

Appendix 4.10-2

Local Transportation Assessment



Prepared by
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**LOCAL TRANSPORTATION ASSESSMENT
FOR THE PROPOSED ARTESIA PLACE PROJECT
IN THE CITY OF ARTESIA**



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TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY	1
INTRODUCTION	3
LEVEL OF SERVICE METHODOLOGY	7
Analysis Scenarios	7
Study Locations.....	7
Analysis Methodology	7
Performance Criteria	9
EXISTING (2022) CONDITIONS	10
Street System	10
Transit Service.....	12
Traffic Volumes	13
Peak Hour Intersection Operations	13
PROJECT TRAFFIC.....	16
Project Trip Generation.....	16
Trip Distribution and Assignment.....	17
EXISTING (2022) PLUS PROJECT CONDITIONS	20
Peak Hour Intersection Operations	20
OPENING YEAR (2025) CONDITIONS.....	23
Street System	23
Traffic Volumes	23
Peak Hour Intersection Operations	23
OPENING YEAR (2025) PLUS PROJECT CONDITIONS	26
Peak Hour Intersection Operations	26
Traffic Signal Warrant Analysis.....	29
Parking Assessment	29
Site Access and Circulation.....	31
CONCLUSIONS AND RECOMMENDATIONS	33
Project Trip Generation.....	33
Level Of Service Analysis Findings.....	33
Project Frontage and Access Recommendations	33
Offsite Recommendations.....	34

LIST OF FIGURES

Page

Figure 1 – Vicinity Map	4
Figure 2 – Project Site Plan.....	5
Figure 3 – Existing Lane Configuration and Traffic Control	11
Figure 4 – Existing Intersection Traffic Volumes	14
Figure 5 – Project Trip Distribution and Project-Related Intersection Traffic Volumes	19
Figure 6 – Existing Plus Project Intersection Traffic Volumes	21
Figure 7 – Opening Year Intersection Traffic Volumes.....	24
Figure 8 – Opening Year Plus Project Intersection Traffic Volumes	27

LIST OF TABLES

Page

Table 1 – Project Development Summary	3
Table 2 – Level of Service Descriptions	8
Table 3 – Summary of Intersection Operations – Existing Conditions.....	15
Table 4 – Summary of Project Trip Generation.....	18
Table 5 – Summary of Intersection Operations – Existing Plus Project Conditions	21
Table 6 – Summary of Intersection Operations – Opening Year Conditions.....	25
Table 7 – Summary of Intersection Operations – Opening Year Plus Project Conditions.....	27
Table 8 – Signal Warrant Summary	30
Table 9 – Parking Summary	32

APPENDICES

Appendix A	Scoping Agreement
Appendix B	Signal Timing and Traffic Data Collection
Appendix C	Intersection Analysis Worksheets
Appendix D	Trip Generation Excerpts
Appendix E	Cumulative Project Information
Appendix F	Signal Warrant Analysis Worksheets

**LOCAL TRANSPORTATION ASSESSMENT
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IN THE CITY OF ARTESIA**

EXECUTIVE SUMMARY

This Local Transportation Analysis (LTA) has been prepared to evaluate the traffic effects of the proposed Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment) (“Project”). The Project site is located in the City of Artesia (“City”) and consists of one approximately 3.3-acre parcel (Assessor Parcel Number [APN] 7035-016-064) located at 11709 Artesia Boulevard. The Project site is generally bound by roadways, with Artesia Boulevard on the south, Alburdis Avenue on the east, and Flallon Avenue on the west. The Project site is currently vacant. The Project proposes a mixed-use development comprised of 80 residential dwelling units (DUs), 4,407 Gross Square Feet (GSF) commercial, 4,407 GSF restaurant, and 2,443 GSF of live/work (office) uses. Construction is anticipated to occur in a single phase and fully-operational in 2025.

Vehicular access to the Project site would be provided at 9 locations: 4 full-access driveways and 1 full-access private street along Flallon Avenue, and 3 full-access driveways and 1 full-access private street along Alburdis Avenue. Consistent with the improvements proposed by Project, it is recommended that all 9 access locations are stop-controlled for the outbound approach. Other than these proposed stop controls, there are no further access recommendations. The Project would provide pedestrian-oriented accessible walkways to all of its uses. Sidewalks would be provided on all Project site frontages and boundaries.

The Project site is designated as Gateway Community Commercial and is zoned Artesia Boulevard Corridor Specific Plan. Hence, the Project requires a General Plan Amendment to permit integrated, mixed-use commercial and residential development to be considered and regulated with the adoption of specific plans and a Zoning Code Text Amendment (Artesia Boulevard Corridor Specific Plan Amendment) to allow the proposed mixed-use development with residential uses. The requested approvals also include a Design Review and Vesting Tentative Tact Map.

This LTA has been conducted in accordance with the *Los Angeles County Public Works Transportation Impact Analysis Guidelines Plan*¹ (July 2020) (TIA Guidelines), and input from City staff during scoping of the Project’s traffic analysis requirements.

The Project is expected to generate 74 PM commuter peak hour pass-by trips (37 inbound / 37 outbound). The Project is estimated to generate a net total of 2,585 daily trips, with 224 trips (121 inbound / 104 outbound) during the AM commuter peak hour and 137 trips (73 inbound / 64 outbound) during the PM commuter peak hour.

¹ *Los Angeles County Public Works Transportation Impact Analysis Guidelines*, County of Los Angeles, July 2020.

The LTA will evaluate the intersection Level of Service (LOS) during the weekday AM and PM peak hours for the following conditions:

- Existing (2022) Conditions
- Existing (2022) Plus Project
- Opening Year (2025) Conditions
- Opening Year (2025) Plus Project

The traffic operation analysis shows that the Project would degrade the LOS operations at intersections of Flallon Avenue / Artesia Boulevard and Albutis Avenue / Artesia Boulevard during the PM peak hours (LOS E for the stop-controlled, southbound approach) under Existing (2022) Plus Project Conditions and Opening Year (2025) Plus Project Conditions. These delays are related to outbound traffic making the southbound left-turn movement onto Artesia Boulevards since they are required to wait for “gaps” in traffic for both the eastbound and westbound approaches.

Traffic signal warrant analyses were conducted for the two deficient unsignalized intersections following the California Manual on Uniform Traffic Control Devices (CA MUTCD) guidelines. Neither intersection satisfies the signal warrants under the Opening Year (2025) Plus Project conditions. Therefore, it is not recommended to install traffic signal at either location.

**LOCAL TRANSPORTATION ASSESSMENT
FOR THE PROPOSED ARTESIA PLACE PROJECT
IN THE CITY OF ARTESIA**

INTRODUCTION

This Local Transportation Analysis (LTA) has been prepared to evaluate the traffic effects of the proposed Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment) (“Project”). The Project site is located in the City of Artesia (“City”) and consists of one approximately 3.3-acre parcel (Assessor Parcel Number [APN] 7035-016-064) located at 11709 Artesia Boulevard. The Project site is generally bound by roadways, with Artesia Boulevard on the south, Alburdis Avenue on the east, and Flallon Avenue on the west. **Figure 1** depicts the Project location in its regional setting.

The Project site is currently vacant. The Project proposes a mixed-use development comprised of residential, commercial, retail and live/work (office) uses; see **Table 1**.

Table 1 – Project Development Summary

Land Use	Residential (DU)	Non-residential (GSF)			
		Office	Restaurant	Retail	Total
Townhomes	59				
Mixed-Use Carriage Townhomes (Commercial ground floor)	4		1,725	1,725	3,450
Shopkeeper Units (Commercial Condominiums with Townhomes above)	8		1,332	1,332	2,664
Commercial			1,350	1,350	2,700
Live/Work Townhomes	9	2,443			2,443
Total	80	2,443	4,407	4,407	11,257
DU = dwelling unit; GSF = gross square feet					

Vehicular access to the Project site would be provided at 9 locations: 4 full-access driveways and 1 full-access private street along Flallon Avenue, and 3 full-access driveways and 1 full-access private street along Alburdis Avenue. No access to the Project site is proposed along Artesia Boulevard. Construction is anticipated to occur in a single phase and fully-operational in 2025. **Figure 2** shows the Conceptual Site Plan.

