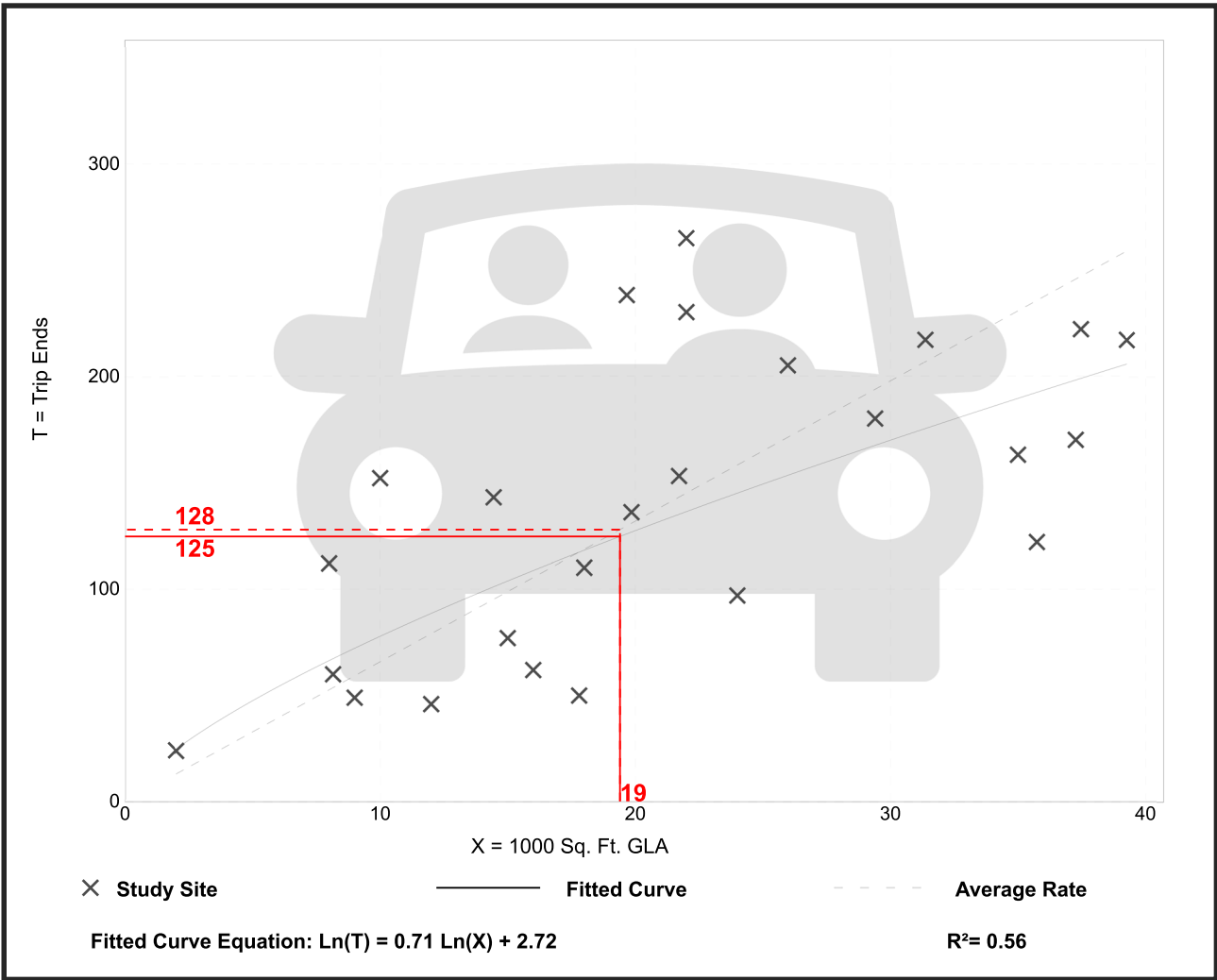
(822)

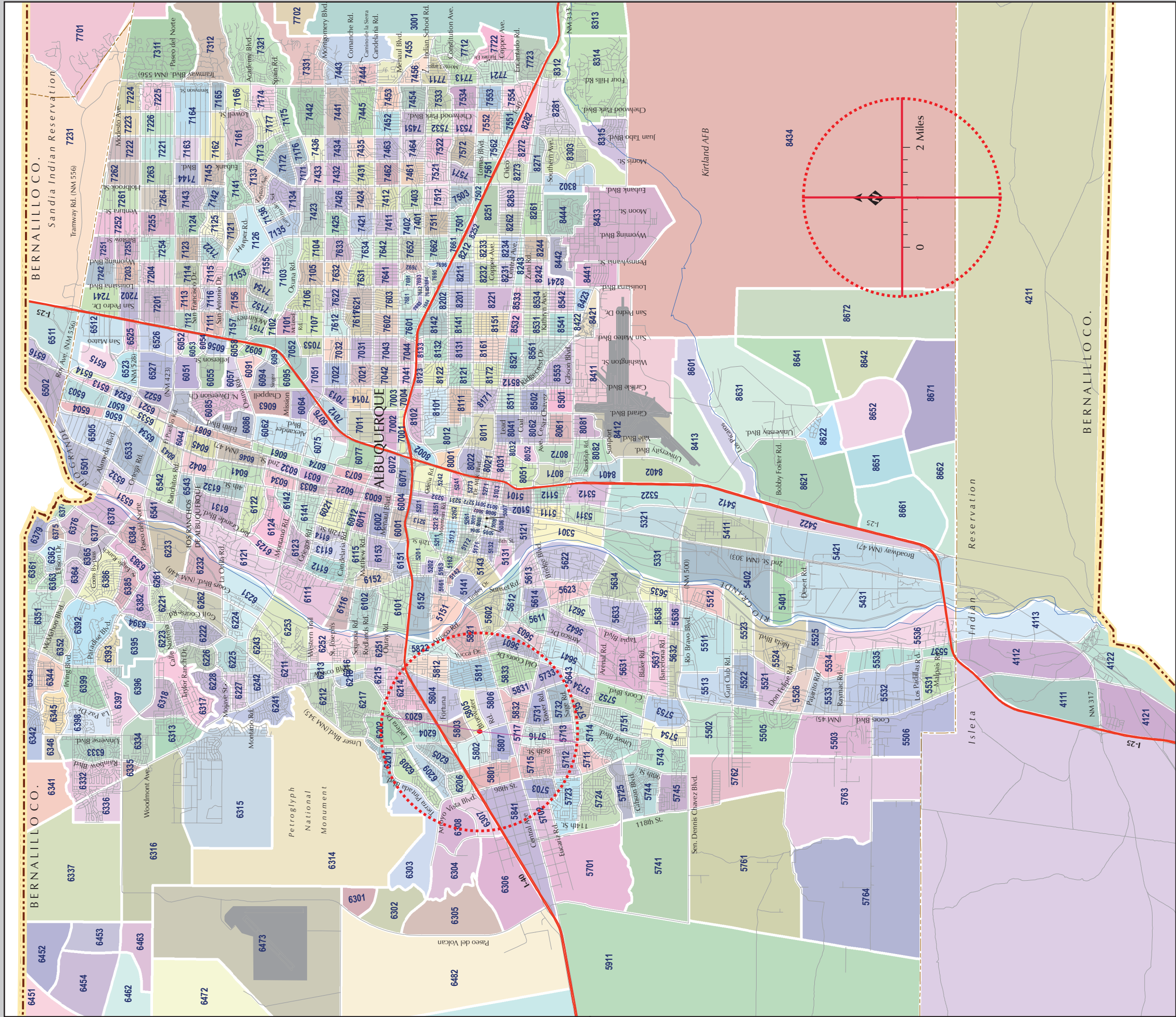
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation





2010 Data Analysis Subzones (DASZ)

Bernalillo County, NM

DASZ and DASZ Number

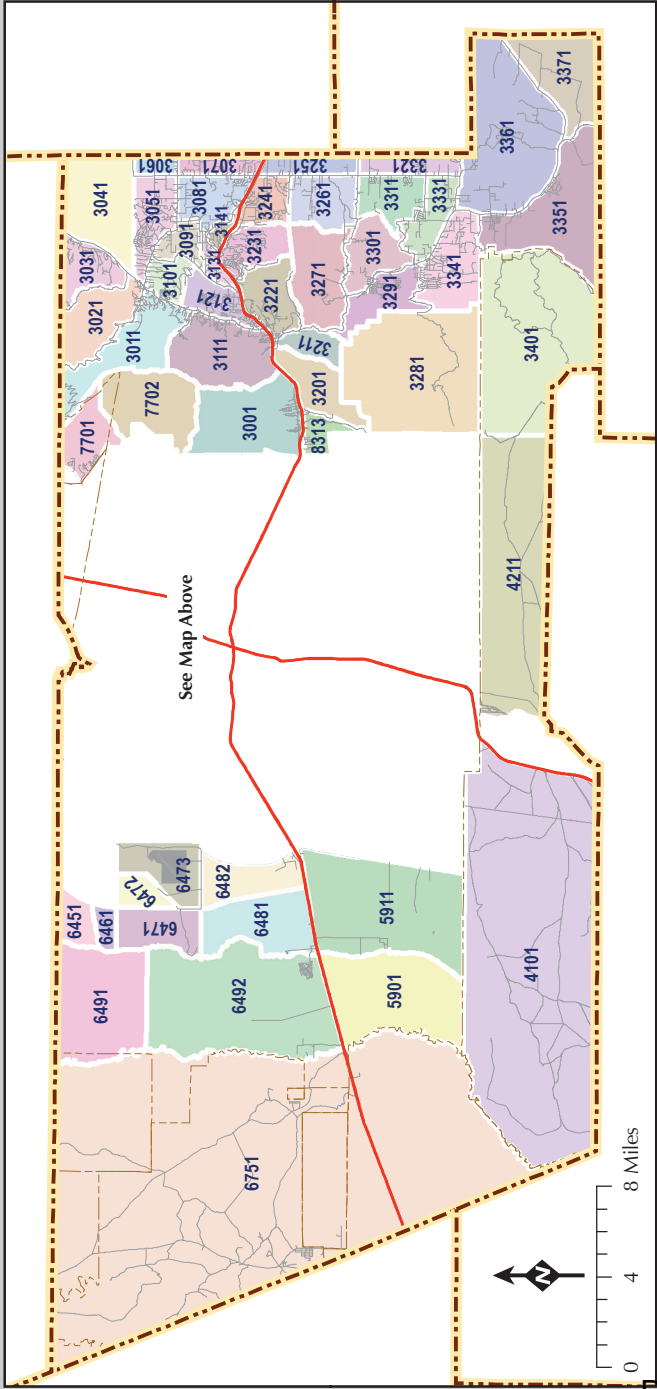
Roadways

Indian Reservation Boundary

County Boundary

Source: MRCOG 2011
Printed: March 2014

MRMPO
Mid-Region Metropolitan Planning Organization



Trip Distribution Table
Trip Type: *Commercial*

Sub Area Population Data							NORTH - Unser Blvd.			NORTHEAST - Los Volcanes Rd.			SOUTHEAST - Bluewater Rd.			SOUTH - Unser Blvd.			SOUTHWEST - Bluewater Rd.			NORTHWEST - Los Volcanes Rd.		
DASZ NUMBER ¹	% DASZ ¹ in Study	2016 Population ²	2040 Population ²	Interpolated Population for the Year	Population in Study Area	% Population	% Utilizing	% Population Utilizing	Popula-tion	% Utilizing	% Population Utilizing	Popula-tion	% Utilizing	% Population Utilizing	Popula-tion	% Utilizing	% Population Utilizing	Popula-tion	% Utilizing	% Population Utilizing	Popula-tion	% Utilizing	% Population Utilizing	Popula-tion
		2016		2025																				
5601	90%	2,039	2,125	2,039	1,835	3.44%	0%	0.00%	0	10%	0.34%	183	40%	1.37%	734	50%	1.72%	917	0%	0.00%	0	0%	0.00%	0
5602	5%	2,316	2,490	2,315	116	0.22%	0%	0.00%	0	0%	0.00%	0	25%	0.05%	29	75%	0.16%	87	0%	0.00%	0	0%	0.00%	0
5702	20%	46	45	46	9	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	0.01%	7	25%	0.00%	2	0%	0.00%	0
5703	100%	2,542	1,969	2,545	2,545	4.77%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	3.58%	1,908	25%	1.19%	636	0%	0.00%	0
5712	90%	2,632	2,255	2,634	2,370	4.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	3.33%	1,778	25%	1.11%	593	0%	0.00%	0
5713	100%	961	809	962	962	1.80%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	1.35%	721	25%	0.45%	240	0%	0.00%	0
5715	100%	4,173	3,578	4,176	4,176	7.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	5.87%	3,132	25%	1.96%	1,044	0%	0.00%	0
5716	100%	2,685	2,496	2,686	2,686	5.03%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	3.77%	2,014	25%	1.26%	671	0%	0.00%	0
5717	100%	6	589	3	3	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	0.00%	3	25%	0.00%	1	0%	0.00%	0
5723	10%	4,643	3,787	4,647	465	0.87%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	75%	0.65%	349	25%	0.22%	116	0%	0.00%	0
5731	100%	1,272	1,227	1,272	1,272	2.38%	0%	0.00%	0	0%	0.00%	0	25%	0.60%	318	75%	1.79%	954	0%	0.00%	0	0%	0.00%	0
5732	100%	650	1,178	648	648	1.21%	0%	0.00%	0	0%	0.00%	0	25%	0.30%	162	75%	0.91%	486	0%	0.00%	0	0%	0.00%	0
5733	95%	91	97	91	86	0.16%	0%	0.00%	0	0%	0.00%	0	25%	0.04%	22	75%	0.12%	65	0%	0.00%	0	0%	0.00%	0
5801	100%	1449	1,976	1,447	1,447	2.71%	25%	0.68%	362	0%	0.00%	0	0%	0.00%	0	25%	0.68%	362	50%	1.36%	723	0%	0.00%	0
5802	100%	590	543	590	590	1.11%	25%	0.28%	148	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	0.55%	295	25%	0.28%	148
5803	100%	0	0	0	0	0.00%	75%	0.00%	0	25%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5804	100%	2,853	3,047	2,852	2,852	5.34%	50%	2.67%	1,426	25%	1.34%	713	25%	1.34%	713	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5805	100%	115	267	114	114	0.21%	0%	0.00%	0	50%	0.11%	57	50%	0.11%	57	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5806	100%	707	741	707	707	1.32%	0%	0.00%	0	25%	0.33%	177	50%	0.66%	353	25%	0.33%	177	0%	0.00%	0	0%	0.00%	0
5807	100%	1,726	1,709	1,726	1,726	3.23%	0%	0.00%	0	0%	0.00%	0	25%	0.81%	432	75%	2.43%	1,295	0%	0.00%	0	0%	0.00%	0
5811	100%	4,234	4,170	4,234	4,234	7.93%	0%	0.00%	0	25%	1.98%	1,059	25%	1.98%	1,059	50%	3.97%	2,117	0%	0.00%	0	0%	0.00%	0
5812	95%	2,217	2,102	2,218	2,107	3.95%	0%	0.00%	0	50%	1.97%	1,053	50%	1.97%	1,053	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5821	50%	1,953	2,055	1,953	976	1.83%	0%	0.00%	0	25%	0.46%	244	25%	0.46%	244	50%	0.91%	488	0%	0.00%	0	0%	0.00%	0
5822	50%	1,046	1,412	1,044	522	0.98%	25%	0.24%	131	50%	0.49%	261	25%	0.24%	131	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5831	100%	669	930	668	668	1.25%	0%	0.00%	0	25%	0.31%	167	50%	0.63%	334	25%	0.31%	167	0%	0.00%	0	0%	0.00%	0
5832	100%	1,219	1,397	1,218	1,218	2.28%	0%	0.00%	0	0%	0.00%	0	25%	0.57%	305	75%	1.71%	914	0%	0.00%	0	0%	0.00%	0
5833	100%	3,940	3,653	3,941	3,941	7.38%	0%	0.00%	0	25%	1.85%	985	25%	1.85%	985	50%	3.69%	1,971	0%	0.00%	0	0%	0.00%	0
5841	60%	171	210	171	102	0.19%	25%	0.05%	26	0%	0.00%	0	0%	0.00%	0	50%	0.10%	51	25%	0.05%	26	0%	0.00%	0
6201	40%	1,382	1,914	1,380	552	1.03%	50%	0.52%	276	50%	0.52%	276	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6202	60%	1,388	1,446	1,388	833	1.56%	50%	0.78%	416	50%	0.78%	416	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6203	100%	861	1,047	860	860	1.61%	25%	0.40%	215	75%	1.21%	645	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6204	100%	1,827	1,645	1,828	1,828	3.42%	50%	1.71%	914	50%	1.71%	914	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6205	100%	2,227	1,913	2,228	2,228	4.17%	50%	2.09%	1,114	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	2.09%	1,114
6206	100%	1,713	1,485	1,714	1,714	3.21%	50%	1.61%	857	0%	0.00%	0	50%	1.61%	857	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6208	100%	2,499	3,258	2,496	2,496	4.68%	50%	2.34%	1,248	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	50%	2.34%	1,248	0%	0.00%	0
6209	100%	1,641	1,441	1,642	1,642	3.08%	50%	1.54%	821	0%	0.00%	0	50%	1.54%	821	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6214	80%	3,560	3,480	3,560	2,848	5.34%	50%	2.67%	1,424	50%	2.67%	1,424	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6307	90%	0	154	-1	-1	0.00%	75%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	25%	0.00%	0	0%	0.00%	0
6308	50%	0	0	0	0	0.00%	75%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	25%	0.00%	0	0%	0.00%	0
64,043								18%			16%			16%			37%			10%			2%	

¹DASZ = Data Analysis SubZone
²Source: Mid-Region Council of Governments (MRCOG) "2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico "

Development: Bluewater Galleria**Driveway: 1 Driveway 1 (Node 54) SilverCreek**

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 1 (Node 54) SilverCreek to Origin 1 (Node 31) Unser North	17	6	3	1
2	Driveway 1 (Node 54) SilverCreek to Origin 2 (Node 32) I40 N-E Ramp	0	0	2	0
3	Driveway 1 (Node 54) SilverCreek to Origin 3 (Node 42) LV East	16	5	8	2
4	Driveway 1 (Node 54) SilverCreek to Origin 4 (Node 53) SilverCreek	6	2	16	4
6	Driveway 1 (Node 54) SilverCreek to Origin 6 (Node 13) Unser South	0	0	35	8
7	Driveway 1 (Node 54) SilverCreek to Origin 7 (Node 14) BW West	0	0	10	2
8	Driveway 1 (Node 54) SilverCreek to Origin 8 (Node 24) LV West	2	1	2	0
9	Origin 9 (Node 34) I40 E-S Ramp to Driveway 1 (Node 54) SilverCreek	2	1	0	0

Development: Bluewater Galleria**Driveway: 2 Driveway 2 (Node 62) Unser**

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 2 (Node 62) Unser to Origin 1 (Node 31) Unser North	0	0	15	3
2	Driveway 2 (Node 62) Unser to Origin 2 (Node 32) I40 N-E Ramp	0	0	2	0
3	Driveway 2 (Node 62) Unser to Origin 3 (Node 42) LV East	0	0	5	1
5	Origin 5 (Node 12) BW East to Driveway 2 (Node 62) Unser	10	3	0	0
6	Origin 6 (Node 13) Unser South to Driveway 2 (Node 62) Unser	37	12	0	0
7	Origin 7 (Node 14) BW West to Driveway 2 (Node 62) Unser	10	3	0	0
8	Driveway 2 (Node 62) Unser to Origin 8 (Node 24) LV West	0	0	2	0