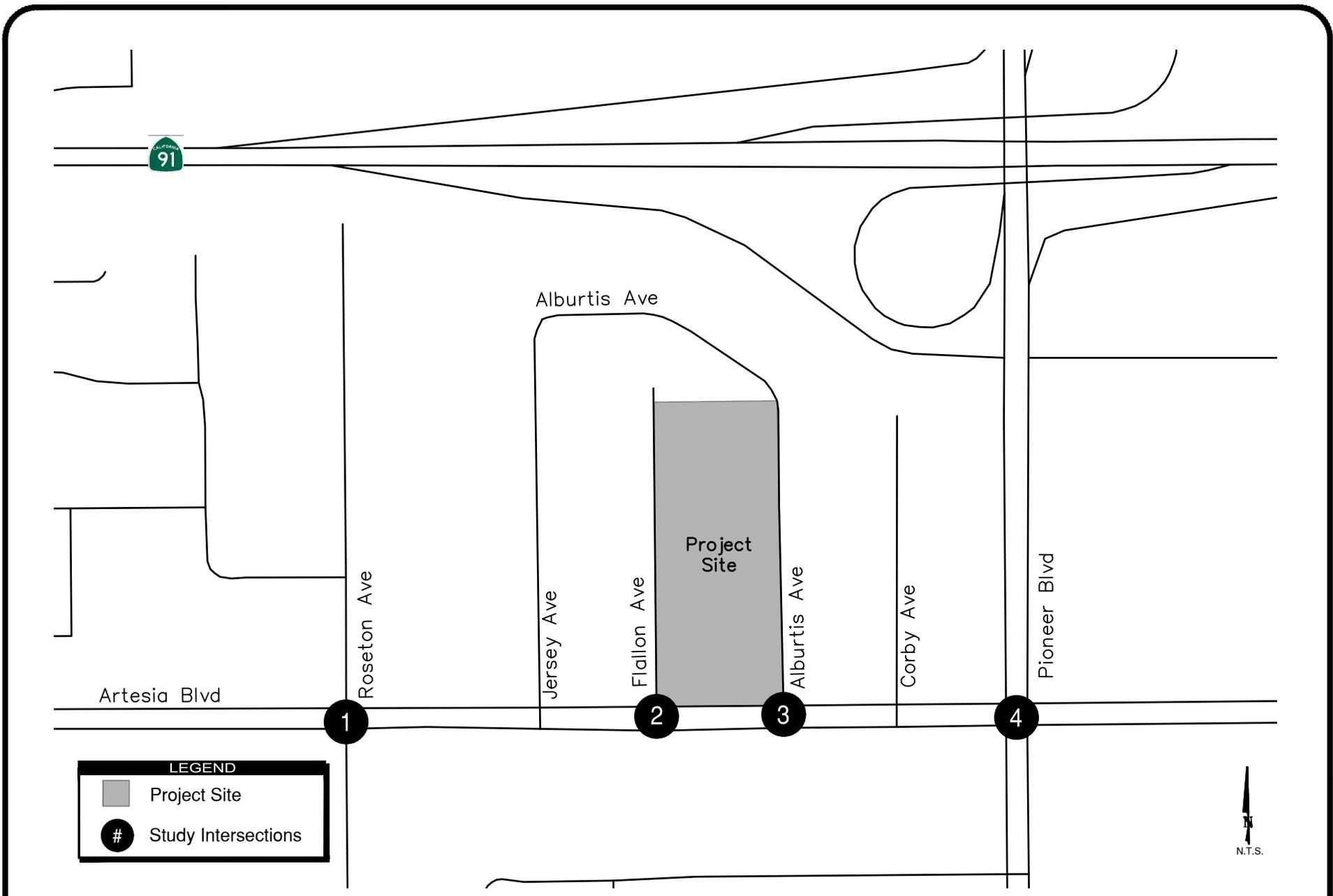


FIGURE 1 - Vicinity Map
Artesia Place Project

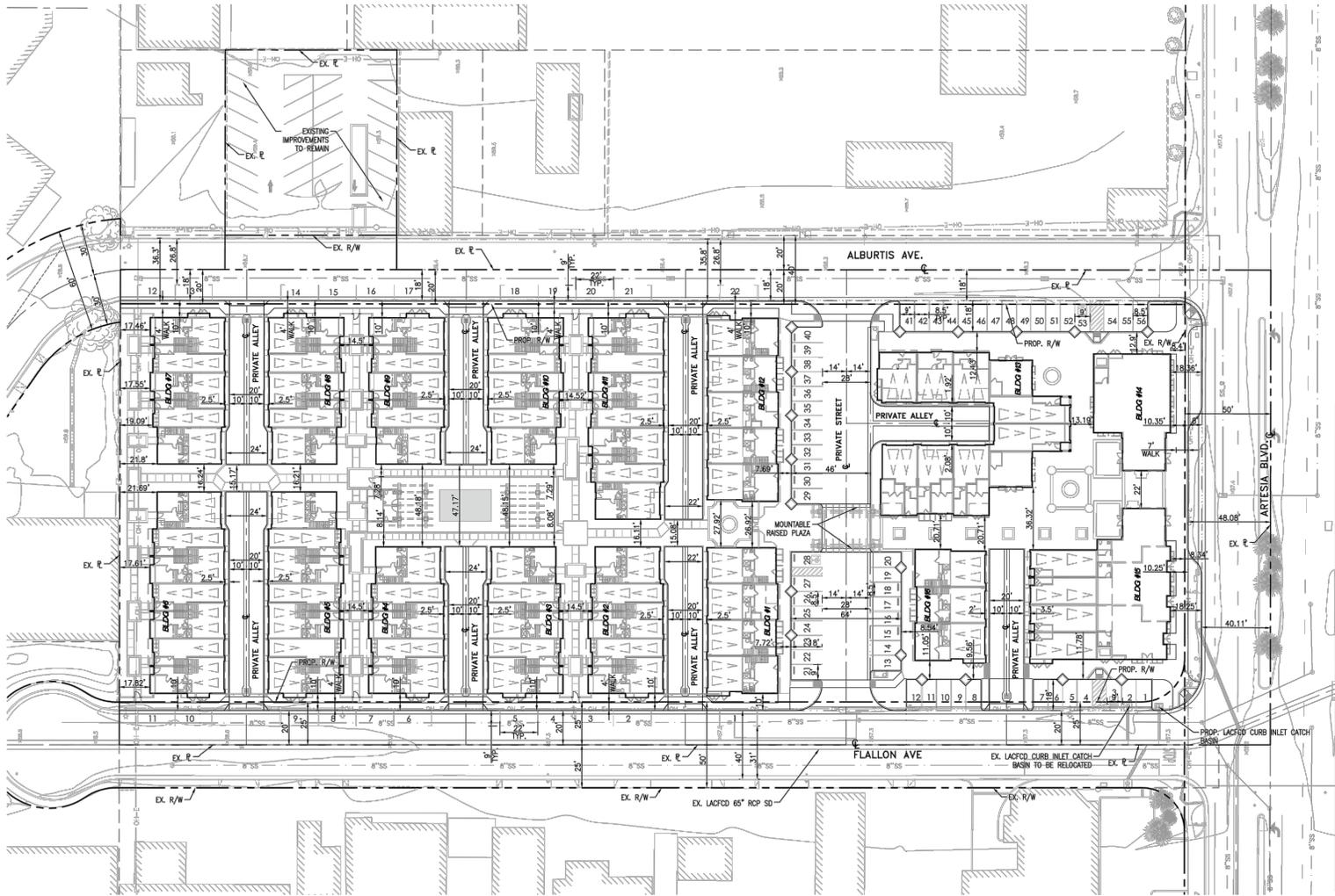


FIGURE 2 - Project Site Plan
Artesia Place Project

The Project site is designated as Gateway Community Commercial and is zoned Artesia Boulevard Corridor Specific Plan. Hence, the Project requires a General Plan Amendment to permit integrated, mixed-use commercial and residential development to be considered and regulated with the adoption of specific plans and a Zoning Code Text Amendment (Artesia Boulevard Corridor Specific Plan Amendment) to allow the proposed mixed-use development with residential uses. The requested approvals also include a Design Review and Vesting Tentative Tact Map.

LEVEL OF SERVICE METHODOLOGY

This LTA has been conducted in accordance with the *Los Angeles County Public Works Transportation Impact Analysis Guidelines Plan*² (July 2020) (TIA Guidelines), and input from City staff during scoping of the Project's traffic analysis requirements. The study area and intersections were established in consultation with City staff through the Scoping Agreement process. A copy of the approved Scoping Agreement is provided in **Appendix A**.

Kimley-Horn will identify Project-related Level of Service (LOS) deficiencies based on criteria within the County's TIA Guidelines, and recommend improvements to alleviate deficiencies resulting from the Project, if necessary.

Analysis Scenarios

The Project will be evaluated for the following conditions:

- Existing (2022) Conditions
- Existing (2022) Plus Project
- Opening Year (2025) Conditions
- Opening Year (2025) Plus Project

Study Locations

The LOS analysis will be conducted at the following study intersections:

1. Roseton Avenue at Artesia Boulevard (Signalized)
2. Flallon Avenue at Artesia Boulevard (Unsignalized)
3. Alburdis Avenue at Artesia Boulevard (Unsignalized)
4. Pioneer Boulevard at Artesia Boulevard (Signalized)

It should be noted that the two signalized study area intersections (i.e., Roseton Avenue at Artesia Boulevard and Pioneer Boulevard at Artesia Boulevard) were evaluated as part of the *Artesia Boulevard Corridor Specific Plan*³ and all study intersections are located within the City of Artesia's jurisdiction.

Analysis Methodology

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the *Highway Capacity Manual, 6th Edition* (HCM 6) methodology, consistent with City of Artesia and County of Los Angeles requirements. The TIA Guidelines require analysis of traffic operations to be based on the vehicular delay methodologies of the HCM (Transportation Research Board Special Report 209). The Project's intersection analysis has been accomplished using the Synchro 11 analysis

² *Los Angeles County Public Works Transportation Impact Analysis Guidelines*, County of Los Angeles, July 2020.