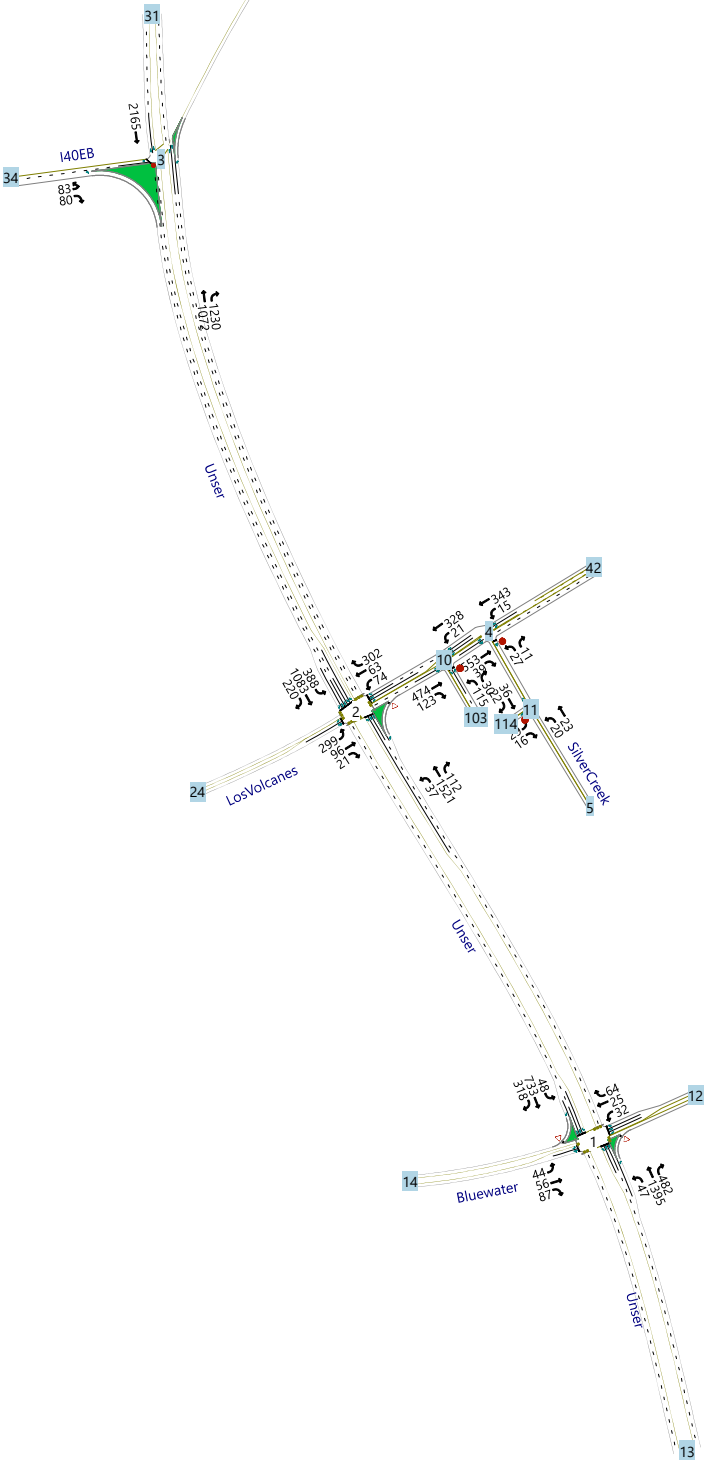
Development: Bluewater Galleria**Driveway: 1 Driveway 1 (Node 54) SilverCreek**

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 1 (Node 54) SilverCreek to Origin 1 (Node 31) Unser North	17	18	3	3
2	Driveway 1 (Node 54) SilverCreek to Origin 2 (Node 32) I40 N-E Ramp	0	0	2	2
3	Driveway 1 (Node 54) SilverCreek to Origin 3 (Node 42) LV East	16	17	8	8
4	Driveway 1 (Node 54) SilverCreek to Origin 4 (Node 53) SilverCreek	6	6	16	15
6	Driveway 1 (Node 54) SilverCreek to Origin 6 (Node 13) Unser South	0	0	35	33
7	Driveway 1 (Node 54) SilverCreek to Origin 7 (Node 14) BW West	0	0	10	9
8	Driveway 1 (Node 54) SilverCreek to Origin 8 (Node 24) LV West	2	2	2	2
9	Origin 9 (Node 34) I40 E-S Ramp to Driveway 1 (Node 54) SilverCreek	2	2	0	0

Development: Bluewater Galleria**Driveway: 2 Driveway 2 (Node 62) Unser**

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 2 (Node 62) Unser to Origin 1 (Node 31) Unser North	0	0	15	14
2	Driveway 2 (Node 62) Unser to Origin 2 (Node 32) I40 N-E Ramp	0	0	2	2
3	Driveway 2 (Node 62) Unser to Origin 3 (Node 42) LV East	0	0	5	5
5	Origin 5 (Node 12) BW East to Driveway 2 (Node 62) Unser	10	10	0	0
6	Origin 6 (Node 13) Unser South to Driveway 2 (Node 62) Unser	37	38	0	0
7	Origin 7 (Node 14) BW West to Driveway 2 (Node 62) Unser	10	10	0	0
8	Driveway 2 (Node 62) Unser to Origin 8 (Node 24) LV West	0	0	2	2

APPENDIX E
LOS Worksheets
Baseline Scenario (2024)
Implementation Year (2025)
Horizon Year (2035)



HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS, Baseline (2024)

AM Peak (0715), Timing Plan: 21

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	56	87	32	25	64	47	1395	482	48	733	318
Future Volume (veh/h)	44	56	87	32	25	64	47	1395	482	48	733	318
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	49	62	97	36	28	71	52	1550	0	53	814	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	418	207	324	332	487	381	362	1833		135	1804	
Arrive On Green	0.03	0.32	0.32	0.26	0.26	0.26	0.02	0.52	0.00	0.03	0.53	0.00
Sat Flow, veh/h	1697	644	1008	1091	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	49	0	159	36	28	71	52	1550	0	53	814	0
Grp Sat Flow(s),veh/h/ln	1697	0	1652	1091	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	2.5	0.0	8.7	3.1	1.4	4.6	1.6	45.5	0.0	2.2	17.7	0.0
Cycle Q Clear(g_c), s	2.5	0.0	8.7	4.6	1.4	4.6	1.6	45.5	0.0	2.2	17.7	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	0	531	332	487	381	362	1833		135	1804	
V/C Ratio(X)	0.12	0.00	0.30	0.11	0.06	0.19	0.14	0.85		0.39	0.45	
Avail Cap(c_a), veh/h	501	0	606	332	487	381	476	1833		257	1804	
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.5	0.0	30.5	35.0	33.1	34.3	13.9	24.4	0.0	23.4	17.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.7	0.2	1.1	0.1	5.0	0.0	0.7	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	6.1	1.6	1.1	3.1	1.1	25.5	0.0	1.2	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	30.7	35.6	33.4	35.4	14.0	29.4	0.0	24.1	18.3	0.0
LnGrp LOS	C		C	D	C	D	B	C		C	B	
Approach Vol, veh/h	208			135			1602			867		
Approach Delay, s/veh	30.4			35.0			28.9			18.7		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	68.4		44.6	6.5	68.9	7.1	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.2	47.5		10.7	3.6	19.7	4.5	6.6				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	5.7	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	26.2
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

BlueGal_2024AMX.syn

Civil Transformations Inc.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS, Baseline (2024)
AM Peak (0715), Timing Plan: 21

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	96	21	74	63	302	37	1521	112	388	1083	220
Future Volume (veh/h)	299	96	21	74	63	302	37	1521	112	388	1083	220
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	329	105	23	81	69	332	41	1671	0	426	1190	242
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	461	433	95	406	418	505	51	1828		450	1610	880
Arrive On Green	0.12	0.30	0.30	0.05	0.23	0.23	0.01	0.12	0.00	0.13	0.46	0.46
Sat Flow, veh/h	1739	1451	318	1640	1856	1407	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	329	0	128	81	69	332	41	1671	0	426	1190	242
Grp Sat Flow(s),veh/h/ln	1739	0	1768	1640	1856	1407	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.7	0.0	6.6	4.5	3.6	23.8	3.0	38.8	0.0	15.0	33.4	9.6
Cycle Q Clear(g_c), s	14.7	0.0	6.6	4.5	3.6	23.8	3.0	38.8	0.0	15.0	33.4	9.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	0	528	406	418	505	51	1828		450	1610	880
V/C Ratio(X)	0.71	0.00	0.24	0.20	0.17	0.66	0.80	0.91		0.95	0.74	0.28
Avail Cap(c_a), veh/h	461	0	528	622	595	639	124	1828		450	1610	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	31.8	33.0	37.4	32.3	59.0	51.1	0.0	51.6	26.5	12.4
Incr Delay (d2), s/veh	5.2	0.0	0.2	0.2	0.2	1.7	23.8	8.6	0.0	29.4	3.1	0.8
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	8.1	0.0	5.1	3.3	3.0	12.9	2.8	26.3	0.0	12.6	19.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.4	0.0	32.1	33.2	37.6	34.0	82.8	59.7	0.0	81.0	29.6	13.2
LnGrp LOS	D		C	C	D	C	F	E		F	C	B
Approach Vol, veh/h	457			482			1712			1858		
Approach Delay, s/veh	35.2			34.4			60.2			39.2		
Approach LOS	D			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	48.5	10.2	41.3	7.7	60.7	19.0	32.5				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+117), s	10.0	40.8	6.5	8.6	5.0	35.4	16.7	25.8				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.6	0.0	1.6	0.0	1.3				

Intersection Summary

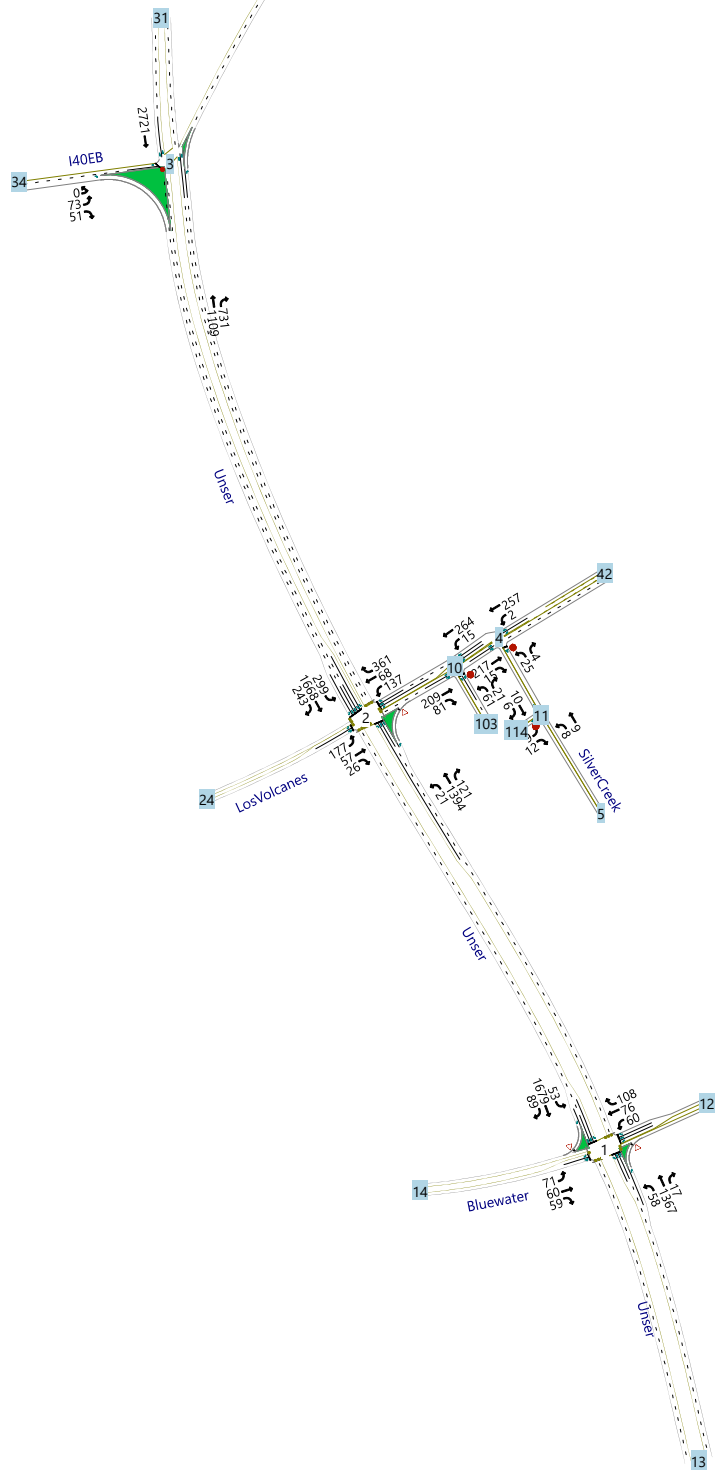
HCM 7th Control Delay, s/veh 46.3
HCM 7th LOS D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection										
Int Delay, s/veh	201.5									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	0	80	0	1072	1230	0	2165	0	0	0
Future Vol, veh/h	0	80	0	1072	1230	0	2165	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	0	99	0	1323	1519	0	2673	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	3335	-	-	0	-	-	-	0		
Stage 1	2673	-	-	-	-	-	-	-		
Stage 2	662	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	~ 6	0	0	-	0	0	-	0		
Stage 1	~ 38	0	0	-	0	0	-	0		
Stage 2	478	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	~ 6	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-	-	-		
Stage 1	~ 38	-	-	-	-	-	-	-		
Stage 2	478	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	\$ 8060	0			0					
HCM LOS	F									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)	-	6	-	-						
HCM Lane V/C Ratio	-	16.365	-	-						
HCM Ctrl Dly (s/v)	-	\$ 8060	0	-						
HCM Lane LOS	-	F	A	-						
HCM 95th %tile Q(veh)	-	14.6	-	-						
Notes										
~: Volume exceeds capacity		\$: Delay exceeds 300s								
+: Computation Not Defined		*: All major volume in platoon								

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 				 	
Traffic Vol, veh/h	553	39	15	343	27	11
Future Vol, veh/h	553	39	15	343	27	11
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	658	46	18	408	32	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	705	0	1126	352
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	444	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	700	-	171	623
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	700	-	166	623
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	547	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.43		17.43	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	335	-	-	700	-	
HCM Lane V/C Ratio	0.135	-	-	0.026	-	
HCM Ctrl Dly (s/v)	17.4	-	-	10.3	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	



HCM 7th Signalized Intersection Summary
1: Unser & Bluewater

Bluewater Galleria TIS, Baseline (2024)
PM Peak (1645), Timing Plan: 25

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	60	59	60	76	108	58	1367	17	53	1679	89
Future Volume (veh/h)	71	60	59	60	76	108	58	1367	17	53	1679	89
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	79	67	66	67	84	120	64	1519	0	59	1866	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	391	287	283	353	487	381	198	1763		136	1731	
Arrive On Green	0.05	0.34	0.34	0.26	0.26	0.26	0.03	0.50	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1697	850	837	1116	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	79	0	133	67	84	120	64	1519	0	59	1866	0
Grp Sat Flow(s),veh/h/ln	1697	0	1687	1116	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	4.0	0.0	6.8	5.7	4.2	8.0	2.1	45.7	0.0	2.6	60.9	0.0
Cycle Q Clear(g_c), s	4.0	0.0	6.8	5.7	4.2	8.0	2.1	45.7	0.0	2.6	60.9	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	0	570	353	487	381	198	1763		136	1731	
V/C Ratio(X)	0.20	0.00	0.23	0.19	0.17	0.31	0.32	0.86		0.44	1.08	
Avail Cap(c_a), veh/h	447	0	619	353	487	381	302	1763		252	1731	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.8	0.0	28.6	34.7	34.2	35.6	15.8	26.1	0.0	23.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.2	0.8	2.2	0.3	5.8	0.0	0.8	46.0	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	2.9	0.0	4.9	2.9	3.6	5.4	1.5	26.0	0.0	1.3	17.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	0.0	28.6	35.9	35.0	37.7	16.1	31.9	0.0	24.6	46.0	0.0
LnGrp LOS	C		C	D	C	D	B	C		C	F	
Approach Vol, veh/h	212			271			1583			1925		
Approach Delay, s/veh	28.7			36.4			31.3			45.3		
Approach LOS	C			D			C			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	66.0		46.5	7.1	66.4	9.0	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.6	47.7		8.8	4.1	62.9	6.0	10.0				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.6				

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, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary 2: Unser & LosVolcanes

Bluewater Galleria TIS, Baseline (2024)
PM Peak (1645), Timing Plan: 25

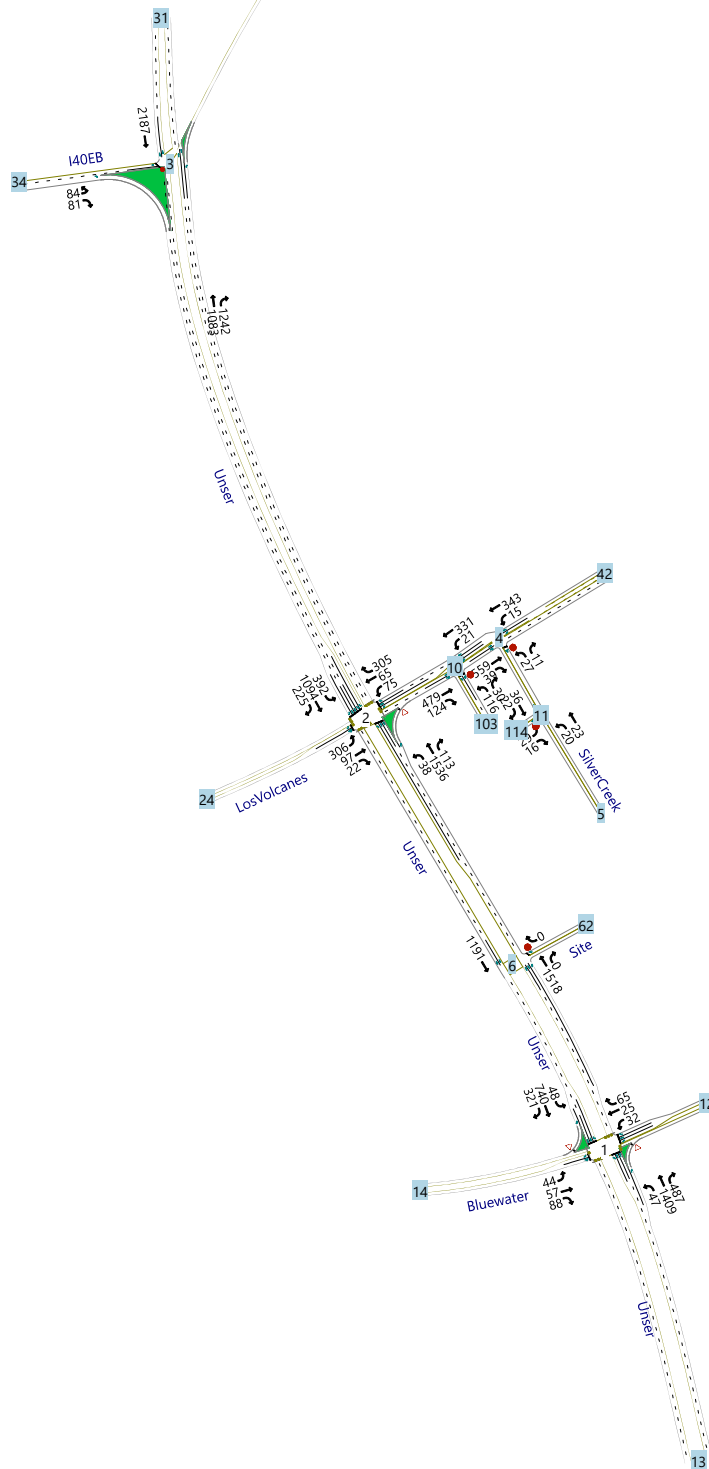
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	57	26	137	68	361	21	1394	121	299	1668	243
Future Volume (veh/h)	177	57	26	137	68	361	21	1394	121	299	1668	243
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	195	63	29	151	75	397	23	1532	0	329	1833	267
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	444	337	155	491	498	540	37	1828		387	1575	828
Arrive On Green	0.10	0.28	0.28	0.08	0.27	0.27	0.01	0.12	0.00	0.11	0.45	0.45
Sat Flow, veh/h	1739	1183	544	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	195	0	92	151	75	397	23	1532	0	329	1833	267
Grp Sat Flow(s),veh/h/ln	1739	0	1727	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	9.6	0.0	4.8	7.9	3.7	29.1	1.7	35.2	0.0	11.5	54.1	11.6
Cycle Q Clear(g_c), s	9.6	0.0	4.8	7.9	3.7	29.1	1.7	35.2	0.0	11.5	54.1	11.6
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	444	0	492	491	498	540	37	1828		387	1575	828
V/C Ratio(X)	0.44	0.00	0.19	0.31	0.15	0.74	0.62	0.84		0.85	1.16	0.32
Avail Cap(c_a), veh/h	487	0	492	654	595	613	124	1828		450	1575	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	32.4	27.7	33.4	31.8	59.1	49.5	0.0	52.1	33.0	14.9
Incr Delay (d2), s/veh	0.7	0.0	0.2	0.4	0.1	4.0	15.9	4.8	0.0	12.8	81.0	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	7.3	0.0	3.7	5.6	3.0	15.5	1.5	23.5	0.0	9.2	54.7	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	0.0	32.6	28.1	33.6	35.8	75.0	54.3	0.0	64.9	114.0	15.9
LnGrp LOS	C		C	C	C	D	E	D		E	F	B
Approach Vol, veh/h	287			623			1555			2429		
Approach Delay, s/veh	29.4			33.6			54.6			96.5		
Approach LOS	C			C			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	48.5	14.1	39.7	6.7	59.6	16.0	37.7				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	16.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+1/3), s	11.5	37.2	9.9	6.8	3.7	56.1	11.6	31.1				
Green Ext Time (p_c), s	0.3	0.0	0.3	0.4	0.0	0.0	0.2	1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh	71.3											
HCM 7th LOS	E											

Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	73	51	0	1109	731	0	2721	0	0	0
Future Vol, veh/h	73	51	0	1109	731	0	2721	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	90	63	0	1369	902	0	3359	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	4044	-	-	0	-	-	-	0		
Stage 1	3359	-	-	-	-	-	-	-		
Stage 2	685	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	2	0	0	-	0	0	-	0		
Stage 1	15	0	0	-	0	0	-	0		
Stage 2	465	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	2	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	2	-	-	-	-	-	-	-		
Stage 1	15	-	-	-	-	-	-	-		
Stage 2	465	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	0	0			0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)		-	-	-	-					
HCM Lane V/C Ratio		-	-	-	-					
HCM Ctrl Dly (s/v)		-	0	0	-					
HCM Lane LOS		-	A	A	-					
HCM 95th %tile Q(veh)		-	-	-	-					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↓	↑	↓	
Traffic Vol, veh/h	217	15	2	257	25	4
Future Vol, veh/h	217	15	2	257	25	4
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	258	18	2	306	30	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	276	0	578	138
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	311	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	1063	-	396	860
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1063	-	395	860
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	653	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.06		12.53	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	513	-	-	1063	-	
HCM Lane V/C Ratio	0.067	-	-	0.002	-	
HCM Ctrl Dly (s/v)	12.5	-	-	8.4	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	



HCM 7th Signalized Intersection Summary
1: Unser & Bluewater

Bluewater Galleria TIS, Implementation (2025) NO-Build
AM Peak (0715), Timing Plan: 21

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
Future Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	49	63	98	36	28	72	52	1566	0	53	822	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	417	208	323	331	487	381	359	1833		133	1804	
Arrive On Green	0.03	0.32	0.32	0.26	0.26	0.26	0.02	0.52	0.00	0.03	0.53	0.00
Sat Flow, veh/h	1697	646	1006	1089	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	49	0	161	36	28	72	52	1566	0	53	822	0
Grp Sat Flow(s),veh/h/ln	1697	0	1652	1089	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	2.5	0.0	8.8	3.1	1.4	4.6	1.6	46.3	0.0	2.2	17.9	0.0
Cycle Q Clear(g_c), s	2.5	0.0	8.8	4.8	1.4	4.6	1.6	46.3	0.0	2.2	17.9	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	531	331	487	381	359	1833		133	1804	
V/C Ratio(X)	0.12	0.00	0.30	0.11	0.06	0.19	0.14	0.85		0.40	0.46	
Avail Cap(c_a), veh/h	501	0	606	331	487	381	473	1833		254	1804	
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.5	0.0	30.6	35.1	33.1	34.3	13.9	24.6	0.0	23.9	17.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.7	0.2	1.1	0.1	5.3	0.0	0.7	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	6.2	1.6	1.1	3.1	1.1	25.9	0.0	1.2	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	30.7	35.7	33.4	35.4	14.0	29.9	0.0	24.6	18.4	0.0
LnGrp LOS	C		C	D	C	D	B	C		C	B	
Approach Vol, veh/h	210			136			1618			875		
Approach Delay, s/veh	30.4			35.1			29.4			18.8		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	68.4		44.6	6.5	68.9	7.1	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.2	48.3		10.8	3.6	19.9	4.5	6.8				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	5.8	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	26.5
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS, Implementation (2025) NO-Build
AM Peak (0715), Timing Plan: 21



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
Future Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	336	107	24	82	71	335	42	1688	0	431	1202	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	461	433	97	409	421	508	53	1819		450	1601	876
Arrive On Green	0.12	0.30	0.30	0.05	0.23	0.23	0.01	0.12	0.00	0.13	0.46	0.46
Sat Flow, veh/h	1739	1443	324	1640	1856	1407	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	336	0	131	82	71	335	42	1688	0	431	1202	247
Grp Sat Flow(s),veh/h/ln	1739	0	1767	1640	1856	1407	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.7	0.0	6.7	4.6	3.7	24.0	3.0	39.3	0.0	15.2	34.1	9.9
Cycle Q Clear(g_c), s	14.7	0.0	6.7	4.6	3.7	24.0	3.0	39.3	0.0	15.2	34.1	9.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	0	530	409	421	508	53	1819		450	1601	876
V/C Ratio(X)	0.73	0.00	0.25	0.20	0.17	0.66	0.80	0.93		0.96	0.75	0.28
Avail Cap(c_a), veh/h	461	0	530	624	595	639	124	1819		450	1601	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	31.8	32.8	37.3	32.2	59.0	51.4	0.0	51.7	26.9	12.6
Incr Delay (d2), s/veh	5.8	0.0	0.2	0.2	0.2	1.7	23.5	9.8	0.0	31.8	3.3	0.8
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	8.7	0.0	5.2	3.3	3.0	12.9	2.9	26.7	0.0	13.0	20.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	0.0	32.0	33.0	37.5	33.9	82.5	61.2	0.0	83.5	30.2	13.4
LnGrp LOS	D		C	C	D	C	F	E		F	C	B
Approach Vol, veh/h	467					488		1730		1880		
Approach Delay, s/veh	35.7					34.3		61.7		40.2		
Approach LOS	D					C		E		D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	48.2	10.3	41.5	7.8	60.4	19.0	32.8				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+117, s)	117.2	41.3	6.6	8.7	5.0	36.1	16.7	26.0				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.6	0.0	1.1	0.0	1.3				

Intersection Summary

HCM 7th Control Delay, s/veh	47.3
HCM 7th LOS	D

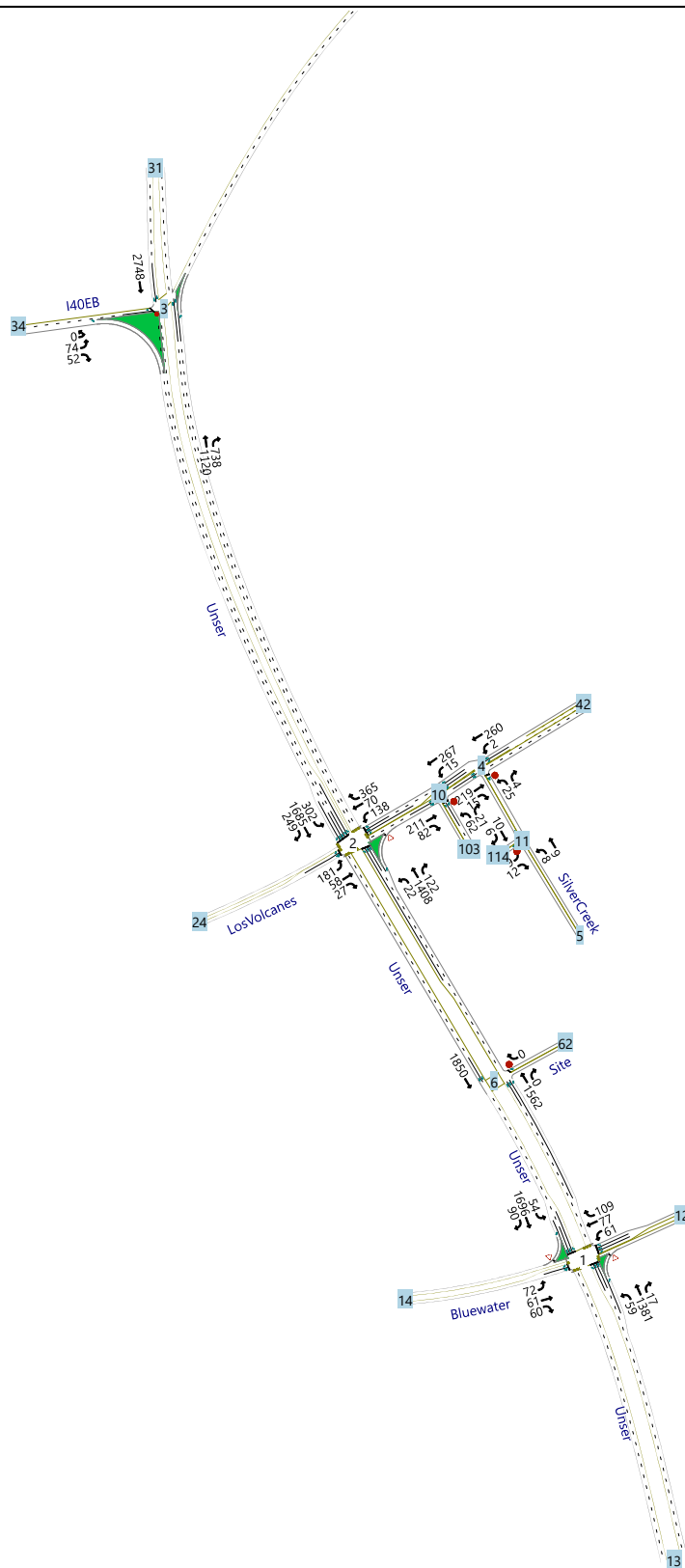
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

Intersection										
Int Delay, s/veh	216.3									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	0	81	0	1083	1242	0	2187	0	0	0
Future Vol, veh/h	0	81	0	1083	1242	0	2187	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	0	100	0	1337	1533	0	2700	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	3369	-	-	0	-	-	-	0		
Stage 1	2700	-	-	-	-	-	-	-		
Stage 2	669	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	~ 6	0	0	-	0	0	-	0		
Stage 1	~ 37	0	0	-	0	0	-	0		
Stage 2	474	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	~ 6	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-	-	-		
Stage 1	~ 37	-	-	-	-	-	-	-		
Stage 2	474	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	\$ 8637.47	0			0					
HCM LOS	F									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)	-	6	-	-						
HCM Lane V/C Ratio	-	17.507	-	-						
HCM Ctrl Dly (s/v)		\$ 8637.5	0	-						
HCM Lane LOS	-	F	A	-						
HCM 95th %tile Q(veh)	-	14.8	-	-						
Notes										
~: Volume exceeds capacity		\$: Delay exceeds 300s								
+: Computation Not Defined		*: All major volume in platoon								

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	559	39	15	343	27	11
Future Vol, veh/h	559	39	15	343	27	11
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	665	46	18	408	32	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	712	0	1133	356
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	444	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	695	-	169	619
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	695	-	164	619
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	547	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.43		17.53	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	332	-	-	695	-	
HCM Lane V/C Ratio	0.136	-	-	0.026	-	
HCM Ctrl Dly (s/v)	17.5	-	-	10.3	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	



HCM 7th Signalized Intersection Summary
1: Unser & Bluewater

Bluewater Galleria TIS, Implementation (2025) NO-Build
PM Peak (1645), Timing Plan: 25

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
Future Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	80	68	67	68	86	121	66	1534	0	60	1884	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	391	287	283	352	487	381	238	1759		134	1727	
Arrive On Green	0.05	0.34	0.34	0.26	0.26	0.26	0.03	0.50	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1697	850	837	1114	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	80	0	135	68	86	121	66	1534	0	60	1884	0
Grp Sat Flow(s),veh/h/ln	1697	0	1687	1114	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	4.0	0.0	6.9	5.8	4.3	8.0	2.1	46.6	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	6.9	5.8	4.3	8.0	2.1	46.6	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	0	571	352	487	381	238	1759		134	1727	
V/C Ratio(X)	0.20	0.00	0.24	0.19	0.18	0.32	0.28	0.87		0.45	1.09	
Avail Cap(c_a), veh/h	446	0	619	352	487	381	341	1759		250	1727	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.8	0.0	28.6	34.8	34.2	35.6	13.5	26.4	0.0	24.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.2	0.8	2.2	0.2	6.3	0.0	0.9	50.9	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	2.9	0.0	5.0	3.0	3.6	5.5	1.5	26.5	0.0	1.3	19.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	0.0	28.6	36.0	35.0	37.8	13.8	32.7	0.0	25.2	50.9	0.0
LnGrp LOS	C		C	D	D	D	B	C		C	F	
Approach Vol, veh/h	215			275			1600			1944		
Approach Delay, s/veh	28.7			36.5			31.9			50.1		
Approach LOS	C			D			C			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	65.9		46.6	7.2	66.2	9.1	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.7	48.6		8.9	4.1	2.0	6.0	10.0				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	23.1	0.0	0.6				

Intersection Summary

HCM 7th Control Delay, s/veh	40.8
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS, Implementation (2025) NO-Build
PM Peak (1645), Timing Plan: 25



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
Future Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
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			
Adj Sat Flow, veh/h/ln	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	199	64	30	152	77	401	24	1547	0	332	1852	274
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	446	339	159	494	502	544	38	1805		390	1561	823
Arrive On Green	0.10	0.29	0.29	0.08	0.27	0.27	0.01	0.12	0.00	0.12	0.45	0.45
Sat Flow, veh/h	1739	1175	551	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	199	0	94	152	77	401	24	1547	0	332	1852	274
Grp Sat Flow(s),veh/h/ln	1739	0	1726	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	9.8	0.0	4.9	7.9	3.8	29.3	1.7	35.7	0.0	11.6	53.6	12.1
Cycle Q Clear(g_c), s	9.8	0.0	4.9	7.9	3.8	29.3	1.7	35.7	0.0	11.6	53.6	12.1
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	0	497	494	502	544	38	1805		390	1561	823
V/C Ratio(X)	0.45	0.00	0.19	0.31	0.15	0.74	0.63	0.86		0.85	1.19	0.33
Avail Cap(c_a), veh/h	487	0	497	657	595	615	124	1805		450	1561	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	32.2	27.5	33.3	31.6	59.0	50.0	0.0	52.1	33.2	15.1
Incr Delay (d2), s/veh	0.7	0.0	0.2	0.3	0.1	4.1	16.1	5.5	0.0	13.0	90.8	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.4	0.0	3.7	5.6	3.1	15.6	1.6	23.9	0.0	9.3	57.7	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.7	0.0	32.3	27.9	33.4	35.7	75.1	55.5	0.0	65.1	124.0	16.2
LnGrp LOS	C		C	C	C	D	E	E		E	F	B
Approach Vol, veh/h	293				630		1571				2458	
Approach Delay, s/veh	29.2				33.5		55.8				104.0	
Approach LOS	C				C		E				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	47.9	14.1	40.1	6.8	59.1	16.2	38.0				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	16.6	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+11.3), s	16.6	37.7	9.9	6.9	3.7	55.6	11.8	31.3				
Green Ext Time (p_c), s	0.3	0.0	0.3	0.4	0.0	0.0	0.1	1.2				

Intersection Summary

HCM 7th Control Delay, s/veh	75.3
HCM 7th LOS	E

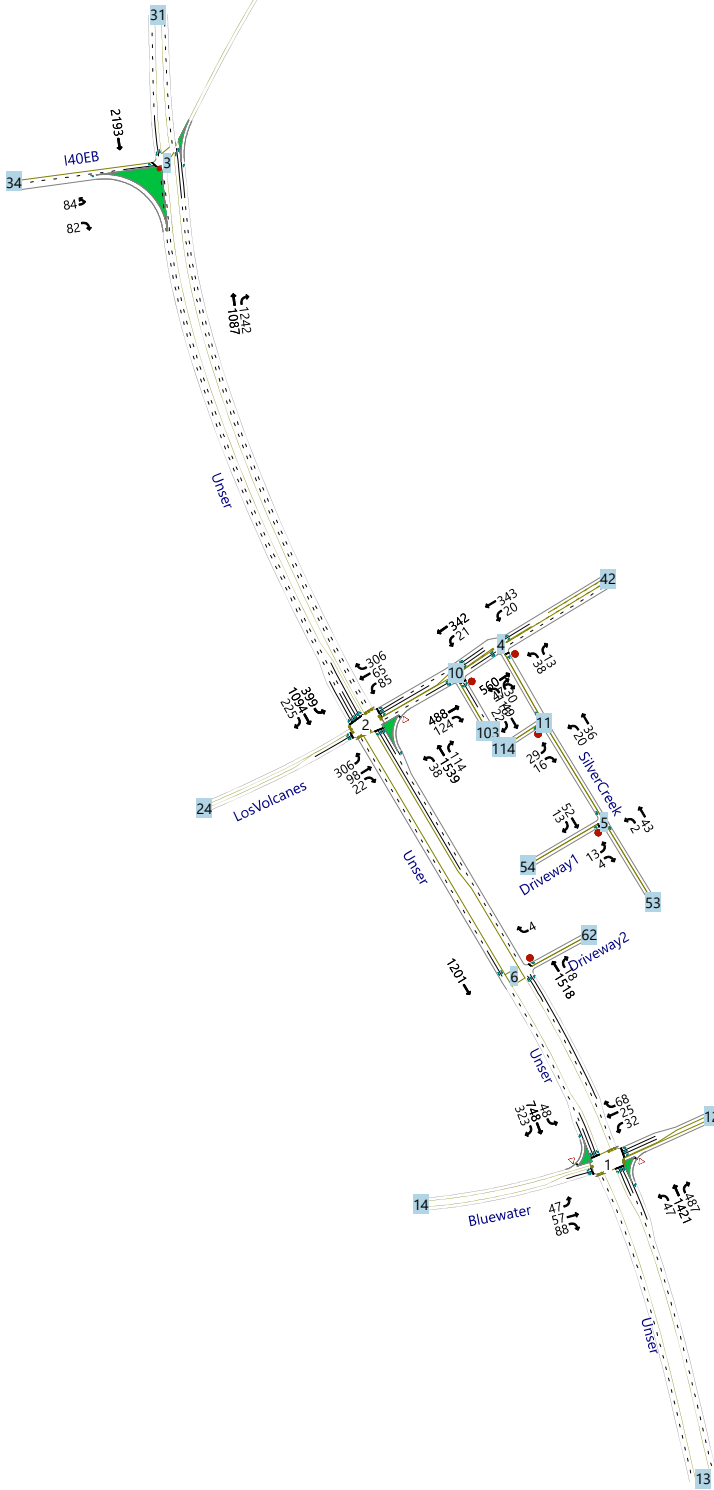
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	74	52	0	1120	738	0	2748	0	0	0
Future Vol, veh/h	74	52	0	1120	738	0	2748	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	91	64	0	1383	911	0	3393	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	4084	-	-	0	-	-	-	0		
Stage 1	3393	-	-	-	-	-	-	-		
Stage 2	691	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	2	0	0	-	0	0	-	0		
Stage 1	15	0	0	-	0	0	-	0		
Stage 2	461	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	2	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	2	-	-	-	-	-	-	-		
Stage 1	15	-	-	-	-	-	-	-		
Stage 2	461	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	0	0			0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT EBLn1 EBLn2		SBT							
Capacity (veh/h)	-		-	-	-					
HCM Lane V/C Ratio	-		-	-	-					
HCM Ctrl Dly (s/v)	-		0	0	-					
HCM Lane LOS	-		A	A	-					
HCM 95th %tile Q(veh)	-		-	-	-					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	219	15	2	260	25	4
Future Vol, veh/h	219	15	2	260	25	4
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	261	18	2	310	30	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	584	139
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	314	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	1060	-	392	859
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1060	-	391	859
Mov Cap-2 Maneuver	-	-	-	-	479	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	651	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.06		12.57	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	510	-	-	1060	-	
HCM Lane V/C Ratio	0.068	-	-	0.002	-	
HCM Ctrl Dly (s/v)	12.6	-	-	8.4	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	



HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS
Implementation (2025) BUILD, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
Future Volume (veh/h)	47	57	88	32	25	68	47	1421	487	48	748	323
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	52	63	98	36	28	76	52	1579	0	53	831	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	419	209	325	333	487	381	354	1826		130	1798	
Arrive On Green	0.03	0.32	0.32	0.26	0.26	0.26	0.02	0.52	0.00	0.03	0.53	0.00
Sat Flow, veh/h	1697	646	1006	1089	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	52	0	161	36	28	76	52	1579	0	53	831	0
Grp Sat Flow(s),veh/h/ln	1697	0	1652	1089	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	2.6	0.0	8.8	3.1	1.4	4.9	1.6	47.2	0.0	2.2	18.3	0.0
Cycle Q Clear(g_c), s	2.6	0.0	8.8	4.5	1.4	4.9	1.6	47.2	0.0	2.2	18.3	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	0	534	333	487	381	354	1826		130	1798	
V/C Ratio(X)	0.12	0.00	0.30	0.11	0.06	0.20	0.15	0.86		0.41	0.46	
Avail Cap(c_a), veh/h	500	0	606	333	487	381	468	1826		252	1798	
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	30.4	34.9	33.1	34.4	14.1	25.0	0.0	24.5	17.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.7	0.2	1.2	0.1	5.7	0.0	0.8	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	1.9	0.0	6.2	1.6	1.1	3.3	1.1	26.5	0.0	1.2	11.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.5	0.0	30.6	35.5	33.4	35.6	14.2	30.7	0.0	25.2	18.6	0.0
LnGrp LOS	C		C	D	C	D	B	C		C	B	
Approach Vol, veh/h	213			140			1631			884		
Approach Delay, s/veh	30.3			35.1			30.2			19.0		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	68.2		44.8	6.5	68.7	7.3	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.2	49.2		10.8	3.6	20.3	4.6	6.9				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	5.9	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	27.0
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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Civil Transformations Inc.

HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation (2025) BUILD, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
Future Volume (veh/h)	306	98	22	85	65	306	38	1539	114	399	1094	225
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	336	108	24	93	71	336	42	1691	0	438	1202	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	461	426	95	419	423	508	53	1816		450	1599	875
Arrive On Green	0.12	0.29	0.29	0.06	0.23	0.23	0.01	0.12	0.00	0.13	0.46	0.46
Sat Flow, veh/h	1739	1446	321	1640	1856	1407	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	336	0	132	93	71	336	42	1691	0	438	1202	247
Grp Sat Flow(s),veh/h/ln	1739	0	1768	1640	1856	1407	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.7	0.0	6.8	5.2	3.7	24.0	3.0	39.4	0.0	15.5	34.1	9.9
Cycle Q Clear(g_c), s	14.7	0.0	6.8	5.2	3.7	24.0	3.0	39.4	0.0	15.5	34.1	9.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	0	521	419	423	508	53	1816		450	1599	875
V/C Ratio(X)	0.73	0.00	0.25	0.22	0.17	0.66	0.80	0.93		0.97	0.75	0.28
Avail Cap(c_a), veh/h	461	0	521	624	595	639	124	1816		450	1599	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	32.3	32.4	37.2	32.2	59.0	51.5	0.0	51.8	26.9	12.7
Incr Delay (d2), s/veh	5.8	0.0	0.3	0.3	0.2	1.7	23.5	10.1	0.0	35.5	3.3	0.8
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	8.7	0.0	5.3	3.7	3.0	13.0	2.9	26.9	0.0	13.4	20.2	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.1	0.0	32.5	32.7	37.4	33.9	82.5	61.6	0.0	87.3	30.2	13.5
LnGrp LOS	D		C	C	D	C	F	E		F	C	B
Approach Vol, veh/h	468			500			1733			1887		
Approach Delay, s/veh	35.8			34.2			62.1			41.3		
Approach LOS	D			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	48.2	11.0	40.8	7.8	60.4	19.0	32.8				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+11), s	17.5	41.4	7.2	8.8	5.0	36.1	16.7	26.0				
Green Ext Time (p_c), s	0.0	0.0	0.2	0.6	0.0	1.1	0.0	1.3				

Intersection Summary

HCM 7th Control Delay, s/veh 47.8

HCM 7th LOS D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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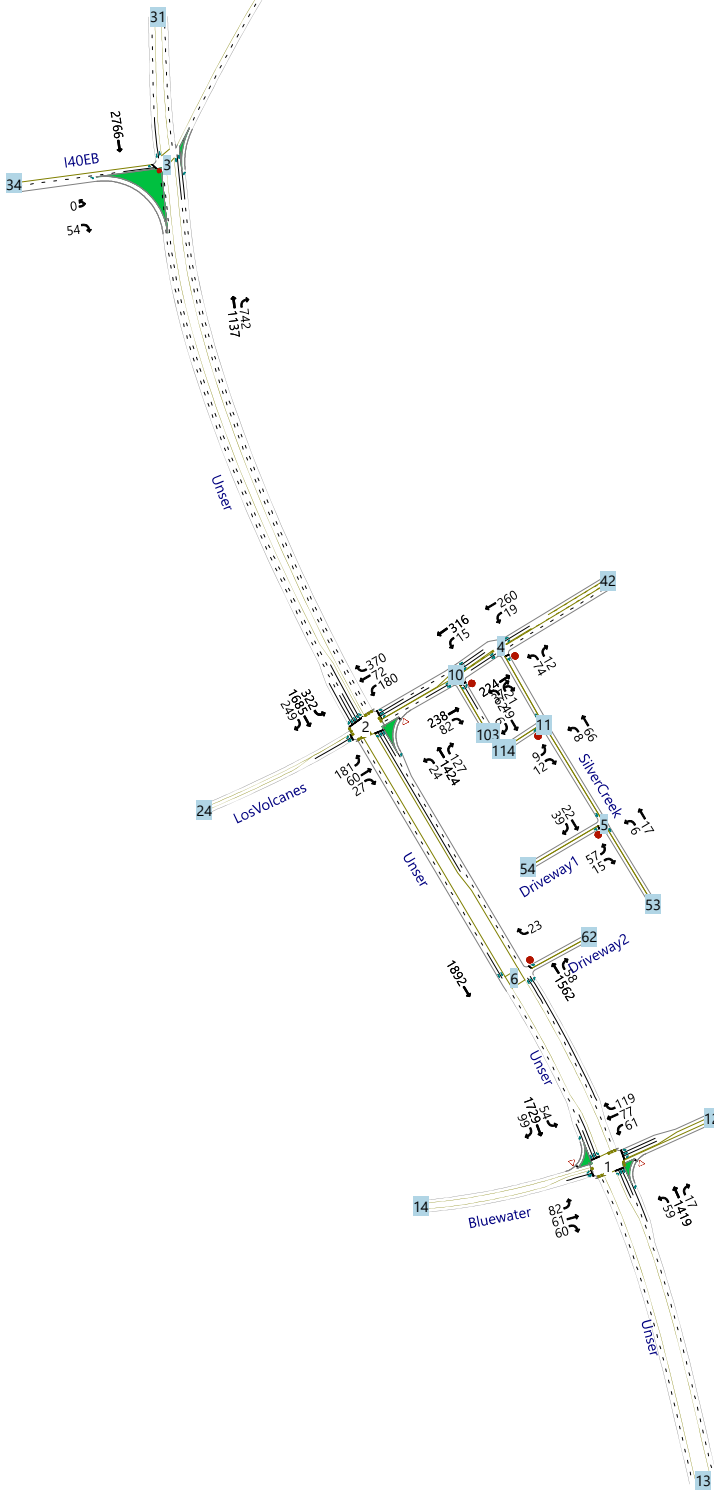
Civil Transformations Inc.

Intersection										
Int Delay, s/veh	219.4									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	0	81	0	1083	1242	0	2187	0	0	0
Future Vol, veh/h	0	82	0	1087	1242	0	2193	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	0	101	0	1342	1533	0	2707	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	3378	-	-	0	-	-	-	0		
Stage 1	2707	-	-	-	-	-	-	-		
Stage 2	671	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	~ 6	0	0	-	0	0	-	0		
Stage 1	~ 37	0	0	-	0	0	-	0		
Stage 2	472	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	~ 6	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-	-	-		
Stage 1	~ 37	-	-	-	-	-	-	-		
Stage 2	472	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	\$ 8784.89	0			0					
HCM LOS	F									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)	-	6	-	-						
HCM Lane V/C Ratio	-	17.792	-	-						
HCM Ctrl Dly (s/v)		\$ 8784.9	0	-						
HCM Lane LOS	-	F	A	-						
HCM 95th %tile Q(veh)	-	14.9	-	-						
Notes										
~: Volume exceeds capacity		\$: Delay exceeds 300s								
+: Computation Not Defined		*: All major volume in platoon								

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑	↱↱	
Traffic Vol, veh/h	559	39	15	343	27	11
Future Vol, veh/h	560	47	20	343	38	13
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	667	56	24	408	45	15
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	723	0	1151	361
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	456	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	688	-	164	614
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	688	-	158	614
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	534	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.57		18.9	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	319	-	-	688	-	
HCM Lane V/C Ratio	0.19	-	-	0.035	-	
HCM Ctrl Dly (s/v)	18.9	-	-	10.4	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	43	52	0
Future Vol, veh/h	13	4	2	43	52	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	4	2	47	57	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	115	64	71	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	882	1001	1530	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	880	1001	1530	-	-	-
Mov Cap-2 Maneuver	880	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.06	0.33		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	80	-	906	-	-	
HCM Lane V/C Ratio	0.001	-	0.02	-	-	
HCM Ctrl Dly (s/v)	7.4	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	0	1518	0	0	1191
Future Vol, veh/h	0	4	1518	18	0	1201
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	-	475	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	0	4	1650	20	0	1305
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	825	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	316	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	316	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	16.56	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-	316	-		
HCM Lane V/C Ratio	-	-	0.014	-		
HCM Ctrl Dly (s/v)	-	-	16.6	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		



HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation (2025) BUILD, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
Future Volume (veh/h)	82	61	60	61	77	119	59	1419	17	54	1729	99
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	91	68	67	68	86	132	66	1577	0	60	1921	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	397	292	288	352	487	381	116	1739		126	1708	
Arrive On Green	0.05	0.34	0.34	0.26	0.26	0.26	0.03	0.50	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1697	850	837	1114	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	91	0	135	68	86	132	66	1577	0	60	1921	0
Grp Sat Flow(s),veh/h/ln	1697	0	1687	1114	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	4.5	0.0	6.8	5.8	4.3	8.9	2.1	49.5	0.0	2.7	60.1	0.0
Cycle Q Clear(g_c), s	4.5	0.0	6.8	5.8	4.3	8.9	2.1	49.5	0.0	2.7	60.1	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	580	352	487	381	116	1739		126	1708	
V/C Ratio(X)	0.23	0.00	0.23	0.19	0.18	0.35	0.57	0.91		0.48	1.12	
Avail Cap(c_a), veh/h	443	0	619	352	487	381	218	1739		241	1708	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.5	0.0	28.1	34.8	34.2	35.9	28.7	27.6	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.2	0.8	2.5	1.6	8.4	0.0	1.0	64.4	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	3.3	0.0	4.9	3.0	3.6	6.0	1.6	28.5	0.0	1.4	23.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.6	0.0	28.2	36.0	35.0	38.4	30.3	36.0	0.0	27.0	64.4	0.0
LnGrp LOS	C		C	D	D	D	C	D		C	F	
Approach Vol, veh/h	226			286			1643			1981		
Approach Delay, s/veh	28.4			36.8			35.8			63.3		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	65.2		47.2	7.2	65.6	9.7	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.7	51.5		8.8	4.1	62.1	6.5	10.9				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.6				

Intersection Summary

HCM 7th Control Delay, s/veh	48.6
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation (2025) BUILD, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
Future Volume (veh/h)	181	60	27	180	72	370	24	1424	127	322	1685	249
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	199	66	30	198	79	407	26	1565	0	354	1852	274
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	446	320	145	503	506	555	40	1764		410	1549	819
Arrive On Green	0.10	0.27	0.27	0.11	0.27	0.27	0.01	0.11	0.00	0.12	0.44	0.44
Sat Flow, veh/h	1739	1188	540	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	199	0	96	198	79	407	26	1565	0	354	1852	274
Grp Sat Flow(s),veh/h/ln	1739	0	1728	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	9.8	0.0	5.2	10.3	3.9	29.6	1.9	36.3	0.0	12.4	53.2	12.2
Cycle Q Clear(g_c), s	9.8	0.0	5.2	10.3	3.9	29.6	1.9	36.3	0.0	12.4	53.2	12.2
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	0	465	503	506	555	40	1764		410	1549	819
V/C Ratio(X)	0.45	0.00	0.21	0.39	0.16	0.73	0.65	0.89		0.86	1.20	0.33
Avail Cap(c_a), veh/h	486	0	465	631	595	623	124	1764		450	1549	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	33.9	26.8	33.1	31.0	59.0	50.8	0.0	51.7	33.4	15.4
Incr Delay (d2), s/veh	0.7	0.0	0.2	0.5	0.1	3.9	16.4	7.0	0.0	14.9	94.6	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	7.4	0.0	3.9	7.3	3.2	15.7	1.7	24.5	0.0	9.9	58.7	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.8	0.0	34.2	27.3	33.3	34.9	75.4	57.9	0.0	66.6	128.0	16.5
LnGrp LOS	C		C	C	C	C	E	E		E	F	B
Approach Vol, veh/h	295			684			1591			2480		
Approach Delay, s/veh	29.9			32.5			58.2			106.9		
Approach LOS	C			C			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	48.6	47.0	16.7	37.8	6.9	58.7	16.2	38.2				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+14.4), s	14.4	38.3	12.3	7.2	3.9	55.2	11.8	31.6				
Green Ext Time (p_c), s	0.2	0.0	0.4	0.4	0.0	0.0	0.1	1.2				

Intersection Summary

HCM 7th Control Delay, s/veh 77.0

HCM 7th LOS E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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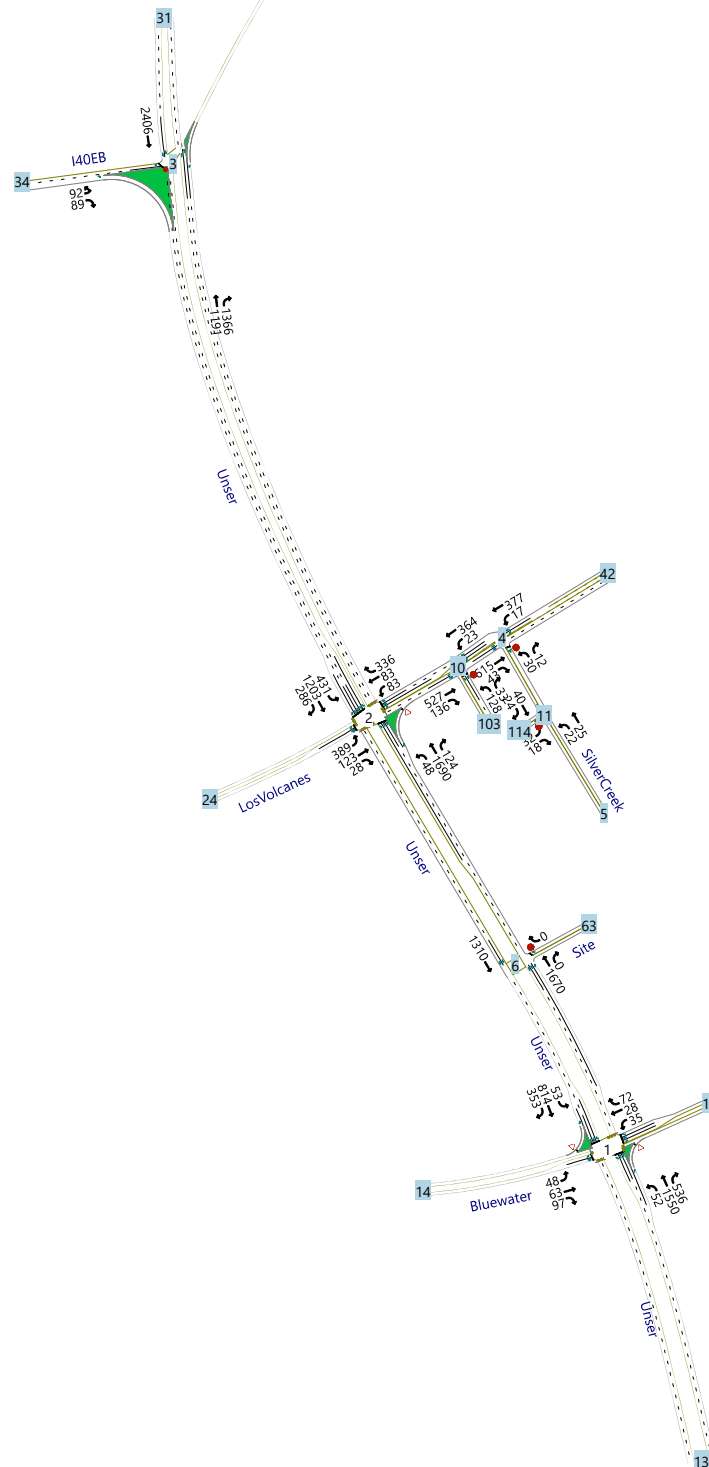
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Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	74	52	0	1120	738	0	2748	0	0	0
Future Vol, veh/h	74	54	0	1137	742	0	2766	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	91	67	0	1404	916	0	3415	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	4117	-	-	0	-	-	-	-	0	
Stage 1	3415	-	-	-	-	-	-	-	-	
Stage 2	702	-	-	-	-	-	-	-	-	
Critical Hdwy	6.82	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.51	-	-	-	-	-	-	-	-	
Pot Cap-1 Maneuver	2	0	0	-	0	0	-	0		
Stage 1	14	0	0	-	0	0	-	0		
Stage 2	455	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	2	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	2	-	-	-	-	-	-	-		
Stage 1	14	-	-	-	-	-	-	-		
Stage 2	455	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	0	0			0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT		EBLn1	EBLn2	SBT					
Capacity (veh/h)			-	-	-	-				
HCM Lane V/C Ratio			-	-	-	-				
HCM Ctrl Dly (s/v)			-	0	0	-				
HCM Lane LOS			-	A	A	-				
HCM 95th %tile Q(veh)			-	-	-	-				

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	219	15	2	260	25	4
Future Vol, veh/h	224	37	19	260	74	12
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	267	44	23	310	88	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	311	0	643	155
Stage 1	-	-	-	-	289	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	1028	-	358	838
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1028	-	350	838
Mov Cap-2 Maneuver	-	-	-	-	447	-
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	609	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.58		14.58	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	478	-	-	1028	-	
HCM Lane V/C Ratio	0.214	-	-	0.022	-	
HCM Ctrl Dly (s/v)	14.6	-	-	8.6	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-	

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	17	22	0
Future Vol, veh/h	57	15	6	17	22	39
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	16	7	18	24	42
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	77	45	66	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	32	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	926	1025	1535	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	922	1025	1535	-	-	-
Mov Cap-2 Maneuver	922	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.17	1.92		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	470	-	942	-	-	
HCM Lane V/C Ratio	0.004	-	0.083	-	-	
HCM Ctrl Dly (s/v)	7.4	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	0	1562	0	0	1850
Future Vol, veh/h	0	23	1562	58	0	1892
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	-	475	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	0	25	1698	63	0	2057
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	849	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	304	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	304	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	17.88	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT		
Capacity (veh/h)		-	-	304	-	
HCM Lane V/C Ratio		-	-	0.082	-	
HCM Ctrl Dly (s/v)		-	-	17.9	-	
HCM Lane LOS		-	-	C	-	
HCM 95th %tile Q(veh)		-	-	0.3	-	



HCM 7th Signalized Intersection Summary
1: Unser & Bluewater

Bluewater Galleria TIS, Horizon (2035) NO-Build
AM Peak (0715), Timing Plan: 21

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	63	97	35	28	72	52	1550	536	53	814	353
Future Volume (veh/h)	48	63	97	35	28	72	52	1550	536	53	814	353
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	53	70	108	39	31	80	58	1722	0	59	904	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	417	211	325	320	487	381	328	1814		114	1788	
Arrive On Green	0.03	0.32	0.32	0.26	0.26	0.26	0.03	0.52	0.00	0.03	0.52	0.00
Sat Flow, veh/h	1697	650	1003	1073	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	53	0	178	39	31	80	58	1722	0	59	904	0
Grp Sat Flow(s),veh/h/ln	1697	0	1653	1073	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	2.7	0.0	9.8	3.4	1.5	5.2	1.8	56.0	0.0	2.5	20.6	0.0
Cycle Q Clear(g_c), s	2.7	0.0	9.8	5.8	1.5	5.2	1.8	56.0	0.0	2.5	20.6	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	535	320	487	381	328	1814		114	1788	
V/C Ratio(X)	0.13	0.00	0.33	0.12	0.06	0.21	0.18	0.95		0.52	0.51	
Avail Cap(c_a), veh/h	496	0	606	320	487	381	437	1814		232	1788	
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	30.7	35.7	33.2	34.5	14.6	27.4	0.0	28.2	18.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.8	0.3	1.3	0.1	12.1	0.0	1.3	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	1.9	0.0	6.9	1.7	1.3	3.5	1.3	32.3	0.0	1.5	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.5	0.0	30.9	36.5	33.4	35.8	14.7	39.5	0.0	29.6	19.5	0.0
LnGrp LOS	C		C	D	C	D	B	D		C	B	
Approach Vol, veh/h	231			150			1780			963		
Approach Delay, s/veh	30.5			35.5			38.7			20.1		
Approach LOS	C			D			D			C		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	67.7		44.9	6.8	68.4	7.4	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.5	58.0		11.8	3.8	22.6	4.7	7.8				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	6.4	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	32.2
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS, Horizon (2035) NO-Build
AM Peak (0715), Timing Plan: 21



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	123	28	83	83	336	48	1690	124	431	1203	286
Future Volume (veh/h)	389	123	28	83	83	336	48	1690	124	431	1203	286
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	427	135	31	91	91	369	53	1857	0	474	1322	314
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	463	455	104	428	460	537	67	1713		450	1498	832
Arrive On Green	0.12	0.32	0.32	0.06	0.25	0.25	0.01	0.11	0.00	0.13	0.43	0.43
Sat Flow, veh/h	1739	1436	330	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	427	0	166	91	91	369	53	1857	0	474	1322	314
Grp Sat Flow(s),veh/h/ln	1739	0	1766	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.7	0.0	8.5	4.9	4.7	26.4	3.8	40.3	0.0	16.0	41.7	14.2
Cycle Q Clear(g_c), s	14.7	0.0	8.5	4.9	4.7	26.4	3.8	40.3	0.0	16.0	41.7	14.2
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	0	559	428	460	537	67	1713		450	1498	832
V/C Ratio(X)	0.92	0.00	0.30	0.21	0.20	0.69	0.79	1.08		1.05	0.88	0.38
Avail Cap(c_a), veh/h	463	0	559	637	595	639	124	1713		450	1498	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	30.9	30.8	35.7	31.1	58.7	53.4	0.0	52.0	31.5	15.3
Incr Delay (d2), s/veh	24.0	0.0	0.3	0.2	0.2	2.4	18.5	48.4	0.0	57.3	7.9	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.2	0.0	6.6	3.5	3.8	14.1	3.5	36.2	0.0	15.7	25.1	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.9	0.0	31.2	31.0	35.9	33.6	77.2	101.8	0.0	109.3	39.4	16.6
LnGrp LOS	E		C	C	D	C	E	F		F	D	B
Approach Vol, veh/h	593		551			1910			2110			
Approach Delay, s/veh	51.1		33.5			101.1			51.7			
Approach LOS	D		C			F			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	45.8	10.7	43.5	8.9	56.9	19.0	35.2				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+11.0), s	10.0	42.3	6.9	10.5	5.8	43.7	16.7	28.4				
Green Ext Time (p_c), s	0.0	0.0	0.2	0.8	0.0	0.0	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh 68.0
HCM 7th LOS E

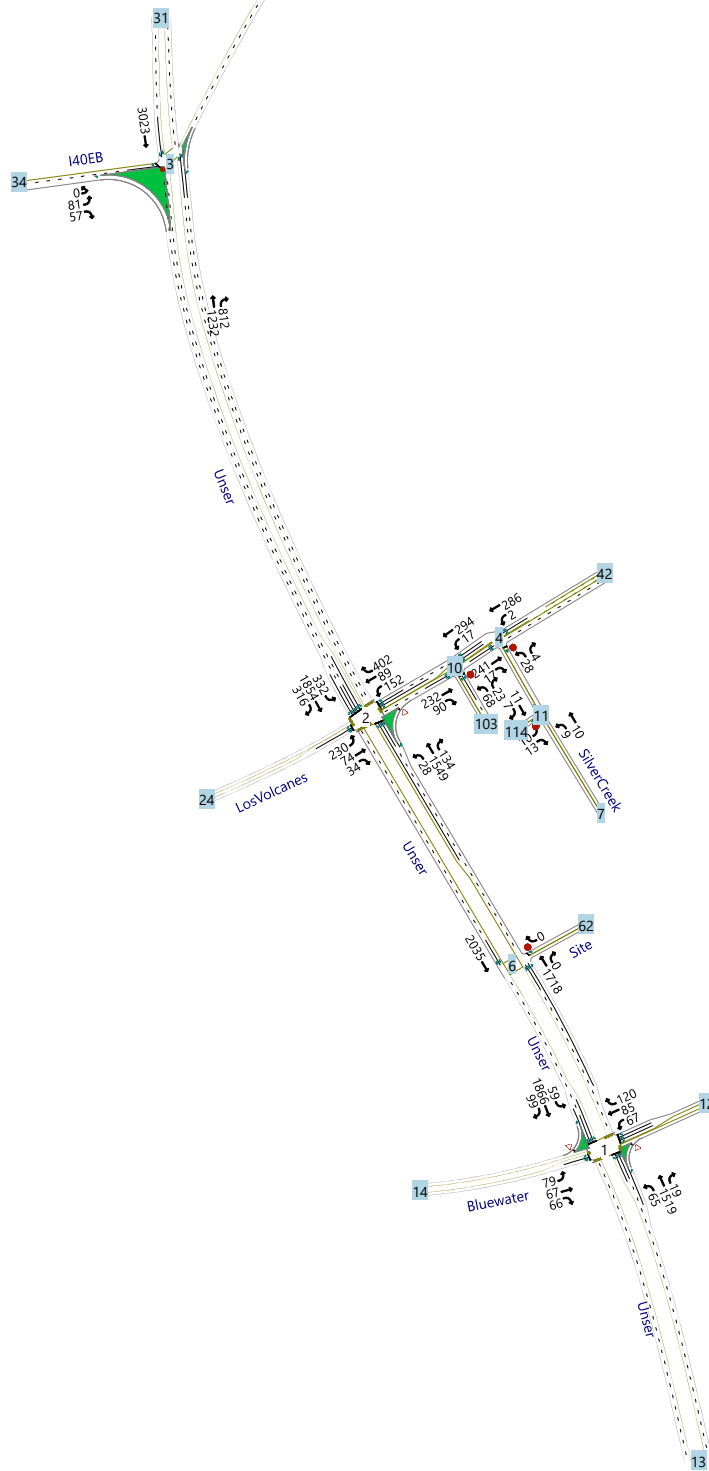
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

Intersection										
Int Delay, s/veh	415.1									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	0	89	0	1191	1366	0	2406	0	0	0
Future Vol, veh/h	0	89	0	1191	1366	0	2406	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	0	110	0	1470	1686	0	2970	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	3706	-	-	0	-	-	-	0		
Stage 1	2970	-	-	-	-	-	-	-		
Stage 2	735	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	~ 3	0	0	-	0	0	-	0		
Stage 1	~ 26	0	0	-	0	0	-	0		
Stage 2	438	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	~ 3	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	~ 3	-	-	-	-	-	-	-		
Stage 1	~ 26	-	-	-	-	-	-	-		
Stage 2	438	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v \$	16646.36	0			0					
HCM LOS	F									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)	-	3	-	-						
HCM Lane V/C Ratio	-	33.366	-	-						
HCM Ctrl Dly (s/v)	\$	16646.4	0	-						
HCM Lane LOS	-	F	A	-						
HCM 95th %tile Q(veh)	-	16.4	-	-						
Notes										
~: Volume exceeds capacity		\$: Delay exceeds 300s								
+: Computation Not Defined		*: All major volume in platoon								

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	615	43	17	377	30	12
Future Vol, veh/h	615	43	17	377	30	12
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	732	51	20	449	36	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	783	0	1247	392
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	489	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	648	-	141	587
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	532	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	648	-	137	587
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	516	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.46		19.34	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	301	-	-	648	-	
HCM Lane V/C Ratio	0.166	-	-	0.031	-	
HCM Ctrl Dly (s/v)	19.3	-	-	10.7	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	



HCM 7th Signalized Intersection Summary
1: Unser & Bluewater

Bluewater Galleria TIS, Horizon (2035) NO-Build
PM Peak (1645), Timing Plan: 25

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	67	66	67	85	120	65	1519	19	59	1866	99
Future Volume (veh/h)	79	67	66	67	85	120	65	1519	19	59	1866	99
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	88	74	73	74	94	133	72	1688	0	66	2073	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	389	291	287	349	487	381	120	1734		115	1705	
Arrive On Green	0.05	0.34	0.34	0.26	0.26	0.26	0.03	0.50	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1697	849	838	1102	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	88	0	147	74	94	133	72	1688	0	66	2073	0
Grp Sat Flow(s),veh/h/ln	1697	0	1687	1102	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	4.4	0.0	7.5	6.4	4.7	8.9	2.3	56.5	0.0	3.0	60.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	7.5	6.4	4.7	8.9	2.3	56.5	0.0	3.0	60.0	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	0	577	349	487	381	120	1734		115	1705	
V/C Ratio(X)	0.23	0.00	0.25	0.21	0.19	0.35	0.60	0.97		0.58	1.22	
Avail Cap(c_a), veh/h	437	0	619	349	487	381	218	1734		226	1705	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.6	0.0	28.4	35.0	34.4	35.9	28.6	29.5	0.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.4	0.9	2.5	1.8	16.2	0.0	1.7	102.6	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	3.2	0.0	5.4	3.3	4.0	6.1	1.8	33.8	0.0	1.6	37.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.7	0.0	28.5	36.4	35.3	38.4	30.4	45.7	0.0	29.0	102.7	0.0
LnGrp LOS	C		C	D	D	D	C	D		C	F	
Approach Vol, veh/h	235			301			1760			2139		
Approach Delay, s/veh	28.6			36.9			45.1			100.4		
Approach LOS	C			D			D			F		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	65.0		47.1	7.5	65.5	9.6	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	5.0	58.5		9.5	4.3	62.0	6.4	10.9				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.6				

Intersection Summary

HCM 7th Control Delay, s/veh	70.3
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS, Horizon (2035) NO-Build
PM Peak (1645), Timing Plan: 25



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	74	34	152	89	402	28	1549	134	332	1854	316
Future Volume (veh/h)	230	74	34	152	89	402	28	1549	134	332	1854	316
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			
Adj Sat Flow, veh/h/ln	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	253	81	37	167	98	442	31	1702	0	365	2037	347
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	475	381	174	525	542	586	44	1566		420	1414	786
Arrive On Green	0.12	0.32	0.32	0.09	0.29	0.29	0.01	0.10	0.00	0.12	0.40	0.40
Sat Flow, veh/h	1739	1186	542	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	253	0	118	167	98	442	31	1702	0	365	2037	347
Grp Sat Flow(s),veh/h/ln	1739	0	1728	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	11.9	0.0	6.0	8.4	4.7	32.1	2.2	36.8	0.0	12.7	48.5	17.2
Cycle Q Clear(g_c), s	11.9	0.0	6.0	8.4	4.7	32.1	2.2	36.8	0.0	12.7	48.5	17.2
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	475	0	555	525	542	586	44	1566		420	1414	786
V/C Ratio(X)	0.53	0.00	0.21	0.32	0.18	0.75	0.70	1.09		0.87	1.44	0.44
Avail Cap(c_a), veh/h	486	0	555	679	595	627	124	1566		450	1414	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	29.7	25.6	31.8	29.8	59.0	53.9	0.0	51.6	35.7	17.9
Incr Delay (d2), s/veh	1.1	0.0	0.2	0.3	0.2	4.8	17.9	50.3	0.0	15.9	202.5	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	0.0	4.5	5.9	3.9	16.8	2.1	33.8	0.0	10.2	89.1	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.0	0.0	29.8	26.0	31.9	34.6	76.9	104.3	0.0	67.4	238.3	19.7
LnGrp LOS	C		C	C	C	C	E	F		E	F	B
Approach Vol, veh/h	371				707		1733				2749	
Approach Delay, s/veh	26.6				32.2		103.8				188.0	
Approach LOS	C				C		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.9	42.3	14.7	44.1	7.2	54.0	18.2	40.5				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+14.7), s	14.7	38.8	10.4	8.0	4.2	50.5	13.9	34.1				
Green Ext Time (p_c), s	0.2	0.0	0.3	0.6	0.0	0.0	0.1	1.0				

Intersection Summary

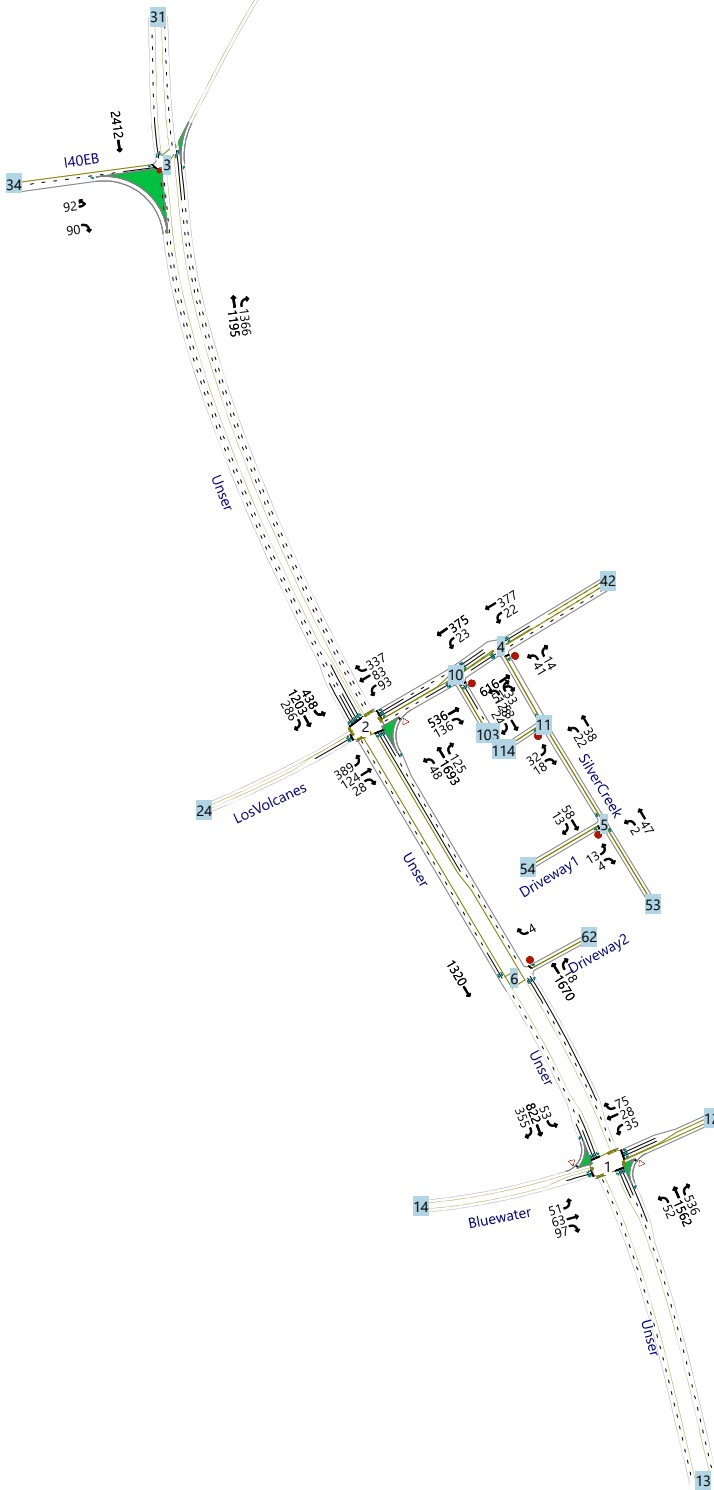
HCM 7th Control Delay, s/veh	131.2
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	81	57	0	1232	812	0	3023	0	0	0
Future Vol, veh/h	81	57	0	1232	812	0	3023	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	100	70	0	1521	1002	0	3732	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	4493	-	-	0	-	-	-	0		
Stage 1	3732	-	-	-	-	-	-	-		
Stage 2	760	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	1	0	0	-	0	0	-	0		
Stage 1	9	0	0	-	0	0	-	0		
Stage 2	425	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	1	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	1	-	-	-	-	-	-	-		
Stage 1	9	-	-	-	-	-	-	-		
Stage 2	425	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	0	0			0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT EBLn1 EBLn2		SBT							
Capacity (veh/h)	-		-	-	-					
HCM Lane V/C Ratio	-		-	-	-					
HCM Ctrl Dly (s/v)	-		0	0	-					
HCM Lane LOS	-		A	A	-					
HCM 95th %tile Q(veh)	-		-	-	-					

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	241	17	2	286	28	4
Future Vol, veh/h	241	17	2	286	28	4
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	287	20	2	340	33	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	307	0	642	154
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	1032	-	359	840
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1032	-	358	840
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	628	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.06		13.12	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	481	-	-	1032	-	
HCM Lane V/C Ratio	0.079	-	-	0.002	-	
HCM Ctrl Dly (s/v)	13.1	-	-	8.5	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	



HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Horion (2035) BUILD, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	63	97	35	28	72	52	1550	536	53	814	353
Future Volume (veh/h)	51	63	97	35	28	75	52	1562	536	53	822	355
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	57	70	108	39	31	83	58	1736	0	59	913	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	420	212	327	323	487	381	323	1806		111	1780	
Arrive On Green	0.03	0.33	0.33	0.26	0.26	0.26	0.03	0.52	0.00	0.03	0.52	0.00
Sat Flow, veh/h	1697	650	1003	1073	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	57	0	178	39	31	83	58	1736	0	59	913	0
Grp Sat Flow(s),veh/h/ln	1697	0	1653	1073	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	2.9	0.0	9.8	3.4	1.5	5.4	1.8	57.2	0.0	2.5	21.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	9.8	5.5	1.5	5.4	1.8	57.2	0.0	2.5	21.0	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	0	539	323	487	381	323	1806		111	1780	
V/C Ratio(X)	0.14	0.00	0.33	0.12	0.06	0.22	0.18	0.96		0.53	0.51	
Avail Cap(c_a), veh/h	496	0	606	323	487	381	432	1806		229	1780	
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.3	0.0	30.5	35.5	33.2	34.6	14.8	27.9	0.0	28.4	18.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.8	0.3	1.3	0.1	13.8	0.0	1.4	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	2.1	0.0	6.9	1.7	1.3	3.6	1.3	33.3	0.0	1.5	12.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.4	0.0	30.7	36.3	33.4	35.9	14.9	41.7	0.0	29.9	19.8	0.0
LnGrp LOS	C		C	D	C	D	B	D		C	B	
Approach Vol, veh/h	235			153			1794			972		
Approach Delay, s/veh	30.3			35.5			40.8			20.4		
Approach LOS	C			D			D			C		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	67.5		45.1	6.8	68.1	7.6	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	4.5	59.2		11.8	3.8	23.0	4.9	7.5				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	6.5	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	33.5
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

BlueGal_2035AMB.syn

Civil Transformations Inc.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS
Horion (2035) BUILD, AM Peak (0715)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	123	28	83	83	336	48	1690	124	431	1203	286
Future Volume (veh/h)	389	124	28	93	83	337	48	1693	125	438	1203	286
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			
Adj Sat Flow, veh/h/ln	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	427	136	31	102	91	370	53	1860	0	481	1322	314
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	464	448	102	430	461	538	67	1710		450	1496	831
Arrive On Green	0.12	0.31	0.31	0.06	0.25	0.25	0.01	0.11	0.00	0.13	0.43	0.43
Sat Flow, veh/h	1739	1439	328	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	427	0	167	102	91	370	53	1860	0	481	1322	314
Grp Sat Flow(s),veh/h/ln	1739	0	1767	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.7	0.0	8.6	5.5	4.7	26.5	3.8	40.2	0.0	16.0	41.7	14.2
Cycle Q Clear(g_c), s	14.7	0.0	8.6	5.5	4.7	26.5	3.8	40.2	0.0	16.0	41.7	14.2
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	550	430	461	538	67	1710		450	1496	831
V/C Ratio(X)	0.92	0.00	0.30	0.24	0.20	0.69	0.79	1.09		1.07	0.88	0.38
Avail Cap(c_a), veh/h	464	0	550	629	595	639	124	1710		450	1496	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	31.4	30.4	35.6	31.1	58.7	53.4	0.0	52.0	31.6	15.3
Incr Delay (d2), s/veh	23.8	0.0	0.3	0.3	0.2	2.5	18.5	49.8	0.0	62.2	7.9	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.1	0.0	6.7	3.9	3.8	14.1	3.5	36.5	0.0	16.2	25.1	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.7	0.0	31.7	30.7	35.8	33.6	77.2	103.2	0.0	114.2	39.5	16.6
LnGrp LOS	E		C	C	D	C	E	F		F	D	B
Approach Vol, veh/h	594				563		1913				2117	
Approach Delay, s/veh	51.1				33.4		102.5				53.1	
Approach LOS	D				C		F				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	45.7	11.4	42.9	8.9	56.8	19.0	35.3				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+11.0), s	11.0	42.2	7.5	10.6	5.8	43.7	16.7	28.5				
Green Ext Time (p_c), s	0.0	0.0	0.2	0.8	0.0	0.0	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	68.9
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

Intersection

Int Delay, s/veh 421

Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	0	89	0	1191	1366	0	2406	0	0	0
Future Vol, veh/h	0	90	0	1195	1366	0	2412	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	0	111	0	1475	1686	0	2978	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	3715	-	-
Stage 1	2978	-	-
Stage 2	738	-	-
Critical Hdwy	6.82	-	-
Critical Hdwy Stg 1	5.82	-	-
Critical Hdwy Stg 2	5.82	-	-
Follow-up Hdwy	3.51	-	-
Pot Cap-1 Maneuver	~ 3	0	0
Stage 1	~ 26	0	0
Stage 2	436	0	0
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	~ 3	-	-
Mov Cap-2 Maneuver	~ 3	-	-
Stage 1	~ 26	-	-
Stage 2	436	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v \$ 16927.03		0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	3	-	-
HCM Lane V/C Ratio	-	33.915	-	-
HCM Ctrl Dly (s/v)	\$ 16927	0	-	-
HCM Lane LOS	-	F	A	-
HCM 95th %tile Q(veh)	-	16.4	-	-

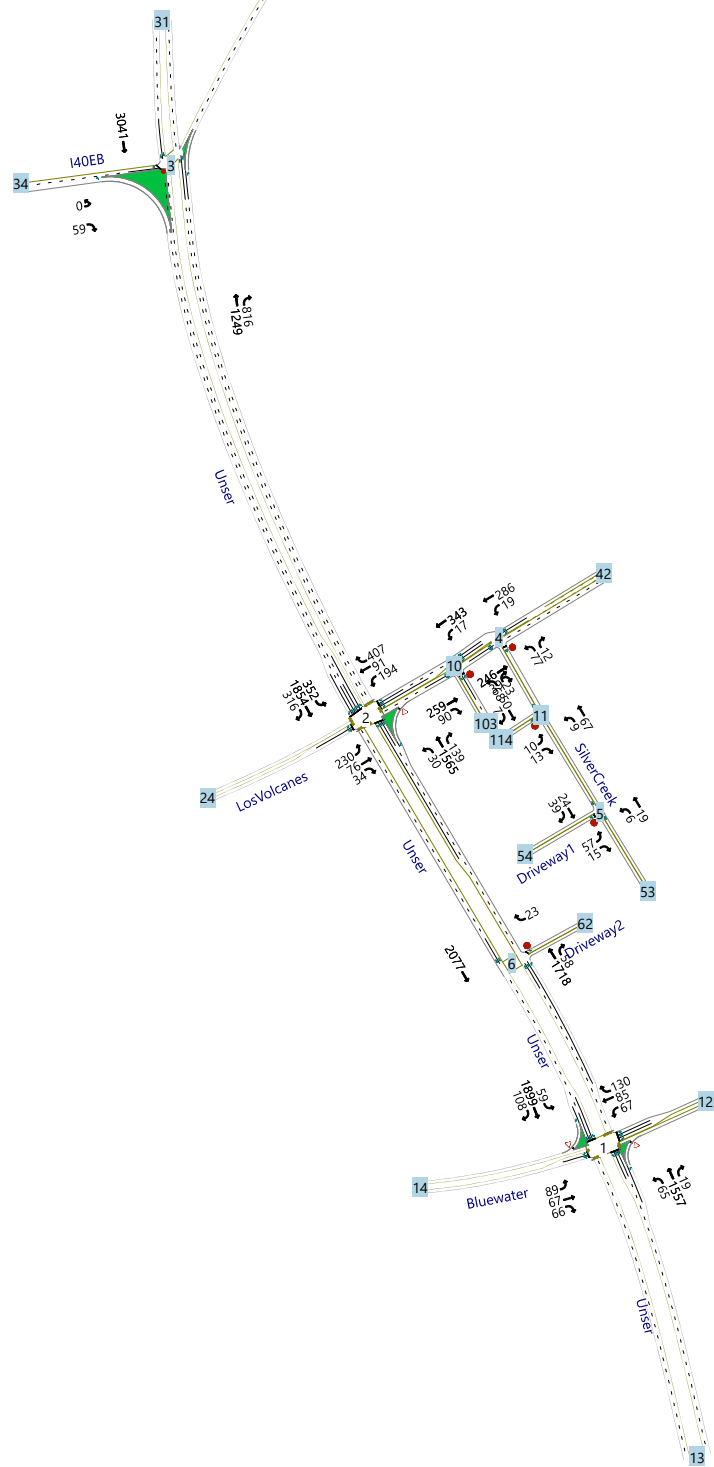
Notes

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

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	615	43	17	377	30	12
Future Vol, veh/h	616	51	22	377	41	14
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	733	61	26	449	49	17
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	794	0	1265	397
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	641	-	137	582
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	641	-	132	582
Mov Cap-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	504	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.6		21.04	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	289	-	-	641	-	
HCM Lane V/C Ratio	0.226	-	-	0.041	-	
HCM Ctrl Dly (s/v)	21	-	-	10.9	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-	

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	47	58	0
Future Vol, veh/h	13	4	2	47	58	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	4	2	51	63	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	126	70	77	0	-	0
Stage 1	70	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	869	993	1521	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	868	993	1521	-	-	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.11	0.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	73	-	894	-	-	
HCM Lane V/C Ratio	0.001	-	0.021	-	-	
HCM Ctrl Dly (s/v)	7.4	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	0	1670	0	0	1310
Future Vol, veh/h	0	4	1670	18	0	1320
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	-	475	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	0	4	1815	20	0	1435
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	908	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	278	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	278	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	18.14	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT		
Capacity (veh/h)		-	-	278	-	
HCM Lane V/C Ratio		-	-	0.016	-	
HCM Ctrl Dly (s/v)		-	-	18.1	-	
HCM Lane LOS		-	-	C	-	
HCM 95th %tile Q(veh)		-	-	0	-	



HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS
Horizon (2035) BUILD, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	67	66	67	85	120	65	1519	19	59	1866	99
Future Volume (veh/h)	89	67	66	67	85	130	65	1557	19	59	1899	108
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	99	74	73	74	94	144	72	1730	0	66	2110	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	395	295	291	349	487	381	120	1714		110	1687	
Arrive On Green	0.06	0.35	0.35	0.26	0.26	0.26	0.03	0.49	0.00	0.07	0.99	0.00
Sat Flow, veh/h	1697	849	838	1102	1856	1452	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	99	0	147	74	94	144	72	1730	0	66	2110	0
Grp Sat Flow(s),veh/h/ln	1697	0	1687	1102	1856	1452	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	4.9	0.0	7.5	6.4	4.7	9.7	2.4	58.8	0.0	3.0	59.3	0.0
Cycle Q Clear(g_c), s	4.9	0.0	7.5	6.4	4.7	9.7	2.4	58.8	0.0	3.0	59.3	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	586	349	487	381	120	1714		110	1687	
V/C Ratio(X)	0.25	0.00	0.25	0.21	0.19	0.38	0.60	1.01		0.60	1.25	
Avail Cap(c_a), veh/h	435	0	619	349	487	381	218	1714		221	1687	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.4	0.0	28.0	35.0	34.4	36.2	28.6	30.6	0.0	27.4	0.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.4	0.9	2.8	1.8	24.0	0.0	2.0	118.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	0.0	5.4	3.3	4.0	6.7	1.8	37.3	0.0	1.6	42.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.5	0.0	28.1	36.4	35.3	39.1	30.4	54.6	0.0	29.4	118.7	0.0
LnGrp LOS	C		C	D	D	D	C	F		C	F	
Approach Vol, veh/h	246			312			1802			2176		
Approach Delay, s/veh	28.2			37.3			53.6			116.0		
Approach LOS	C			D			D			F		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	64.3		47.7	7.5	64.8	10.2	37.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	14.5	* 47		44.0	10.5	49.5	9.5	* 32				
Max Q Clear Time (g_c+I1), s	5.0	60.8		9.5	4.4	61.3	6.9	11.7				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.7				

Intersection Summary

HCM 7th Control Delay, s/veh	81.0
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

BlueGal_2035PMB.syn

Civil Transformations Inc.

HCM 7th Signalized Intersection Summary
2: Unser & LosVolcanes

Bluewater Galleria TIS
Horizon (2035) BUILD, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	74	34	152	89	402	28	1549	134	332	1854	316
Future Volume (veh/h)	230	76	34	194	91	407	30	1565	139	352	1854	316
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	253	84	37	213	100	447	33	1720	0	387	2037	347
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	476	365	161	533	544	596	46	1525		439	1402	782
Arrive On Green	0.12	0.30	0.30	0.11	0.29	0.29	0.01	0.10	0.00	0.13	0.40	0.40
Sat Flow, veh/h	1739	1201	529	1640	1856	1408	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	253	0	121	213	100	447	33	1720	0	387	2037	347
Grp Sat Flow(s),veh/h/ln	1739	0	1730	1640	1856	1408	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	12.0	0.0	6.3	10.7	4.8	32.2	2.4	35.8	0.0	13.5	48.1	17.3
Cycle Q Clear(g_c), s	12.0	0.0	6.3	10.7	4.8	32.2	2.4	35.8	0.0	13.5	48.1	17.3
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	476	0	526	533	544	596	46	1525		439	1402	782
V/C Ratio(X)	0.53	0.00	0.23	0.40	0.18	0.75	0.72	1.13		0.88	1.45	0.44
Avail Cap(c_a), veh/h	485	0	526	655	595	635	124	1525		450	1402	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	31.3	24.8	31.7	29.3	59.0	54.1	0.0	51.3	36.0	18.1
Incr Delay (d2), s/veh	1.1	0.0	0.2	0.5	0.2	4.7	18.7	66.7	0.0	17.9	207.9	1.8
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	8.7	0.0	4.8	7.5	3.9	16.8	2.2	36.6	0.0	10.9	90.2	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.6	0.0	31.5	25.3	31.9	33.9	77.7	120.8	0.0	69.2	243.9	19.9
LnGrp LOS	C		C	C	C	C	E	F		E	F	B
Approach Vol, veh/h	374			760			1753			2771		
Approach Delay, s/veh	27.5			31.2			120.0			191.4		
Approach LOS	C			C			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.6	41.3	17.1	42.0	7.3	53.6	18.4	40.7				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	10.0	* 32	22.0	31.5	9.0	37.5	14.7	38.5				
Max Q Clear Time (g_c+1/5), s	11.5	37.8	12.7	8.3	4.4	50.1	14.0	34.2				
Green Ext Time (p_c), s	0.1	0.0	0.4	0.6	0.0	0.0	0.1	1.0				

Intersection Summary

HCM 7th Control Delay, s/veh 136.9
HCM 7th LOS F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗		↗↗	↗		↗↗			
Traffic Vol, veh/h	81	57	0	1232	812	0	3023	0	0	0
Future Vol, veh/h	81	59	0	1249	816	0	3041	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	-	Free	-	-	None	-	-
Storage Length	0	0	-	-	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	21	2	4	3	2	3	2	2	2
Mvmt Flow	100	73	0	1542	1007	0	3754	0	0	0
Major/Minor	Minor2	Major1			Major2					
Conflicting Flow All	4525	-	-	0	-	-	-	0		
Stage 1	3754	-	-	-	-	-	-	-		
Stage 2	771	-	-	-	-	-	-	-		
Critical Hdwy	6.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 1	5.82	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.82	-	-	-	-	-	-	-		
Follow-up Hdwy	3.51	-	-	-	-	-	-	-		
Pot Cap-1 Maneuver	1	0	0	-	0	0	-	0		
Stage 1	9	0	0	-	0	0	-	0		
Stage 2	420	0	0	-	0	0	-	0		
Platoon blocked, %				-			-			
Mov Cap-1 Maneuver	1	-	-	-	-	-	-	-		
Mov Cap-2 Maneuver	1	-	-	-	-	-	-	-		
Stage 1	9	-	-	-	-	-	-	-		
Stage 2	420	-	-	-	-	-	-	-		
Approach	EB	NB			SB					
HCM Ctrl Dly, s/v	0	0			0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT						
Capacity (veh/h)		-	-	-	-					
HCM Lane V/C Ratio		-	-	-	-					
HCM Ctrl Dly (s/v)		-	0	0	-					
HCM Lane LOS		-	A	A	-					
HCM 95th %tile Q(veh)		-	-	-	-					

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑↑	
Traffic Vol, veh/h	241	17	2	286	28	4
Future Vol, veh/h	246	39	19	286	77	12
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	31	42	5	38	11
Mvmt Flow	293	46	23	340	92	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	339	0	702	170
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	386	-
Critical Hdwy	-	-	4.73	-	7.17	7.065
Critical Hdwy Stg 1	-	-	-	-	6.37	-
Critical Hdwy Stg 2	-	-	-	-	5.97	-
Follow-up Hdwy	-	-	2.599	-	3.861	3.4045
Pot Cap-1 Maneuver	-	-	1000	-	328	820
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1000	-	321	820
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	587	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.54		15.37	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	453	-	-	1000	-	
HCM Lane V/C Ratio	0.234	-	-	0.023	-	
HCM Ctrl Dly (s/v)	15.4	-	-	8.7	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-	

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	19	24	0
Future Vol, veh/h	57	15	6	19	24	39
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	16	7	21	26	42
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	81	47	68	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	921	1022	1533	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	917	1022	1533	-	-	-
Mov Cap-2 Maneuver	917	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.19	1.77		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	432	-	937	-	-	
HCM Lane V/C Ratio	0.004	-	0.084	-	-	
HCM Ctrl Dly (s/v)	7.4	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	0	1718	0	0	2035
Future Vol, veh/h	0	23	1718	58	0	2077
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	-	475	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	4
Mvmt Flow	0	25	1867	63	0	2258
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	934	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	267	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	267	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	19.85	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT		
Capacity (veh/h)		-	-	267	-	
HCM Lane V/C Ratio		-	-	0.094	-	
HCM Ctrl Dly (s/v)		-	-	19.8	-	
HCM Lane LOS		-	-	C	-	
HCM 95th %tile Q(veh)		-	-	0.3	-	

APPENDIX F

Mitigation Analysis LOS Worksheets

HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation1, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
Future Volume (veh/h)	47	57	88	32	25	68	47	1421	487	48	748	323
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)	0.98		0.97	0.98		0.98	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	52	63	98	36	28	76	52	1579	0	53	831	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	251	145	226	142	287	222	472	2136		171	2096	
Arrive On Green	0.02	0.23	0.23	0.15	0.15	0.15	0.02	0.61	0.00	0.04	0.82	0.00
Sat Flow, veh/h	1697	643	1000	1084	1856	1438	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	52	0	161	36	28	76	52	1579	0	53	831	0
Grp Sat Flow(s),veh/h/ln	1697	0	1643	1084	1856	1438	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	0.0	0.0	9.2	3.5	1.4	4.5	1.2	35.3	0.0	1.7	7.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.2	12.8	1.4	4.5	1.2	35.3	0.0	1.7	7.3	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	0	372	142	287	222	472	2136		171	2096	
V/C Ratio(X)	0.21	0.00	0.43	0.25	0.10	0.34	0.11	0.74		0.31	0.40	
Avail Cap(c_a), veh/h	306	0	388	142	287	222	529	2136		214	2096	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.0	0.0	36.5	49.2	39.9	31.5	7.8	15.2	0.0	14.6	4.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	4.3	0.7	4.2	0.0	2.3	0.0	0.4	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(50%),veh/ln	1.2	0.0	3.7	1.1	0.7	2.0	0.4	12.7	0.0	0.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	0.0	36.8	53.4	40.6	35.7	7.9	17.5	0.0	15.0	5.1	0.0
LnGrp LOS	D		D	D	D	D	A	B		B	A	
Approach Vol, veh/h	213			140			1631			884		
Approach Delay, s/veh	38.1			41.2			17.2			5.7		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	72.7		30.9	6.0	73.1	8.4	22.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	6.5	* 63		26.0	6.0	63.0	6.0	* 17				
Max Q Clear Time (g_c+I1), s	3.7	37.3		11.2	3.2	9.3	2.0	14.8				
Green Ext Time (p_c), s	0.0	13.1		0.4	0.0	6.3	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh	16.4
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

BlueGal_2025AMB-MIT1.syn

Civil Transformations Inc.

HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation1, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
Future Volume (veh/h)	306	98	22	85	65	306	38	1539	114	399	1094	225
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	336	108	24	93	71	336	42	1691	0	438	1202	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	428	312	69	296	202	363	54	2034		503	1799	1031
Arrive On Green	0.17	0.22	0.22	0.06	0.11	0.11	0.07	0.80	0.00	0.15	0.51	0.51
Sat Flow, veh/h	1739	1446	321	1640	1856	1405	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	336	0	132	93	71	336	42	1691	0	438	1202	247
Grp Sat Flow(s),veh/h/ln	1739	0	1768	1640	1856	1405	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	18.5	0.0	7.0	5.5	3.9	12.0	2.7	21.9	0.0	14.0	28.0	6.8
Cycle Q Clear(g_c), s	18.5	0.0	7.0	5.5	3.9	12.0	2.7	21.9	0.0	14.0	28.0	6.8
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	382	296	202	363	54	2034		503	1799	1031
V/C Ratio(X)	0.78	0.00	0.35	0.31	0.35	0.93	0.77	0.83		0.87	0.67	0.24
Avail Cap(c_a), veh/h	428	0	382	305	202	363	111	2034		564	1799	1031
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	0.0	36.5	39.9	45.4	39.8	51.0	9.0	0.0	45.8	19.8	6.6
Incr Delay (d2), s/veh	9.3	0.0	0.5	0.6	1.0	29.0	20.3	4.1	0.0	12.9	2.0	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(50%),veh/ln	8.8	0.0	3.0	2.2	1.8	11.6	1.4	4.0	0.0	6.6	10.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.4	0.0	37.1	40.5	46.4	68.8	71.3	13.1	0.0	58.7	21.7	7.2
LnGrp LOS	D		D	D	D	E	E	B		E	C	A
Approach Vol, veh/h	468			500			1733			1887		
Approach Delay, s/veh	41.6			60.4			14.5			28.4		
Approach LOS	D			E			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	49.3	11.0	29.3	7.6	62.1	22.8	17.5				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	18.4	* 42	7.6	23.2	7.4	52.8	18.5	12.0				
Max Q Clear Time (g_c+I1), s	16.0	23.9	7.5	9.0	4.7	30.0	20.5	14.0				
Green Ext Time (p_c), s	0.4	11.0	0.0	0.5	0.0	9.7	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation1, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
Future Volume (veh/h)	82	61	60	61	77	119	59	1419	17	54	1729	99
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)	0.98		0.97	0.97		0.97	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	91	68	67	68	86	132	66	1577	0	60	1921	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	161	156	154	110	232	179	255	2385		187	2335	
Arrive On Green	0.02	0.19	0.19	0.13	0.13	0.13	0.02	0.68	0.00	0.05	1.00	0.00
Sat Flow, veh/h	1697	843	830	1103	1856	1430	1810	3497	1598	1330	3413	1598
Grp Volume(v), veh/h	91	0	135	68	86	132	66	1577	0	60	1921	0
Grp Sat Flow(s),veh/h/ln	1697	0	1673	1103	1856	1430	1810	1749	1598	1330	1706	1598
Q Serve(g_s), s	0.0	0.0	10.0	7.5	6.0	11.2	1.6	36.6	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	10.0	17.5	6.0	11.2	1.6	36.6	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	0	310	110	232	179	255	2385		187	2335	
V/C Ratio(X)	0.57	0.00	0.44	0.62	0.37	0.74	0.26	0.66		0.32	0.82	
Avail Cap(c_a), veh/h	199	0	318	110	232	179	290	2385		234	2335	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.2	0.0	50.6	66.8	56.2	47.5	6.3	12.9	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.4	23.1	4.5	23.7	0.2	1.5	0.0	0.4	3.4	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	5.8	0.0	7.5	5.6	5.5	8.8	1.0	19.1	0.0	0.9	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	0.0	50.9	89.8	60.7	71.2	6.5	14.3	0.0	12.6	3.4	0.0
LnGrp LOS	E		D	F	E	E	A	B		B	A	
Approach Vol, veh/h	226			286			1643			1981		
Approach Delay, s/veh	56.3			72.5			14.0			3.7		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	101.0		31.9	6.8	101.3	8.9	23.0				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	8.5	* 90		26.6	6.0	92.4	6.1	* 18				
Max Q Clear Time (g_c+l1), s	4.0	38.6		12.0	3.6	2.0	2.0	19.5				
Green Ext Time (p_c), s	0.0	17.2		0.3	0.0	29.7	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	15.4
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation1, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
Future Volume (veh/h)	181	60	27	180	72	370	24	1424	127	322	1685	249
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	199	66	30	198	79	407	26	1565	0	354	1852	274
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	284	106	48	281	179	311	38	2737		421	2231	1122
Arrive On Green	0.10	0.09	0.09	0.11	0.10	0.10	0.05	1.00	0.00	0.12	0.64	0.64
Sat Flow, veh/h	1739	1187	540	1640	1856	1405	1654	5106	1485	3374	3497	1510
Grp Volume(v), veh/h	199	0	96	198	79	407	26	1565	0	354	1852	274
Grp Sat Flow(s),veh/h/ln	1739	0	1727	1640	1856	1405	1654	1702	1485	1687	1749	1510
Q Serve(g_s), s	14.6	0.0	7.5	15.3	5.6	13.5	2.2	0.0	0.0	14.4	57.0	8.0
Cycle Q Clear(g_c), s	14.6	0.0	7.5	15.3	5.6	13.5	2.2	0.0	0.0	14.4	57.0	8.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	0	154	281	179	311	38	2737		421	2231	1122
V/C Ratio(X)	0.70	0.00	0.62	0.70	0.44	1.31	0.69	0.57		0.84	0.83	0.24
Avail Cap(c_a), veh/h	284	0	154	281	179	311	65	2737		819	2231	1122
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	0.0	61.5	50.7	59.7	54.5	66.3	0.0	0.0	59.9	19.5	5.6
Incr Delay (d2), s/veh	7.5	0.0	7.5	7.7	1.7	159.7	20.3	0.9	0.0	4.6	3.8	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	11.2	0.0	6.5	11.2	4.9	36.3	2.0	0.4	0.0	10.4	29.5	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.9	0.0	69.0	58.4	61.4	214.3	86.6	0.9	0.0	64.5	23.3	6.2
LnGrp LOS	E		E	E	E	F	F	A		E	C	A
Approach Vol, veh/h	295			684			1591			2480		
Approach Delay, s/veh	62.2			151.5			2.3			27.3		
Approach LOS	E			F			A			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	80.5	20.0	18.0	7.2	94.8	19.0	19.0				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	34.0	* 59	16.0	12.5	5.5	87.0	14.7	13.5				
Max Q Clear Time (g_c+I1), s	16.4	2.0	17.3	9.5	4.2	59.0	16.6	15.5				
Green Ext Time (p_c), s	1.1	16.0	0.0	0.1	0.0	18.1	0.0	0.0				

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] is excluded from calculations of the approach delay and intersection delay.

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HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation2, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
Future Volume (veh/h)	47	57	88	32	25	68	47	1421	487	48	748	323
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	52	63	98	36	28	76	52	1579	0	53	831	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	360	201	313	247	476	373	371	2824		171	2777	
Arrive On Green	0.02	0.31	0.31	0.26	0.26	0.26	0.02	0.56	0.00	0.01	0.19	0.00
Sat Flow, veh/h	1697	646	1005	1091	1856	1451	1810	5025	1598	1330	4904	1598
Grp Volume(v), veh/h	52	0	161	36	28	76	52	1579	0	53	831	0
Grp Sat Flow(s),veh/h/ln	1697	0	1651	1091	1856	1451	1810	1675	1598	1330	1635	1598
Q Serve(g_s), s	0.0	0.0	11.2	4.2	1.7	5.4	1.8	30.1	0.0	2.5	21.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	11.2	15.3	1.7	5.4	1.8	30.1	0.0	2.5	21.9	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	0	514	247	476	373	371	2824		171	2777	
V/C Ratio(X)	0.14	0.00	0.31	0.15	0.06	0.20	0.14	0.56		0.31	0.30	
Avail Cap(c_a), veh/h	403	0	528	247	476	373	408	2824		220	2777	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.1	0.0	39.4	51.9	42.1	34.1	15.0	21.0	0.0	17.4	35.4	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.2	0.2	1.2	0.1	0.8	0.0	0.4	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(50%),veh/ln	1.5	0.0	4.5	1.2	0.8	2.3	0.7	11.5	0.0	0.8	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.2	0.0	39.6	53.1	42.3	35.3	15.0	21.8	0.0	17.8	35.6	0.0
LnGrp LOS	D		D	D	D	D	B	C		B	D	
Approach Vol, veh/h	213			140			1631			884		
Approach Delay, s/veh	40.7			41.3			21.6			34.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	89.8		52.7	6.9	90.4	8.7	44.0				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	9.5	* 78		48.0	6.5	80.5	6.5	* 39				
Max Q Clear Time (g_c+I1), s	4.5	32.1		13.2	3.8	23.9	2.0	17.3				
Green Ext Time (p_c), s	0.0	15.5		0.6	0.0	6.3	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation2, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
Future Volume (veh/h)	306	98	22	85	65	306	38	1539	114	399	1094	225
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	336	108	24	93	71	336	42	1691	0	438	1202	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	423	422	94	374	411	516	53	2010		489	2544	932
Arrive On Green	0.11	0.29	0.29	0.04	0.22	0.22	0.01	0.13	0.00	0.14	0.51	0.51
Sat Flow, veh/h	1739	1446	321	1640	1856	1407	1654	5106	1485	3374	5025	1510
Grp Volume(v), veh/h	336	0	132	93	71	336	42	1691	0	438	1202	247
Grp Sat Flow(s),veh/h/ln	1739	0	1768	1640	1856	1407	1654	1702	1485	1687	1675	1510
Q Serve(g_s), s	16.7	0.0	8.6	6.4	4.6	29.8	3.8	48.5	0.0	19.1	23.3	11.2
Cycle Q Clear(g_c), s	16.7	0.0	8.6	6.4	4.6	29.8	3.8	48.5	0.0	19.1	23.3	11.2
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	423	0	516	374	411	516	53	2010		489	2544	932
V/C Ratio(X)	0.79	0.00	0.26	0.25	0.17	0.65	0.79	0.84		0.90	0.47	0.26
Avail Cap(c_a), veh/h	423	0	603	374	502	585	276	2010		562	2544	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	40.6	43.1	47.3	39.6	73.7	60.7	0.0	63.0	24.0	13.1
Incr Delay (d2), s/veh	10.0	0.0	0.3	0.3	0.2	2.1	21.9	4.5	0.0	15.5	0.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	3.8	2.7	2.2	10.6	1.9	23.0	0.0	9.1	9.1	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.7	0.0	40.9	43.4	47.5	41.7	95.5	65.1	0.0	78.5	24.7	13.8
LnGrp LOS	D		D	D	D	D	F	E		E	C	B
Approach Vol, veh/h	468			500			1733			1887		
Approach Delay, s/veh	49.4			42.8			65.9			35.7		
Approach LOS	D			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.7	64.5	10.4	49.3	8.8	81.4	21.0	38.7				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	25.0	* 49	6.4	51.2	25.0	48.4	16.7	40.6				
Max Q Clear Time (g_c+I1), s	21.1	50.5	8.4	10.6	5.8	25.3	18.7	31.8				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.8	0.1	9.5	0.0	1.1				

Intersection Summary

HCM 7th Control Delay, s/veh 49.3

HCM 7th LOS D

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation2, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
Future Volume (veh/h)	82	61	60	61	77	119	59	1419	17	54	1729	99
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	91	68	67	68	86	132	66	1577	0	60	1921	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	305	263	259	264	470	368	144	2817		175	2762	
Arrive On Green	0.02	0.31	0.31	0.25	0.25	0.25	0.03	0.56	0.00	0.01	0.19	0.00
Sat Flow, veh/h	1697	849	836	1116	1856	1451	1810	5025	1598	1330	4904	1598
Grp Volume(v), veh/h	91	0	135	68	86	132	66	1577	0	60	1921	0
Grp Sat Flow(s),veh/h/ln	1697	0	1685	1116	1856	1451	1810	1675	1598	1330	1635	1598
Q Serve(g_s), s	0.0	0.0	9.0	7.9	5.4	9.9	2.3	30.1	0.0	2.9	54.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.0	16.9	5.4	9.9	2.3	30.1	0.0	2.9	54.9	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	0	522	264	470	368	144	2817		175	2762	
V/C Ratio(X)	0.30	0.00	0.26	0.26	0.18	0.36	0.46	0.56		0.34	0.70	
Avail Cap(c_a), veh/h	340	0	529	264	470	368	312	2817		214	2762	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	0.0	38.9	52.0	43.8	35.6	27.0	21.1	0.0	17.6	49.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	2.4	0.9	2.7	0.8	0.8	0.0	0.4	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	5.2	0.0	6.7	4.3	4.7	6.8	2.0	17.1	0.0	1.6	32.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	0.0	39.0	54.3	44.7	38.3	27.8	21.9	0.0	18.0	50.5	0.0
LnGrp LOS	D		D	D	D	D	C	C		B	D	
Approach Vol, veh/h	226			286			1643			1981		
Approach Delay, s/veh	43.2			44.0			22.2			49.5		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	89.6		52.4	7.6	90.0	8.9	43.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	8.9	* 80		47.1	18.0	69.9	6.1	* 38				
Max Q Clear Time (g_c+I1), s	4.9	32.1		11.0	4.3	56.9	2.0	18.9				
Green Ext Time (p_c), s	0.0	15.6		0.5	0.0	9.6	0.0	0.6				

Intersection Summary

HCM 7th Control Delay, s/veh	37.9
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation2, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
Future Volume (veh/h)	181	60	27	180	72	370	24	1424	127	322	1685	249
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	199	66	30	198	79	407	26	1565	0	354	1852	274
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	340	283	129	415	507	553	36	2210		403	2665	870
Arrive On Green	0.05	0.24	0.24	0.08	0.27	0.27	0.01	0.29	0.00	0.12	0.53	0.53
Sat Flow, veh/h	1739	1188	540	1640	1856	1408	1654	5106	1485	3374	5025	1510
Grp Volume(v), veh/h	199	0	96	198	79	407	26	1565	0	354	1852	274
Grp Sat Flow(s),veh/h/ln	1739	0	1728	1640	1856	1408	1654	1702	1485	1687	1675	1510
Q Serve(g_s), s	6.9	0.0	6.7	12.4	4.8	37.1	2.3	41.1	0.0	15.5	41.1	14.1
Cycle Q Clear(g_c), s	6.9	0.0	6.7	12.4	4.8	37.1	2.3	41.1	0.0	15.5	41.1	14.1
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	0	412	415	507	553	36	2210		403	2665	870
V/C Ratio(X)	0.59	0.00	0.23	0.48	0.16	0.74	0.71	0.71		0.88	0.70	0.31
Avail Cap(c_a), veh/h	340	0	516	415	619	638	61	2210		472	2665	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	0.0	46.1	38.8	41.4	38.9	73.4	44.8	0.0	65.0	26.2	16.5
Incr Delay (d2), s/veh	2.6	0.0	0.3	0.9	0.1	3.8	22.5	1.9	0.0	15.3	1.5	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	0.0	5.3	9.5	4.1	19.3	2.2	25.3	0.0	11.9	22.6	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.5	0.0	46.4	39.6	41.5	42.8	95.9	46.7	0.0	80.3	27.7	17.4
LnGrp LOS	D		D	D	D	D	F	D		F	C	B
Approach Vol, veh/h	295			684			1591			2480		
Approach Delay, s/veh	47.1			41.7			47.5			34.1		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.9	70.4	16.4	41.3	7.3	85.0	11.2	46.5				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	21.0	* 53	12.4	44.8	5.5	68.3	6.9	50.0				
Max Q Clear Time (g_c+I1), s	17.5	43.1	14.4	8.7	4.3	43.1	8.9	39.1				
Green Ext Time (p_c), s	0.4	6.8	0.0	0.5	0.0	16.0	0.0	1.5				

Intersection Summary

HCM 7th Control Delay, s/veh	40.1
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation3, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	57	88	32	25	65	47	1409	487	48	740	321
Future Volume (veh/h)	47	57	88	32	25	68	47	1421	487	48	748	323
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)	0.99		0.98	0.98		0.99	0.99		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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	52	63	98	36	28	76	52	1579	0	53	831	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	368	205	319	255	489	382	364	2789		169	2743	
Arrive On Green	0.02	0.32	0.32	0.26	0.26	0.26	0.02	0.56	0.00	0.01	0.18	0.00
Sat Flow, veh/h	1697	646	1005	1091	1856	1452	1810	5025	1598	1330	4904	1598
Grp Volume(v), veh/h	52	0	161	36	28	76	52	1579	0	53	831	0
Grp Sat Flow(s),veh/h/ln	1697	0	1652	1091	1856	1452	1810	1675	1598	1330	1635	1598
Q Serve(g_s), s	0.0	0.0	11.1	4.1	1.7	5.4	1.9	30.6	0.0	2.6	22.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	11.1	15.2	1.7	5.4	1.9	30.6	0.0	2.6	22.0	0.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	0	525	255	489	382	364	2789		169	2743	
V/C Ratio(X)	0.14	0.00	0.31	0.14	0.06	0.20	0.14	0.57		0.31	0.30	
Avail Cap(c_a), veh/h	411	0	540	255	489	382	404	2789		226	2743	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.3	0.0	38.7	50.9	41.3	33.4	15.4	21.7	0.0	18.0	35.9	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.2	0.2	1.2	0.1	0.8	0.0	0.4	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(50%),veh/ln	1.5	0.0	4.5	1.2	0.8	2.3	0.8	11.7	0.0	0.8	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.4	0.0	38.8	52.1	41.5	34.5	15.5	22.5	0.0	18.4	36.2	0.0
LnGrp LOS	D		D	D	D	C	B	C		B	D	
Approach Vol, veh/h	213			140			1631			884		
Approach Delay, s/veh	39.9			40.5			22.3			35.1		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	88.8		53.7	6.9	89.4	8.7	45.0				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	10.5	* 76		49.0	6.7	79.3	6.5	* 40				
Max Q Clear Time (g_c+I1), s	4.6	32.6		13.1	3.9	24.0	2.0	17.2				
Green Ext Time (p_c), s	0.0	15.3		0.6	0.0	6.3	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	28.4
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