³ *Artesia Boulevard Corridor Specific Plan*, City of Artesia, Adopted December 13, 2011.

software and using the specified input parameters outlined in the TIA Guidelines.

The HCM delay forecast translates to a LOS designation, ranging from LOS A to LOS F. A summary description of each LOS and the corresponding delay is provided in **Table 2**.

TABLE 2 - LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized	Unsignalized	
A	< 10.0	< 10.0	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	> 10.0 - 20.0	> 10.0 - 15.0	LOS B represents stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	> 20.0 - 35.0	> 15.0 - 25.0	LOS C is in the range of stable flow, but marks the beginning of operation in which individual users become affected by interaction with others in the traffic stream.
D	> 35.0 - 55.0	> 25.0 - 35.0	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are restricted, and the driver experiences a generally poor level of comfort and convenience.
E	> 55.0 - 80.0	> 35.0 - 50.0	LOS E represents operating conditions at or near the capacity of the intersection. All speeds are reduced to a low, but relatively uniform level. Small increases in flow will cause breakdowns in traffic movement.
F	> 80.0	> 50.0	LOS F represents forced, or breakdown flow. This condition occurs when the amount of traffic approaching the intersection exceeds the volume which can pass through the intersection, resulting in queues and congestion.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, taking into account a number of factors, including number of lanes, volume of traffic, cycle length, and signal timing and phasing. For unsignalized intersections, the HCM methodology analysis determines the average total delay for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made. The delay and LOS reported is based on the worst movement with the highest delay.

The following assumptions were included in the analysis:

- Peak-hour factor (PHF) based on the existing traffic data was used for the Existing (2022) and Opening Year (2025) scenarios.
- Heavy Vehicle (HV) percentage assumed to be 2 percent, consistent with other traffic studies prepared in the area.
- Traffic signal timing at Roseton Avenue and Pioneer Boulevard was based on existing traffic signal timing plans provided by the City. Timing Plans are provided in **Appendix B**.
- Shared left/through/right-turn movements at Roseton Avenue, Flallon Avenue, and Alburto Avenue were evaluated as a shared left-turn/through movement and separate right-turn pocket with 50-foot storage. This assumption is based on the wide approach lanes, red-curb painted on approach and the “sneak-by” loops existing at Roseton Avenue.
- 40 miles per hour (mph) speeds are assumed along Artesia Boulevard.

Performance Criteria

Criteria for LOS deficiencies are based on the policies adopted in the City of Artesia’s General Plan⁴, which states that LOS D or better is acceptable. A Project induced deficiency is assumed if the addition of Project traffic would cause a facility that is operating acceptably (LOS A, B, C, or D) to begin to operate unacceptably (LOS E or F). For facilities already operating unacceptably (LOS E or F) without project traffic, any added project traffic to the facility is considered a project deficiency and a fair-share calculation for cost of improvements is provided.

⁴ *Artesia General Plan Update*, City of Artesia, July 2010.

EXISTING (2022) CONDITIONS

Street System

Regional access to the Project site is provided by the San Gabriel River Freeway (I-605), located less than 0.50 mile west of the Project site, and the Artesia Freeway (SR-91), located less than 0.25 mile north of the Project site. The following describes the roadways providing access to the study area.

Artesia Boulevard is an east-west roadway that provides two vehicle travel lanes in each direction within the study area with a raised median separating traffic. The posted speed limit is 40 miles per hour (mph). A westbound bike lane is provided on the street's north side. On-street parking is prohibited on the street's north side (adjacent to the Project site) and generally permitted on the south side. The City of Artesia General Plan Circulation Element (Circulation Element) designates Artesia Boulevard as a Primary Arterial Highway.

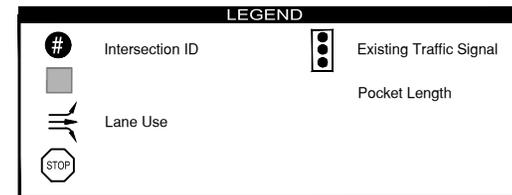
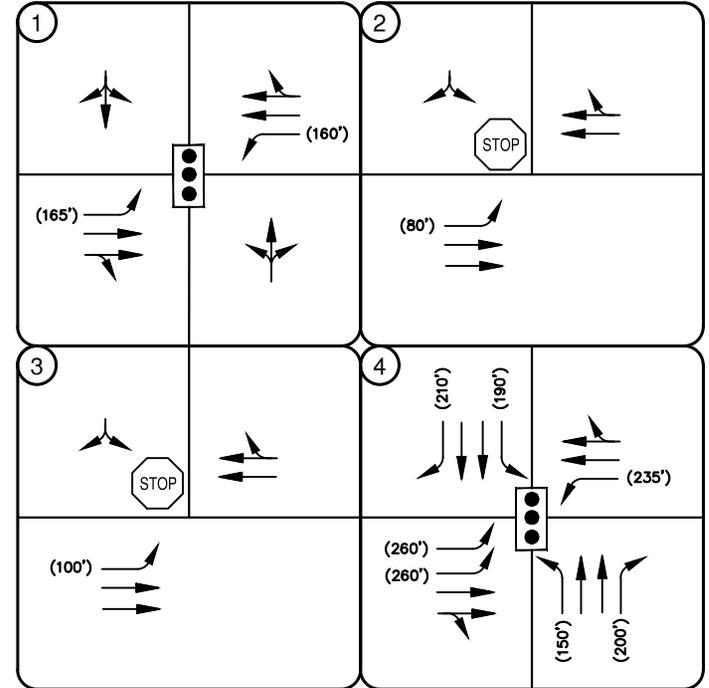
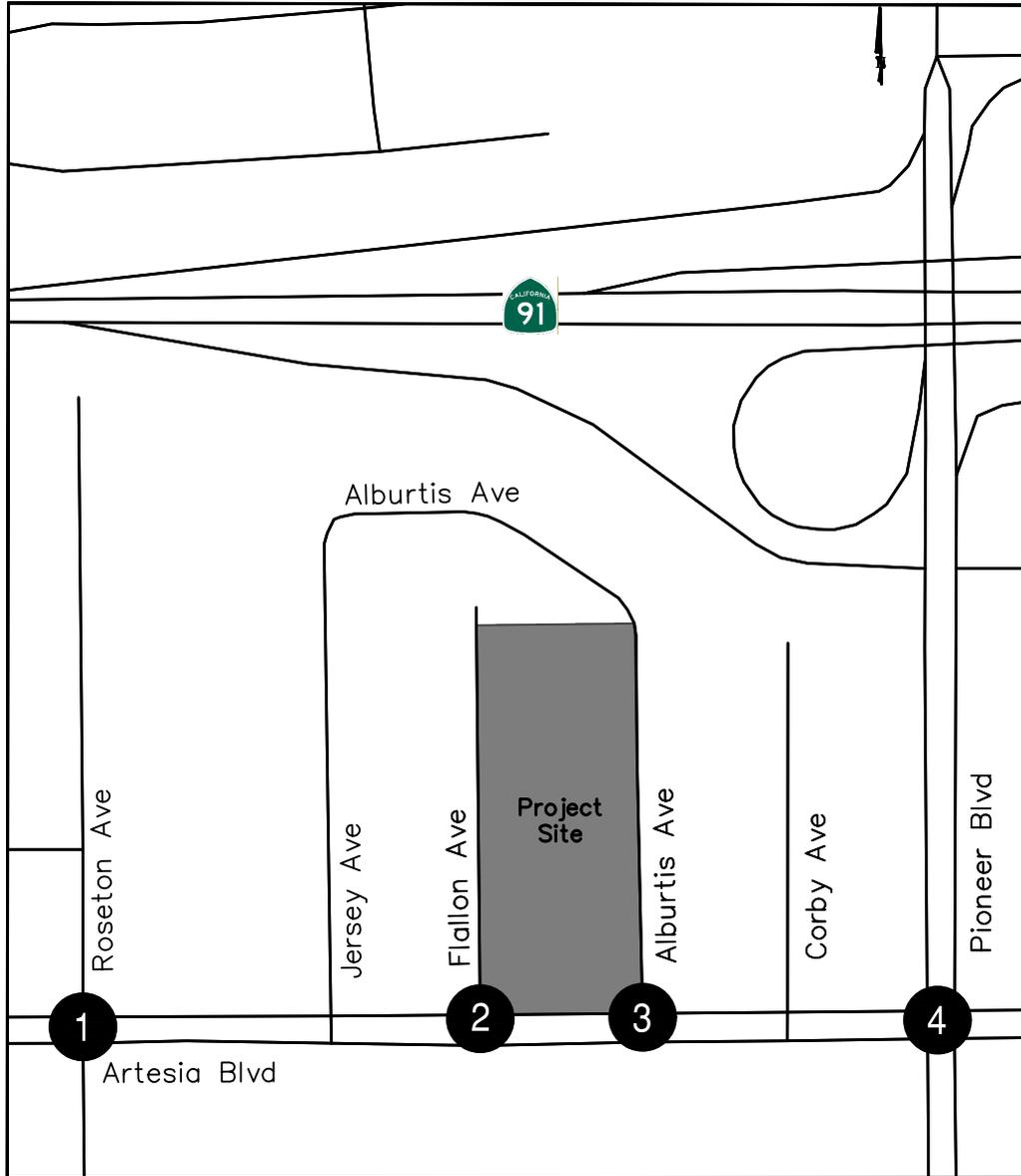
Roseton Avenue is a north-south roadway that provides one vehicle travel lane in each direction within the study area. The posted speed limit is 25 mph. On-street parking is generally permitted. The Circulation Element designates Roseton Avenue as a Local Street.

Flallon Avenue is a north-south roadway that provides one vehicle travel lane in each direction within the study area. There is no posted speed limit (25 mph is assumed). On-street parking is generally permitted. The Circulation Element designates Flallon Avenue as a Local Street.

Alburtis Avenue is a north-south roadway that provides one vehicle travel lane in each direction within the study area. There is no posted speed limit (25 mph is assumed). On-street parking is generally permitted. The Circulation Element designates Alburtis Avenue as a Local Street.

Pioneer Boulevard is a north-south roadway that provides two vehicle travel lanes in each direction within the study area with a raised median separating traffic. The posted speed limit is 35 mph. On-street parking is prohibited on both sides of the street. The Circulation Element designates Pioneer Boulevard as a Primary Arterial Highway.

The existing (as of June 2022) intersection lane configurations and traffic controls are illustrated in **Figure 3**.



Artesia Place Project



FIGURE 3 Existing Lane Configuration and Traffic Control

Transit Service

Transit service to the study area is provided by the City of Cerritos, Orange County Transit Authority (OCTA), Los Angeles County Metropolitan Transportation Authority (Metro), and Long Beach Transit (LBT), which all serve the City of Artesia and surrounding area. The bus stops nearest the Project site are at the Pioneer Boulevard at Artesia Boulevard intersection. The bus routes serving the study area are described below.

City of Cerritos (Cerritos on Wheels) Route 1C (Cerritos to Artesia) operates between Cerritos College and Civic Center along Pioneer Boulevard, 183rd Street, Gridley Road, South Street, and Bloomfield Avenue. Route 1C operates Monday through Saturday from approximately 9:00 AM to 5:00 PM with approximately 1-hour headways.

OCTA Route 30 (Cerritos to Anaheim) operates between Los Cerritos Center and Anaheim along 183rd Street, Gridley Road, South Street, and Orangethorpe Avenue. Route 30 operates every day from approximately 7:00 AM to 7:45 PM with approximately 1-hour headways.

Metro Local Line 62 (Downtown Los Angeles to Hawaiian Gardens) operates between Downtown Los Angeles and Hawaiian Gardens along 6th Street, 7th Street, Olympic Boulevard, Telegraph Road, Norwalk Boulevard, Pioneer Boulevard, and Gridley Road. Route 62 operates on weekdays from approximately 4:15 AM to 11:00 PM with approximately 30-minute headways, and on weekends from approximately 4:30 AM to 11:00 PM with approximately 1-hour headways.

NTS Route 2 (Metro C [Green] Line Norwalk Station to Gridley to 183rd Street) operates in a loop between the Metro C Line Norwalk Station in Norwalk, south on Pioneer Boulevard to Artesia, west on 183rd Street, and back north to the Metro C Line Norwalk Station. Route 2 operates from 6:00 a.m. to 7:33 p.m. on weekdays with approximately 37-minute headways. Route 2 operates from 9:16 a.m. to 5:54 p.m. on weekends with approximately 1-hour 15 minute headways.

LBT Route 172 (Artesia to Long Beach) operates between Palo Verde Avenue and Downtown Long Beach along Long Beach Boulevard, Pacific Avenue, Pacific Coast Highway, Palo Verde Avenue, South Street, Studebaker Road, and 183rd Street. Route 172 operates weekdays from approximately 5:30 AM to 7:00 PM with approximately 30-minute headways. No bus service is provided on the weekends.

LBT Route 173 (Artesia to Long Beach) operates between Studebaker Road and Downtown Long Beach along 183rd Street, Gridley Road, Norwalk Boulevard, Carson Street, and Pacific Avenue. Route 173 operates weekdays from approximately 5:00 AM to 9:45 PM with approximately 30-minute headways, and on weekends from approximately 6:45 AM to 9:45 PM with approximately 1-hour headways.

LBT Route 192 (Artesia to Downtown Long Beach) operates between 183rd Street and Magnolia Avenue along 183rd Street, Gridley Road, South Street, Long Beach Boulevard, Santa Fe Avenue,

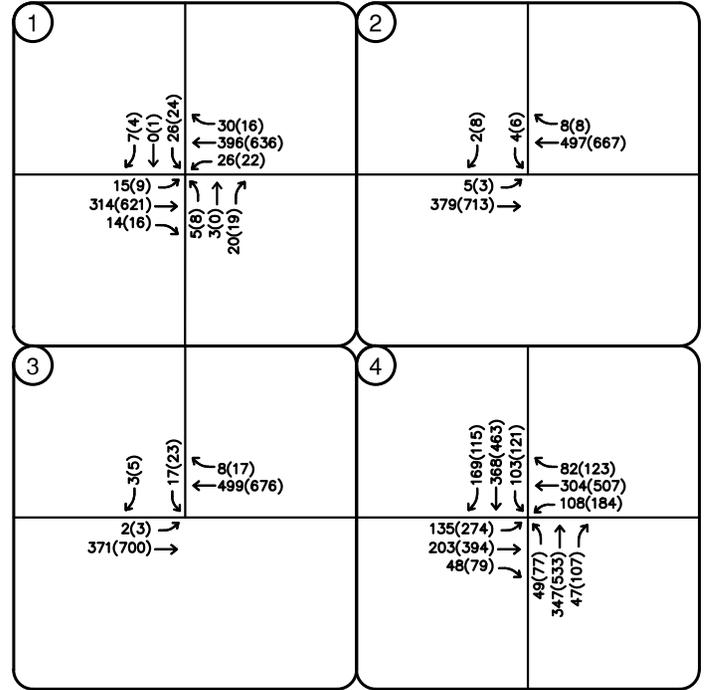
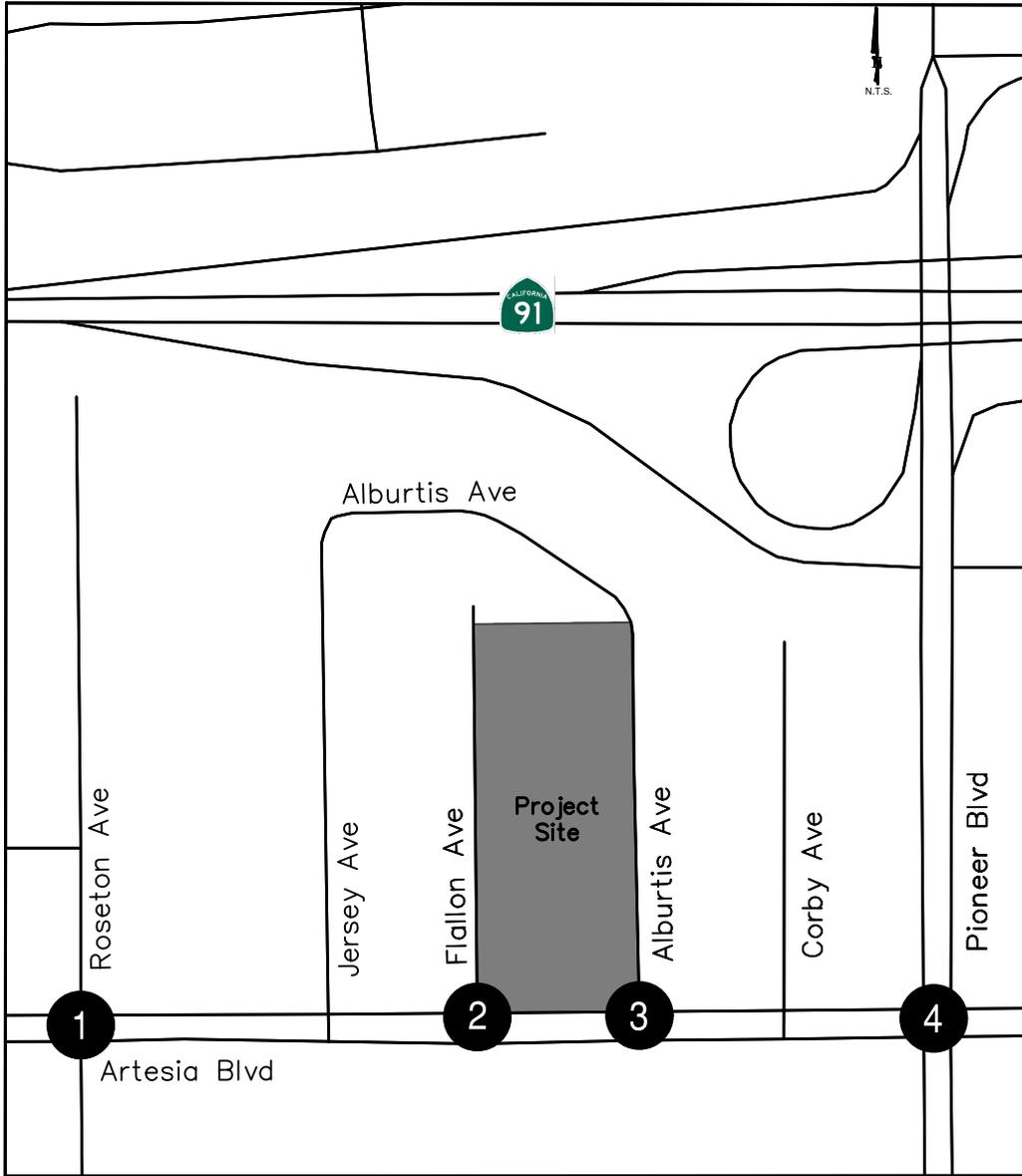
Anaheim Street, and Magnolia Avenue. Route 192 operates weekdays from approximately 5:00 AM to 10:00 PM with approximately 30-minute headways, and on weekends from approximately 5:30 AM to 9:00 PM with approximately 1-hour headways.