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HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation3, AM Peak (0715)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	97	22	75	65	305	38	1536	113	392	1094	225
Future Volume (veh/h)	306	98	22	85	65	306	38	1539	114	399	1094	225
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	336	108	24	93	71	336	42	1691	0	438	1202	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	421	419	93	371	406	517	54	2007		499	2556	936
Arrive On Green	0.11	0.29	0.29	0.04	0.22	0.22	0.01	0.13	0.00	0.15	0.51	0.51
Sat Flow, veh/h	1739	1446	321	1640	1856	1407	1654	5106	1485	3374	5025	1510
Grp Volume(v), veh/h	336	0	132	93	71	336	42	1691	0	438	1202	247
Grp Sat Flow(s),veh/h/ln	1739	0	1768	1640	1856	1407	1654	1702	1485	1687	1675	1510
Q Serve(g_s), s	16.7	0.0	8.6	6.4	4.7	29.8	3.8	48.5	0.0	19.1	23.2	11.2
Cycle Q Clear(g_c), s	16.7	0.0	8.6	6.4	4.7	29.8	3.8	48.5	0.0	19.1	23.2	11.2
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	0	512	371	406	517	54	2007		499	2556	936
V/C Ratio(X)	0.80	0.00	0.26	0.25	0.17	0.65	0.79	0.84		0.88	0.47	0.26
Avail Cap(c_a), veh/h	421	0	603	371	502	589	342	2007		697	2556	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	40.9	43.3	47.6	39.5	73.7	60.7	0.0	62.6	23.8	13.0
Incr Delay (d2), s/veh	10.4	0.0	0.3	0.3	0.2	2.1	21.7	4.5	0.0	9.2	0.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	3.8	2.8	2.2	10.6	1.9	23.0	0.0	8.7	9.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.4	0.0	41.2	43.7	47.8	41.6	95.4	65.3	0.0	71.8	24.4	13.6
LnGrp LOS	D		D	D	D	D	F	E		E	C	B
Approach Vol, veh/h	468			500			1733			1887		
Approach Delay, s/veh	50.0			42.8			66.0			34.0		
Approach LOS	D			D			E			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.2	64.4	10.4	49.0	8.9	81.8	21.0	38.4				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	31.0	* 43	6.4	51.2	31.0	42.4	16.7	40.6				
Max Q Clear Time (g_c+I1), s	21.1	50.5	8.4	10.6	5.8	25.2	18.7	31.8				
Green Ext Time (p_c), s	1.1	0.0	0.0	0.8	0.1	8.2	0.0	1.1				

Intersection Summary

HCM 7th Control Delay, s/veh

48.7

HCM 7th LOS

D

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

1: Unser & Bluewater

Bluewater Galleria TIS

Implementation BUILD - Mitigation3, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	61	60	61	77	109	59	1381	17	54	1696	90
Future Volume (veh/h)	82	61	60	61	77	119	59	1419	17	54	1729	99
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)	0.99		0.98	0.98		0.99	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	1781	1856	1900	1693	1856	1737	1900	1841	1885	1396	1796	1885
Adj Flow Rate, veh/h	91	68	67	68	86	132	66	1577	0	60	1921	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	3	0	14	3	11	0	4	1	34	7	1
Cap, veh/h	305	263	259	264	470	368	144	2817		175	2762	
Arrive On Green	0.02	0.31	0.31	0.25	0.25	0.25	0.03	0.56	0.00	0.01	0.19	0.00
Sat Flow, veh/h	1697	849	836	1116	1856	1451	1810	5025	1598	1330	4904	1598
Grp Volume(v), veh/h	91	0	135	68	86	132	66	1577	0	60	1921	0
Grp Sat Flow(s),veh/h/ln	1697	0	1685	1116	1856	1451	1810	1675	1598	1330	1635	1598
Q Serve(g_s), s	0.0	0.0	9.0	7.9	5.4	9.9	2.3	30.1	0.0	2.9	54.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.0	16.9	5.4	9.9	2.3	30.1	0.0	2.9	54.9	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	0	522	264	470	368	144	2817		175	2762	
V/C Ratio(X)	0.30	0.00	0.26	0.26	0.18	0.36	0.46	0.56		0.34	0.70	
Avail Cap(c_a), veh/h	340	0	529	264	470	368	312	2817		214	2762	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	0.0	38.9	52.0	43.8	35.6	27.0	21.1	0.0	17.6	49.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	2.4	0.9	2.7	0.8	0.8	0.0	0.4	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	5.2	0.0	6.7	4.3	4.7	6.8	2.0	17.1	0.0	1.6	32.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	0.0	39.0	54.3	44.7	38.3	27.8	21.9	0.0	18.0	50.5	0.0
LnGrp LOS	D		D	D	D	D	C	C		B	D	
Approach Vol, veh/h	226			286			1643			1981		
Approach Delay, s/veh	43.2			44.0			22.2			49.5		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	89.6		52.4	7.6	90.0	8.9	43.5				
Change Period (Y+Rc), s	3.5	* 5.5		6.0	3.5	5.5	6.0	* 5.5				
Max Green Setting (Gmax), s	8.9	* 80		47.1	18.0	69.9	6.1	* 38				
Max Q Clear Time (g_c+I1), s	4.9	32.1		11.0	4.3	56.9	2.0	18.9				
Green Ext Time (p_c), s	0.0	15.6		0.5	0.0	9.6	0.0	0.6				

Intersection Summary

HCM 7th Control Delay, s/veh	37.9
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

HCM 7th Signalized Intersection Summary

2: Unser & LosVolcanes

Bluewater Galleria TIS

Implementation BUILD - Mitigation3, PM Peak (1645)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	58	27	138	70	365	22	1408	122	302	1685	249
Future Volume (veh/h)	181	60	27	180	72	370	24	1424	127	322	1685	249
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	1826	1826	1263	1722	1856	1663	1737	1870	1752	1826	1841	1781
Adj Flow Rate, veh/h	199	66	30	198	79	407	26	1565	0	354	1852	274
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	43	12	3	16	11	2	10	5	4	8
Cap, veh/h	402	276	125	445	435	502	36	2112		410	2579	928
Arrive On Green	0.10	0.23	0.23	0.11	0.23	0.23	0.01	0.28	0.00	0.12	0.51	0.51
Sat Flow, veh/h	1739	1188	540	1640	1856	1407	1654	5106	1485	3374	5025	1510
Grp Volume(v), veh/h	199	0	96	198	79	407	26	1565	0	354	1852	274
Grp Sat Flow(s),veh/h/ln	1739	0	1728	1640	1856	1407	1654	1702	1485	1687	1675	1510
Q Serve(g_s), s	12.9	0.0	6.8	13.6	5.1	35.2	2.3	41.8	0.0	15.4	42.6	12.8
Cycle Q Clear(g_c), s	12.9	0.0	6.8	13.6	5.1	35.2	2.3	41.8	0.0	15.4	42.6	12.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	0	401	445	435	502	36	2112		410	2579	928
V/C Ratio(X)	0.49	0.00	0.24	0.44	0.18	0.81	0.71	0.74		0.86	0.72	0.30
Avail Cap(c_a), veh/h	478	0	405	512	435	502	176	2112		585	2579	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	0.0	46.8	37.6	45.9	43.7	73.4	46.9	0.0	64.6	28.1	13.6
Incr Delay (d2), s/veh	0.9	0.0	0.3	0.7	0.2	9.7	22.5	2.4	0.0	9.1	1.8	0.8
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	0.0	5.3	9.5	4.3	21.3	2.2	25.8	0.0	11.4	23.5	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.7	0.0	47.1	38.3	46.1	53.5	95.9	49.3	0.0	73.8	29.9	14.4
LnGrp LOS	D		D	D	D	D	F	D		E	C	B
Approach Vol, veh/h	295			684			1591			2480		
Approach Delay, s/veh	41.4			48.2			50.1			34.5		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	67.5	19.9	40.3	7.3	82.5	19.5	40.7				
Change Period (Y+Rc), s	4.0	* 5.5	4.0	5.5	4.0	5.5	4.3	5.5				
Max Green Setting (Gmax), s	26.0	* 48	22.0	35.2	16.0	57.8	21.7	35.2				
Max Q Clear Time (g_c+I1), s	17.4	43.8	15.6	8.8	4.3	44.6	14.9	37.2				
Green Ext Time (p_c), s	0.8	3.4	0.3	0.5	0.0	10.0	0.3	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	41.6
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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

BlueGal_2025PMB-MIT3.syn

Civil Transformations Inc.

APPENDIX G

Site Traffic Proportional Calculations

Bluewater Galleria Commercial Development

Projected share of traffic at the Unser Intersections

Source: Traffic operations analyses for Scenario 5 (Horizon Year Build).

UNSER / BLUEWATER

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	TOTAL	Remarks
AM PEAK													
48	64	98	35	28	73	53	1566	541	54	822	357	3738	2035 AM Peak (w/growth)
3					3		12			8	2	28	Site Traffic
51	64	98	35	28	76	53	1578	541	54	830	359	3766	Total
												0.7%	AM Site traffic proportion
PM PEAK													
80	68	67	68	86	121	66	1534	19	60	1885	100	4152	2035 PM Peak (w/growth)
1			10		1		3	1	7			23	Site Traffic
80	69	67	78	86	122	66	1537	20	67	1885	100	4175	Total
												0.6%	PM Site traffic proportion
												0.6%	Average

UNSER / LOS VOLCANES

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	TOTAL	Remarks
AM PEAK													
398	126	29	84	85	339	49	1707	125	435	1215	293	4886	2035 AM Peak (w/growth)
10					10		38			33	9	100	Site Traffic
408	126	29	84	85	349	49	1745	125	435	1248	302	4986	Total
												2.0%	AM Site traffic proportion
PM PEAK													
236	76	35	154	91	406	29	1564	135	335	1873	324	5257	2035 PM Peak (w/growth)
2			42	2	5	2	16	5	20			94	Site Traffic
236	78	35	196	93	411	31	1580	140	355	1873	324	5351	Total
												1.8%	PM Site traffic proportion
												1.3%	Average

Connections 2040 MTP Project Listing by Project Type, then Project Title										Publicly Funded Projects (Federal, State & Local)			
MPO #	Project Title	From	To	Project Description	Project Type	Lead Agency	MTP_Plan Cost	Time Frame					
Time Frame: "Funded" = programmed with federal, state or local funding between FFY's 2016-2025; "Near Term" = project completion anticipated FFY's 2026-2030; "Late Term" = project completion anticipated FFY's 2031-2040													
12.4	Rainbow Blvd Connection Widening	McMahon Blvd	Southern Blvd	Preliminary engineering, right-of-way-acquisition, final design, and construction of a 4-lane roadway	Capacity Proj	City of Rio Rancho	\$7,500,000	Late Term					
489.0	Rainbow Blvd Extension (Rio Rancho)	Northern Blvd	King Blvd	Construct New 2 lanes; includes Bike Lanes.	Capacity Proj	City of Rio Rancho	\$12,700,000	Late Term					
425.2	Roy Ave Improvements (West Sect.)	NM 313, 4th Street	Mile Marker #1.26	Reconstruct & Widen from 2 to 4 lanes	Capacity Proj	Pueblo of Sandia	\$6,482,800	Near Term					
579.1	Sage Rd Reconstruction & Widening	Unser Blvd	Coors Blvd	Reconstruct and widen from 2 to 4 lanes with bike lanes. 2 lane major collector with sidewalks.	Capacity Proj	County of Bernalillo	\$4,568,750	Late Term					
935.0	Southeast Los Lentes Road Improvements	Morris Rd	Aspen Dr	Reconstruct roadway including new detached multi-use trail, drainage, lighting and related improvements.	Capacity Proj	Village of Los Lunas	\$2,100,000	Funded					
9.2	Southern Blvd Reconstruction Phase II	Unser Blvd	Golf Course Rd	Final design, right of way mapping, right of way acquisition and environmental clearance of Southern Blvd.	Capacity Proj	City of Rio Rancho	\$6,302,124	Funded					
437.0	Sunport Blvd Extension	500' West of Broadway/Sunport intersection	I-25 Exit 221 Interchange	Construct new 4 lane divided facility with bike lanes includes signage, drainage, and other necessary appurtenances. Demo ID NM006. Project total includes capital outlay & county funds in previous FYs. UNDER DESIGN	Capacity Proj	County of Bernalillo	\$19,756,874	Funded					
281.0	Sunport Commerce Center Roadways	Various Roads		Construct and/or improve various roads in the Sunport Commerce Center area such as Prosperity Ave, Prince St., Commerce Center Ave., and Edmund St.	Capacity Proj	County of Bernalillo	\$21,200,000	Late Term					
367.0	Tower Rd Widening	Unser Blvd	Coors Blvd	Widen from 2 to 4 lanes.	Capacity Proj	City of Albuquerque-DMD	\$4,500,000	Near Term					
395.1	University Blvd & Los Picaros Ramp Construction		University Blvd at Los Picaros Rd.	Construct ramps to make a full interchange at the existing grade seperation.	Capacity Proj	County of Bernalillo	\$3,000,000	Near Term					
395.0	University Blvd Widening	Mesa del Sol	Rio Bravo Blvd	Widen the two lane section in the Los Picaros area from 2 to 4 lanes to provide lane continuity.	Capacity Proj	City of Albuquerque-DMD	\$2,500,000	Near Term					
465.1	Unser Blvd Corridor Improvements Future Stages	Central Ave	Bernalillo-Sandoval County Line	Complete a uniform 4 and/or 6 lane roadway facility & implement multi-modal improvements; construction management services. Project may be phased. (Some PE, Design & ROW done under A300300) COMPLETED	Capacity Proj	City of Albuquerque-DMD	\$4,750,000	Funded					

Q-2

Connections 2040 MTP Project Listing by Project Type, then Project Title					Publicly Funded Projects (Federal, State & Local)				
MPO #	Project Title	From	To	Project Description	Project Type	Lead Agency	MTP_Plan Cost	Time Frame	
Time Frame: "Funded" = programmed with federal, state or local funding between FFY's 2016-2025; "Near Term" = project completion anticipated FFY's 2026-2030; "Late Term" = project completion anticipated FFY's 2031-2040									
232.0	TTP-Pueblo of Laguna			Various multimodal transportation projects & activities. For project specific information contact the tribal government office. FFY 2023 funds for San Jose River Bridge in M137 in Valencia County per TTIP.	Hwy & Brg Pres	Pueblo of Laguna	\$20,000	Funded	
233.0	TTP-Pueblo of San Felipe			Various multimodal transportation projects & activities. For project specific information contact the tribal government office.	Hwy & Brg Pres	Pueblo of San Felipe	\$7,685,140	Funded	
234.0	TTP-Pueblo of Sandia			Various multimodal transportation projects & activities. For project specific information contact the tribal government office.	Hwy & Brg Pres	Pueblo of Sandia	\$2,853,629	Funded	
235.0	TTP-Pueblo of Santa Ana			Various multimodal transportation projects & activities. For project specific information contact the tribal government office.	Hwy & Brg Pres	Pueblo of Santa Ana	\$2,919,547	Funded	
236.0	TTP-Pueblo of Santo Domingo			Various multimodal transportation projects & activities. For project specific information contact the tribal government office.	Hwy & Brg Pres	Pueblo of Santo Domingo	\$7,844,862	Funded	
237.0	TTP-To'hajiilee-Navajo Gov't (Late Time Frame)			Various multimodal transportation projects & activities. For project specific information contact the tribal government office.	Hwy & Brg Pres	To'hajiilee-Navajo Gov't.	\$160,969	Late Term	
706.0	Turquoise Street (SP395) Improvements	BIA SP85	Plaza Street	Rehabilitate Turquoise Street to provide a new surface, improved storm drainage (green infrastructure), traffic calming, and walking paths.	Hwy & Brg Pres	Pueblo of Cochiti	\$541,000	Near Term	
245.2	University and Lomas Intersection Improvements	University and Lomas		Intersection improvements including but not limited to concrete replacement of the asphalt, sidewalk improvements, possible turn lane improvements and other appurtenances as needed.	Hwy & Brg Pres	City of Albuquerque-DMD	\$2,500,000	Near Term	
143.0	Unser Blvd/Central Ave. Intersection and Approaches Improvements	Unser Blvd. fr Fredrick Lane approx. 400 feet north of Sarracino	Central Ave. fr. Approx. 900 feet west of Unser to approx. 75th St.	Complete a uniform 4/6 lane facility and implement multimodal improvements. Local design funds may be used as soft match. COMPLETED	Hwy & Brg Pres	City of Albuquerque-DMD	\$6,000,000	Funded	
G-3 220.0	Van Camp Blvd Improvements	El Cerro Mission Blvd.	El Cerro Mission Blvd.	Design and implement Full depth reclamation of Van Camp Blvd. Project includes new streetlighting at appropriate intersections and other appurtenances as needed	Hwy & Brg Pres	County of Valencia	\$1,750,000	Near Term	

Connections 2040 MTP Project Listing by Project Type, then Project Title					Publicly Funded Projects (Federal, State & Local)				
MPO #	Project Title	From	To	Project Description	Project Type	Lead Agency	MTP_Plan Cost	Time Frame	
Time Frame: "Funded" = programmed with federal, state or local funding between FFY's 2016-2025; "Near Term" = project completion anticipated FFY's 2026-2030; "Late Term" = project completion anticipated FFY's 2031-2040									
				Freeway Overpasses to facilitate traffic flow.					
527.0	Freeway Overpasses Study I-25 & I-40	Various locations on I-40 & I-25 t.b.d.		Pass loc: San Francisco/I-25, Morris/I-40, Midpt btwn Unser&Coors/I-40, 118th/I-40, Atrisco/I-40, San Diego/I-25. Cost is for EACH overpass. See proj #527.1	Misc	Various/Joint Effort	\$1,500,000	Late Term	
801.5	Girard Blvd Bike Lane Study	Santa Clara Ave	Indian School Road	Conduct bike lane study	COMPLETED	Misc	City of Albuquerque-DMD	\$800,000	Funded
6.9	I-25 & NM 6 Interchange Beautification Enhancements Phase III	I-25 Exit 203 vicinity		Erosion control, vegetation management, drainage improvements and landscaping as appropriate.	Misc	Village of Los Lunas	\$1,700,000	Funded	
6.6	I-25 & NM 6 Interchange Enhancements Phase II	I-25 Exit 203 vicinity		Erosion control, vegetation management, and landscaping as appropriate. COMPLETED	Misc	Village of Los Lunas	\$829,588	Funded	
246.0	I-25 & NM6 Interchange Enhancements Ph 4	NM6 and I-25		Erosion control, vegetation management, drainage improvements and landscaping as appropriate on the outside edeg of each ramp.	Misc	Village of Los Lunas	\$500,000	Late Term	
251.1	I-25 Corridor North Study Update	Big I	Tramway Blvd.	Study, PE, Environmental Doc, and some design to identify improvements. COMPLETED	Misc	NMDOT D-3	\$500,000	Funded	
623.0	I-25 Frontage Roads Feasibility Study - Valencia County	North Belen Interchange	Los Lunas Interchange	Conduct a feasibility study to determine need, cost and schedule for implementation.	Misc	NMDOT D-3	\$1,000,000	Late Term	
615.7	I-40 Embudo Channel Improvements	San Mateo Blvd	Juan Tabo Blvd	Reconstruction/rehabilitation of the Embudo Channel in the median of I-40. Project to be staged in sections and built over several years. Project is joint effort with AMAFCA and COA.	Misc	NMDOT D-3	\$250,000	Funded	
1615.1	I-40 Embudo Channel Improvements (Late Time Frame)	approx. San Mateo Blvd	approx. Juan Tabo Blvd.	Reconstruction/rehabilitation of the Embudo Channel.	Misc	NMDOT D-3	\$1,500,000	Late Term	
613.1	Idalia Rd Corridor Study	Northern Blvd	Iris Rd	Corridor Study to outline potential reconstruction phasing of future project.	Misc	City of Rio Rancho	\$1,851,454	Funded	
1652.1	Interstate Landscaping (Late Time Frame)	Sections of Interstate Highways	To Be Selected	Landscaping on various sections of Interstate Highways. Cooperative effort with NMDOT D-3.	Misc	City of Albuquerque-DMD	\$3,160,000	Late Term	
516.0	Ladera Rd Drainage	Peralta Blvd	Valencia Rd	Improve drainage, erosion control, roadside pond construction and other work as necessary.	Misc	Town of Peralta	\$300,000	Near Term	
940.0	Loma Colorado Blvd extension	Northern Blvd	NM 347 Paseo del Volcan	Corridor study and alignment study.	Misc	City of Rio Rancho	\$1,287,377	Funded	
247.0	Main Street West Street lighting Improvements	Huning Ranch Loop West	Desert Willow Rd.	Install street lights to address visibility issues.	Misc	Village of Los Lunas	\$550,000	Near Term	