Traffic Volumes

On June 9, 2022, existing intersection turning movement volumes for the four study area intersections were collected during the typical 7-9 AM and 4-6 PM commuter peak periods. Additionally, 24-hour roadway directional volumes were collected at three locations along Artesia Boulevard and at one location along both Flallon Avenue and Alburdis Avenue in order to perform traffic signal warrant analyses for these unsignalized study intersections. Because the traffic volumes were collected when local schools were on summer break, a 10 percent growth factor was applied to existing traffic volumes collected. The adjusted existing peak hour turning movement volumes are shown in Figure 4. The raw traffic volume data sheets are provided in Appendix B.

Peak Hour Intersection Operations

Intersection LOS operations were evaluated at the study intersections under Existing (2022) Conditions using the analysis procedures and assumptions described above. Table 3 provides the results of the intersection analysis and indicates that all study intersections currently operate at LOS D or better during the AM and PM peak hours under Existing (2022) Conditions. Intersection analysis worksheets are provided in *Appendix C*.



LEGEND

- # Intersection ID
- Project Site
- ←XX(XX) Traffic Volumes

Artesia Place Project



**TABLE 3
SUMMARY OF INTERSECTION OPERATIONS
EXISTING CONDITIONS**

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Roseton Avenue at Artesia Boulevard	S	4.9	A	4.8	A
2	Flallon Avenue at Artesia Boulevard	U	15.4	C	19.8	C
3	Alburtis Avenue at Artesia Boulevard	U	17.3	C	26.2	D
4	Pioneer Boulevard at Artesia Boulevard	S	32.5	C	42.4	D

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

PROJECT TRAFFIC

Project Trip Generation

Trip generation estimates for the Project are based on the *Institute of Transportation Engineers Trip Generation Manual*, 11th Edition (ITE).⁵ A trip is defined as a single, one-directional vehicle movement with either the origin or destination at the project site. In other words, a trip can be either “to” or “from” the site and therefore, a single visitor to a site is counted as two trips. Project trips are estimated for the total average daily, AM (7-9) and PM (4-6) commuter peak hours on a typical weekday. Project-generated trips were based on average rates for ITE Land Use 220 (Multifamily Housing – Low Rise) for the residential units, ITE Land Use 712 (Small Office Building) for the live/work townhomes SF proposed as office space, ITE Land Use 822 (Strip Retail Plaza - <40K) for the retail space, and ITE Land Use 933 (Fast-Food Restaurant without Drive-Through) for the restaurant space.

Trip reductions were taken in account for internal capture and pass-by trips. With multi-use development, there is potential for interaction among onsite uses. These types of trips are considered internal to the site and are “captured” within the site. Typically, internal capture is derived by methodology and data within *ITE Trip Generation Handbook, 3rd Edition*. However, these percentages exceed the 5 percent maximum reduction that is accepted by Caltrans. Because SR-91 is just north of the study area (less than 0.25 mile north of the Project site), this analysis assumes an internal capture of 5 percent. Additionally, commercial uses such as ITE Land Uses 822 and 933 generate pass-by trips. These trips represent vehicles already on the road that stop as they pass by the site on their route to another destination. Pass-by trips would enter and exit the site at the Project driveways but are not new/added trips on the external street and roadway network. Pass-By trip reductions are based on available information from *ITE Trip Generation Manual, 11th Edition*.

The following is a summary of the pass-by reductions selected:

- Land Use 822
 - 0% AM / 29% PM reduction for Land Use 820 (Shopping Center > 150K)
 - 0% AM / 40% PM reduction for Land Use 821 (Shopping Plaza 40-150K)
- Land Use 933
 - 0% AM / 43% PM reduction for Land Use 932 (High-Turnover Sit-Down Restaurant)
 - 50% AM / 55% PM reduction for Land Use 934 (Fast-Food Restaurant with Drive-Through)

Based on the assessment of retail land uses, the 40% PM reduction was selected for the retail use (Land Use 822). This reduction is expected to be conservative since small shopping centers typically attract more pass-by trips than large centers. Based on the assessment of restaurant land uses, the 43% PM reduction was selected for the restaurant use (Land Use 933). This reduction was selected since it was the lower of the available rates and a more conservative assumption.

⁵ *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2022.

Table 4 summarizes the Project's expected trip generation. **Appendix D** contains relevant ITE trip generation rate excerpts for trip rates, pass-by reductions, time of day distributions, and internal capture calculations. Based on these assumptions, 74 PM commuter peak hour pass-by trips (37 inbound / 37 outbound) are expected to be generated. The Project is estimated to generate a net total of 2,585 daily trips, with 224 trips (121 inbound / 104 outbound) during the AM commuter peak hour and 137 trips (73 inbound / 64 outbound) during the PM commuter peak hour peak hour.

Trip Distribution and Assignment

Project trip distribution assumptions were based on proximity to regional and local roadways and existing travel patterns. Trip distribution percentages at each study intersection were applied to Project trip generation to determine Project trips through each intersection. Project trip distribution and resulting peak hour trips to be added to the surrounding street system are shown on **Figure 5**.

**TABLE 4
SUMMARY OF PROJECT TRIP GENERATION
Artesia Place Project**

Land Use	ITE Code	Unit	Trip Generation Rates ¹						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	220	DU	6.740	0.096	0.304	0.400	0.321	0.189	0.510
Small Office Building	712	KSF	14.390	1.369	0.301	1.670	0.734	1.426	2.160
Strip Retail Plaza (<40k)	822	KSF	54.450	1.416	0.944	2.360	3.295	3.295	6.590
Fast-Food Restaurant w/o Drive-thru	933	KSF	450.490	25.044	18.136	43.180	16.605	16.605	33.210
Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Use									
Multifamily Housing (Low-Rise)	80.000	DU	539	8	24	32	26	15	41
Small Office Building	2.443	KSF	35	3	1	4	2	3	5
Strip Retail Plaza (<40k)	4.407	KSF	240	6	4	10	15	15	30
Pass-by Trips (0% AM, 40% PM) ¹			-12	0	0	0	-6	-6	-12
Fast-Food Restaurant w/o Drive-thru	4.407	KSF	1,985	110	80	190	73	73	146
Pass-by Trips (0% AM, 43% PM) ¹			-62	0	0	0	-31	-31	-62
Internal Capture (5%)			-140	-6	-5	-11	-6	-5	-11
Net Project Trips			2,585	121	104	225	73	64	137

¹ Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

² Note: The Trip Generation Manual does not provide pass-by rates for daily trip generation. The daily pass-by trips shown are the sum of the AM and the PM pass-by trips.

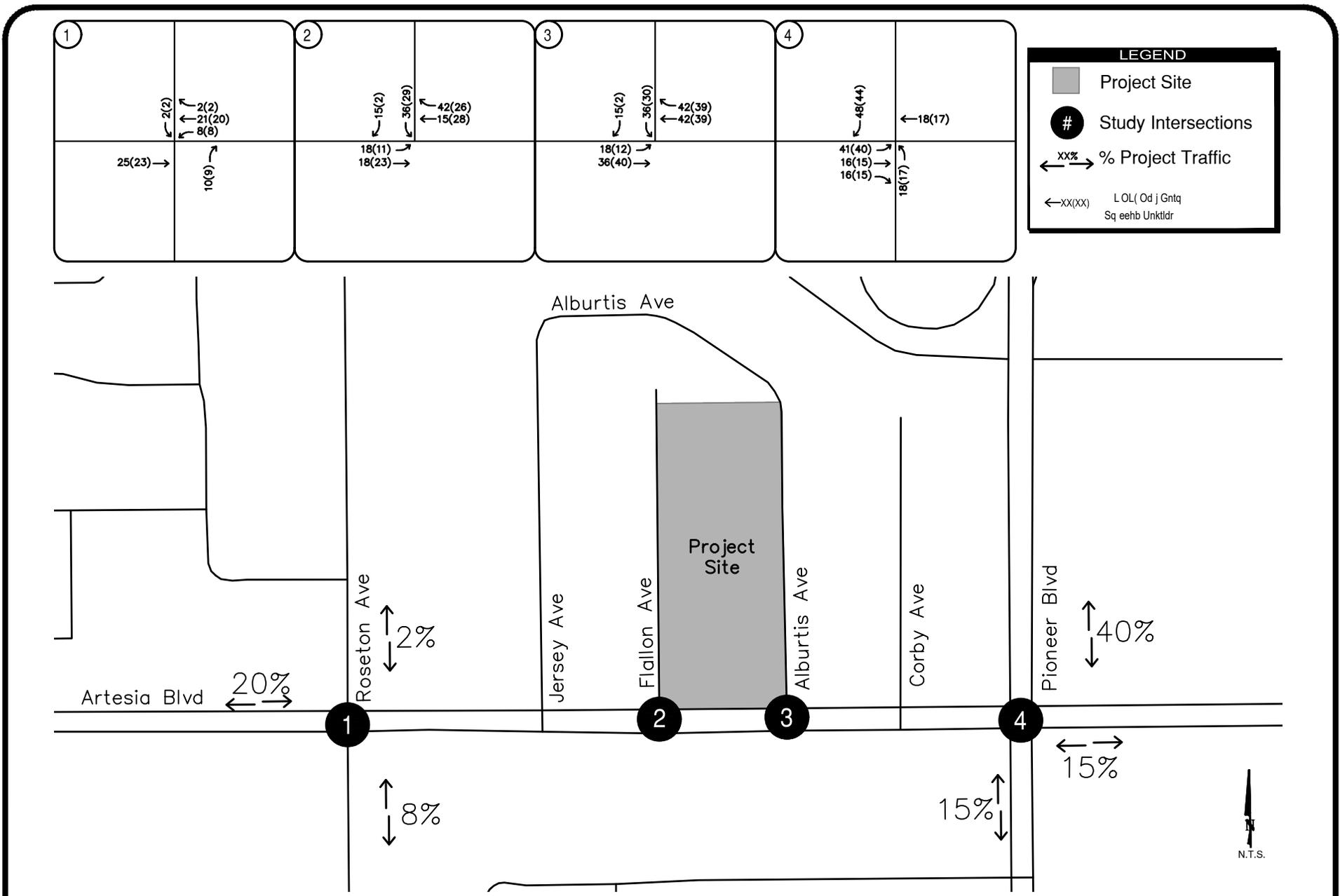


FIGURE 5 - Project Trip Distribution and Project-Related Intersection Traffic Volumes
Artesia Place Project



EXISTING (2022) PLUS PROJECT CONDITIONS

This section addresses the potential effects associated with adding Project-related trips to Existing (2022) Conditions traffic volumes. The Existing (2022) Plus Project Conditions scenario is a hypothetical scenario, which assumes that the Project would be fully implemented at the present time, with no other changes to area traffic volumes or to the street network serving the site. This analysis assumes Project development and full absorption of Project traffic on the circulation system at the present time. Because the Existing (2022) Plus Project Conditions scenario is only a hypothetical scenario, it is presented for informational purposes only, and is not used to assess Project effects or recommend improvements, if any.

Peak Hour Intersection Operations

The peak hour traffic volumes under Existing (2022) Plus Project Conditions are shown on **Figure 6**. **Table 5** provides the results of the Existing (2022) Plus Project Conditions intersection analysis and indicates all study intersections would operate at an acceptable LOS (LOS D or better), except the following study intersections would operate at an unacceptable LOS (LOS E or worse) during the PM peak hour under Existing (2022) Plus Project Conditions:

- #2 – Flallon Avenue at Artesia Boulevard: PM – LOS E
- #3 – Alburtis Avenue at Artesia Boulevard: PM – LOS E

Traffic signal warrant analyses were conducted for the above mentioned deficient unsignalized intersections, as discussed in the *Traffic Signal Warrant Analysis* Section below. Intersection analysis worksheets are provided in **Appendix C**.

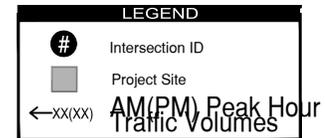
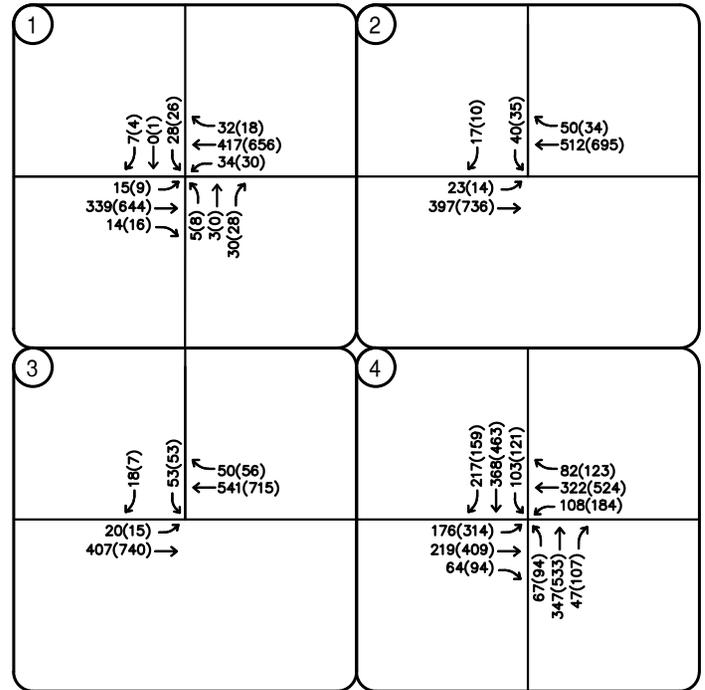
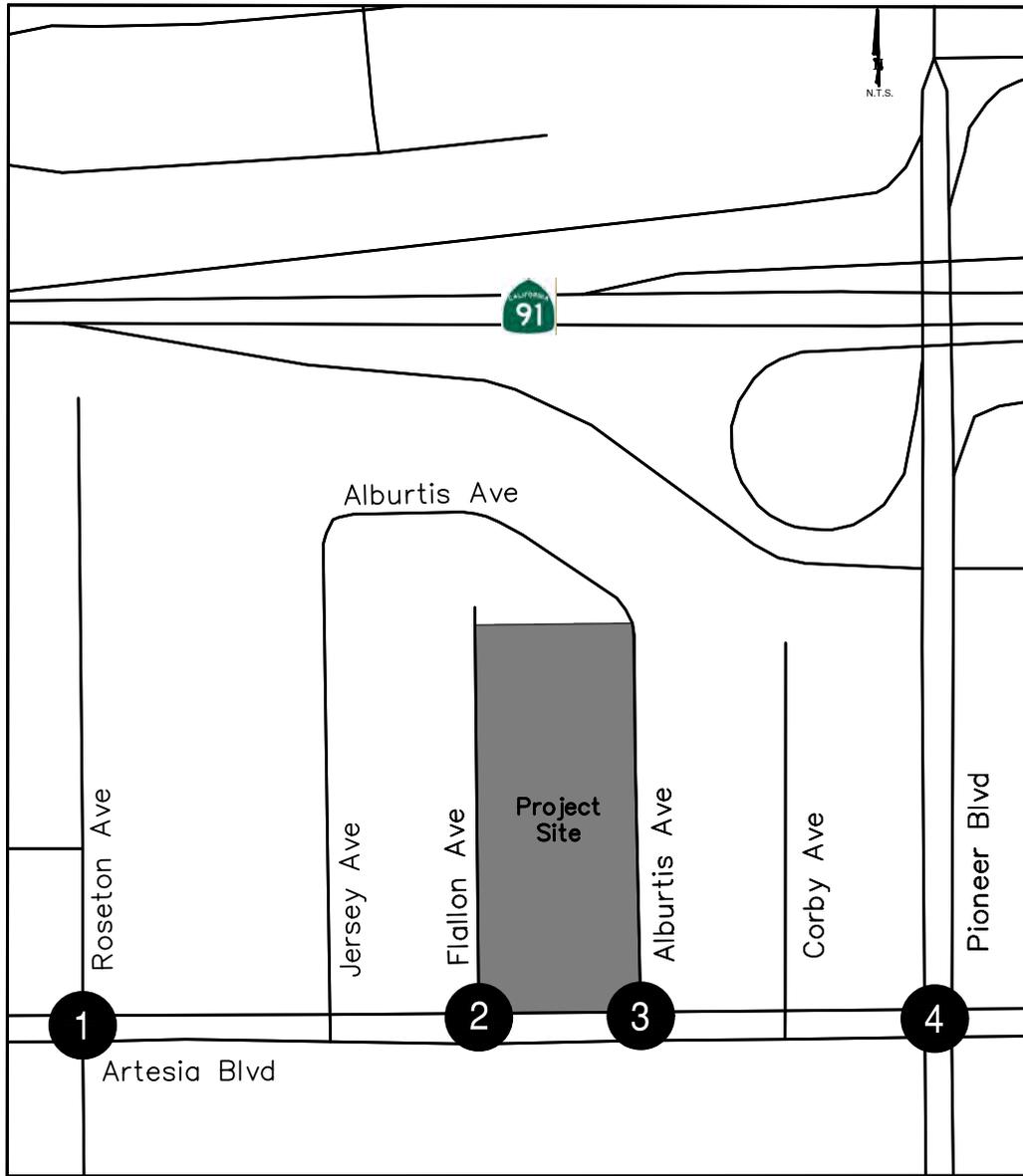


FIGURE 6 - Existing Plus Project Intersection Traffic Volumes
Artesia Place Project



**TABLE 5
SUMMARY OF INTERSECTION OPERATIONS
EXISTING PLUS PROJECT CONDITIONS**

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Change Delay	Project-Related Effect?	Without Project		With Project		Change Delay	Project-Related Effect?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Roseton Avenue at Artesia Boulevard	4.9	A	5.6	A	0.7	No	4.8	A	5.6	A	0.8	No
2	Flallon Avenue at Artesia Boulevard	15.4	C	19.9	C	4.5	No	19.8	C	40.6	E	20.8	Yes
3	Alburtis Avenue at Artesia Boulevard	17.3	C	22.7	C	5.4	No	26.2	D	42.4	E	16.2	Yes
4	Pioneer Boulevard at Artesia Boulevard	32.5	C	33.9	C	1.4	No	42.4	D	44.6	D	2.2	No

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

OPENING YEAR (2025) CONDITIONS

Street System

For Opening Year (2025) Conditions, no changes or improvements to the roadway network were assumed. The intersection lane configurations and traffic controls shown in **Figure 3**, also apply to Opening Year (2025) Conditions assumptions.

Traffic Volumes

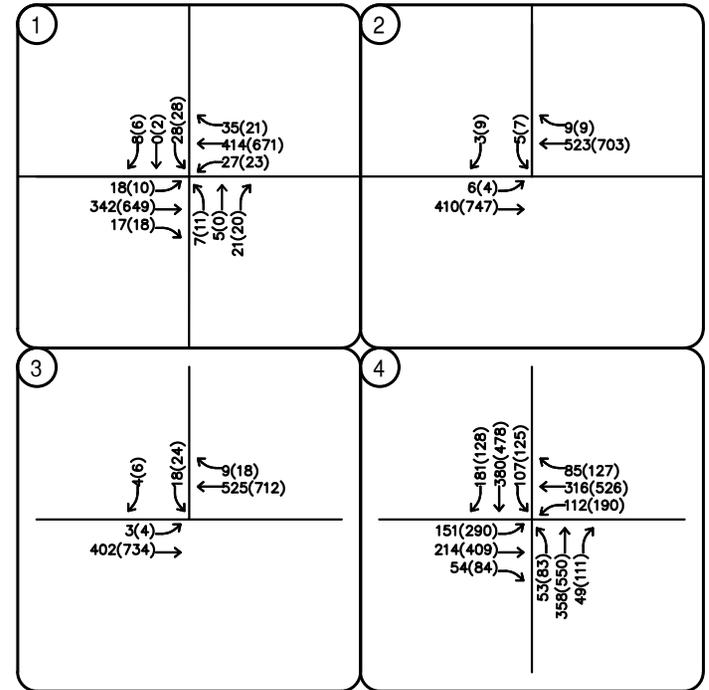
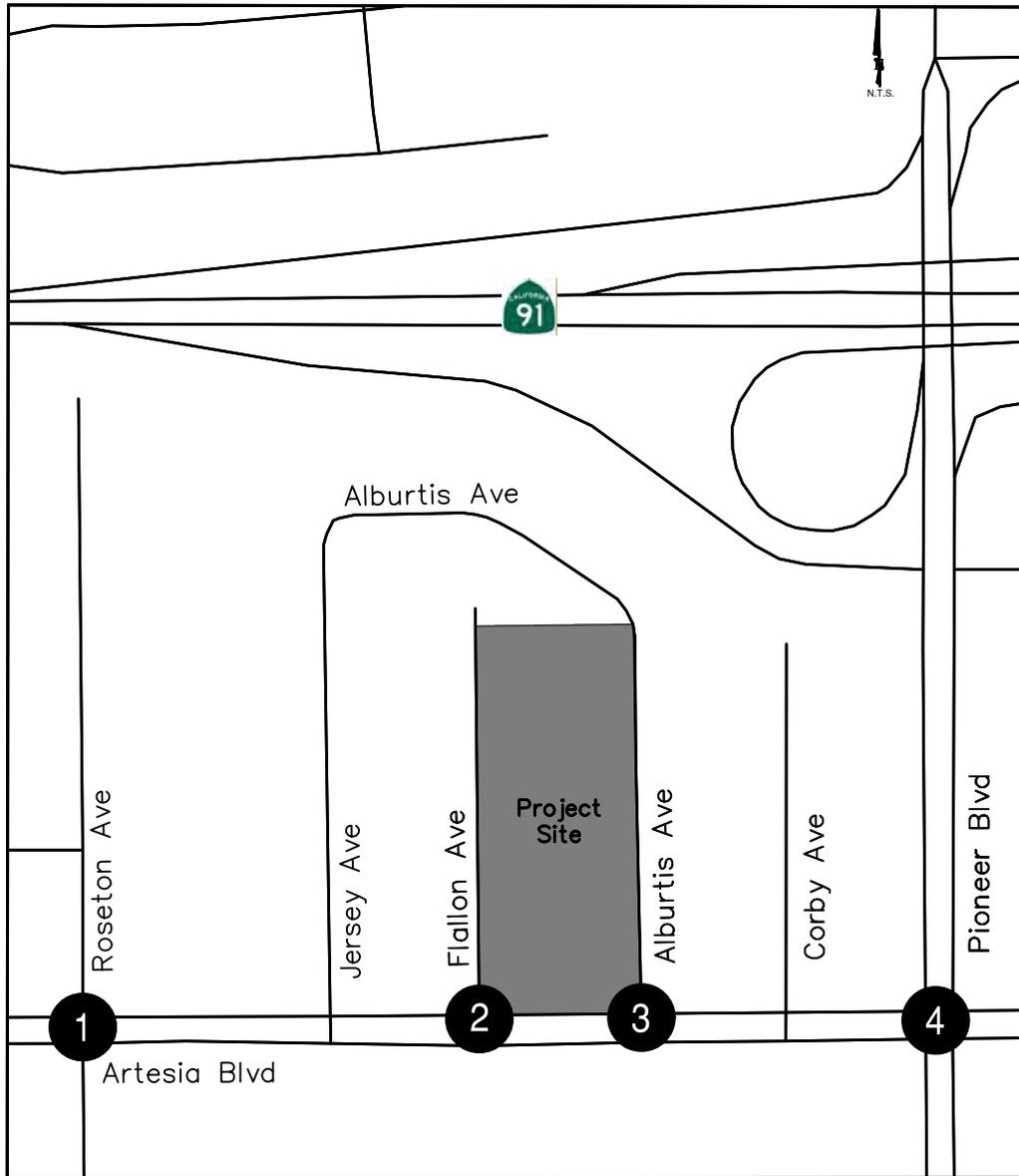
For Opening Year (2025) Conditions, an annual growth rate of 1% was applied to existing traffic volumes to account for background growth, consistent with other traffic studies performed within the City and Project vicinity. Additionally, information on cumulative projects being processed or constructed in the study area was obtained from City staff and assessed. Based on the locations and expected traffic generated within the study area by these projects, traffic volumes from the following projects were included in Opening Year (2025) Conditions:

- 30-unit residential townhomes located at 11504 Artesia Boulevard
- 4,758 square foot office/warehouse building located at 17172 Roeston Avenue

The resulting Opening Year (2025) Conditions peak hour turning movement volumes are shown in **Figure 7**. Cumulative project information and assumed traffic volumes (trip generation / distribution) added to the roadway network are provided in **Appendix E**.

Peak Hour Intersection Operations

Intersection LOS operations were evaluated at the study intersections under Opening Year (2025) Conditions using the analysis procedures and assumptions described above. **Table 6** provides the results of the Opening Year (2025) Conditions intersection analysis and indicates that all study intersections would operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours. Intersection analysis worksheets are provided in **Appendix C**.



LEGEND	
#	Intersection ID
■	Project Site
←XX(XX)	AM(PM) Peak Hour Traffic Volumes

FIGURE 7 - Opening Year Intersection Traffic Volumes
Artesia Place Project



**TABLE 6
SUMMARY OF INTERSECTION OPERATIONS
OPENING YEAR CONDITIONS**

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Roseton Avenue at Artesia Boulevard	S	5.4	A	5.6	A
2	Flallon Avenue at Artesia Boulevard	U	16.0	C	21.7	C
3	Alburtis Avenue at Artesia Boulevard	U	18.1	C	28.5	D
4	Pioneer Boulevard at Artesia Boulevard	S	33.3	C	44.1	D

Note:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

OPENING YEAR (2025) PLUS PROJECT CONDITIONS

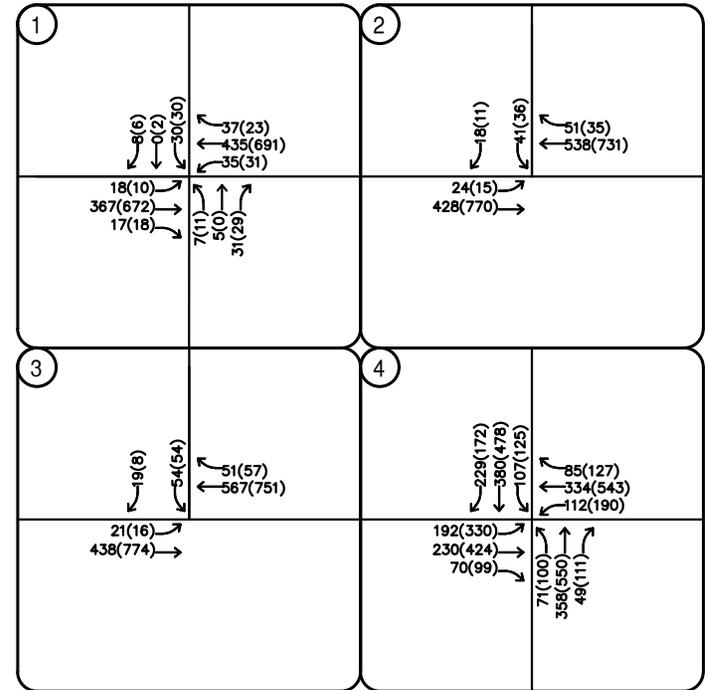
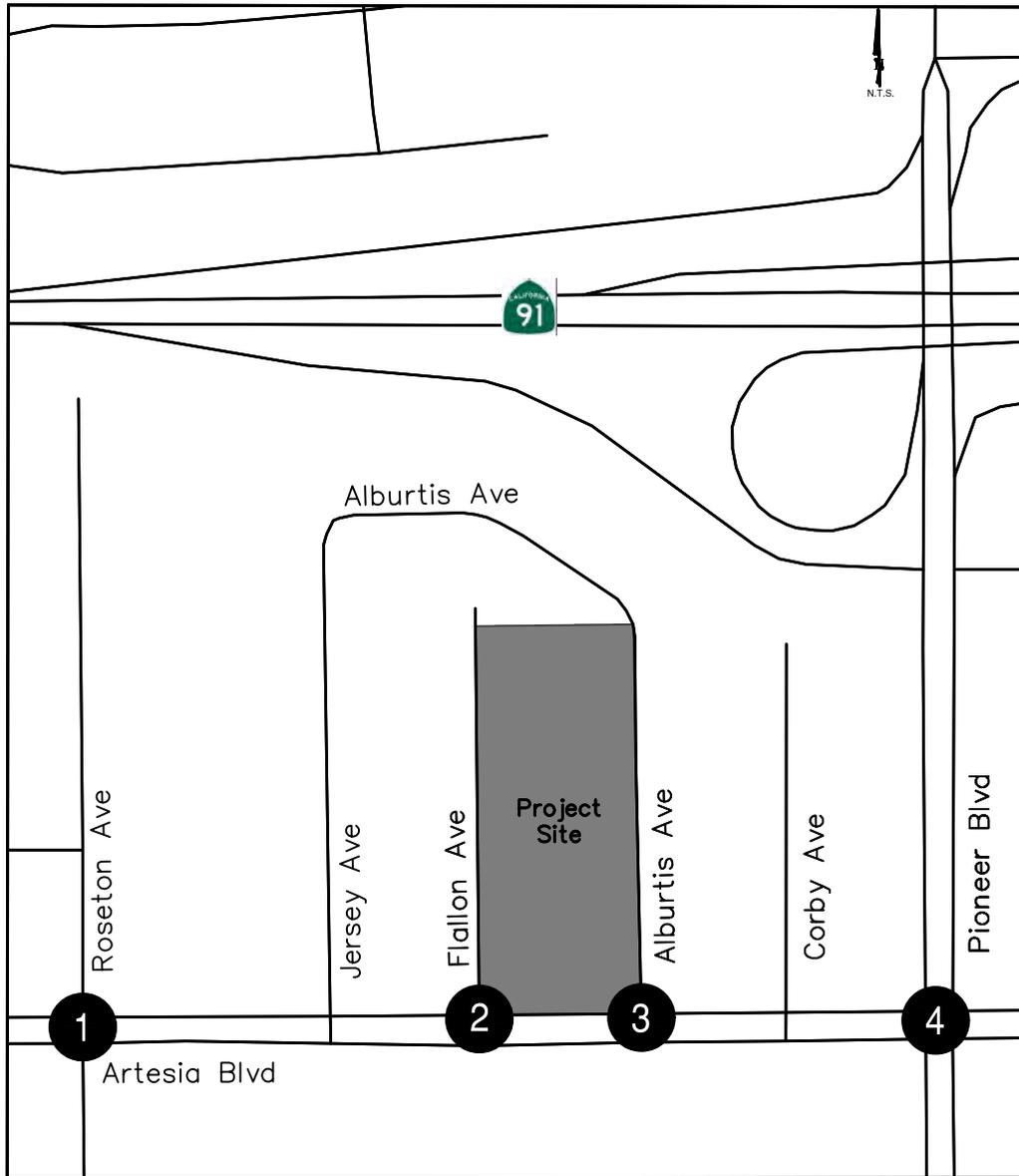
This section addresses the potential effects associated with adding Project-related trips to Opening Year (2025) Conditions traffic volumes.

Peak Hour Intersection Operations

Project-related trips were added to Opening Year (2025) Conditions traffic volumes to develop the volumes for the Opening Year (2025) Plus Project Conditions scenario. The resulting peak hour traffic volumes are shown on **Figure 8. Table 7** Provides the results of the Opening Year (2025) Plus Project Conditions intersection analysis and indicates all study intersections would operate at an acceptable LOS (LOS D), except the following study intersections would operate at an unacceptable LOS during the PM peak hour under Opening Year (2025) Plus Project Conditions:

- #2 – Flallon Avenue at Artesia Boulevard: PM – LOS E
- #3 – Alburdis Avenue at Artesia Boulevard: PM – LOS E

Traffic signal warrant analyses were conducted for the above mentioned deficient unsignalized intersections, as discussed in the *Traffic Signal Warrant Analysis* Section below. Intersection analysis worksheets are provided in **Appendix C**.



LEGEND	
#	Intersection ID
■	Project Site
←XX(XX)	AM(PM) Peak Hour Traffic Volumes

FIGURE 8 - Opening Year Plus Project Intersection Traffic Volumes
Artesia Place Project



**TABLE 7
SUMMARY OF INTERSECTION OPERATIONS
OPENING YEAR PLUS PROJECT CONDITIONS**

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Change in Delay	Sig Impact?	Without Project		With Project		Change in Delay	Sig Impact?
		Delay	LOS	Delay	LOS			ICU/ Delay	LOS	Delay	LOS		
1	Roseton Avenue at Artesia Boulevard	5.4	A	6.1	A	0.700	No	5.6	A	6.4	A	0.8	No
2	Flallon Avenue at Artesia Boulevard	16.0	C	21.3	C	5.300	No	21.7	C	46.4	E	24.7	Yes
3	Alburtis Avenue at Artesia Boulevard	18.1	C	24.9	C	6.800	No	28.5	D	48.7	E	20.2	Yes
4	Pioneer Boulevard at Artesia Boulevard	33.3	C	34.7	C	1.400	No	44.1	D	46.9	D	2.8	No

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

ADDITIONAL ANALYSIS

Traffic Signal Warrant Analysis

Traffic signals may be justified when traffic operations fall below acceptable LOS standards and when one or more signal warrants are satisfied. Per the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD), expected traffic volumes for the Opening Year (2025) Plus Project conditions were evaluated for the following unsignalized intersections:

- #2 – Flallon Avenue at Artesia Boulevard: PM – LOS E
- #3 – Alburdis Avenue at Artesia Boulevard: PM – LOS E

The warrants were conducted by evaluating Warrant 1 (8-Hour Volume) and Warrant 2 (4-Hour Volume). Since the Project is not an unusual land use nor attracts/discharges large numbers of vehicles over a short time, Warrant 3 (Peak Hour Volume) does not apply. Given the proximity of the subject intersections from adjacent signalized intersections/pedestrian crossings, distance from nearest school, and lack of existing traffic and history of collisions, Warrants 4 through 8 were also not evaluated.

The future traffic volumes evaluate were developed existing 24-hour roadway counts, the Project's expected trip generation / distribution, and weighted average Time of Day (TOD) distribution based on ITE⁶ information. The traffic signal warrant analysis worksheets and volume development calculations / assumptions are provided in **Appendix F**. Based on CA MUTCD, for Warrants 1 and 2, neither intersection satisfies the signal warrants under the Opening Year (2025) Plus Project conditions. **Table 8** shows a summary of the traffic signal warrant evaluation for the two locations.

Parking Assessment

Onsite Parking. Pursuant to Artesia Municipal Code (AMC) §9-2.1103: Parking Spaces Required, the Project would require 214 vehicle parking spaces to meet the parking demand generated by the proposed land uses (see **Table 9**). The Project proposes 216 vehicle parking spaces, as follows: for the residential uses, two spaces per garage for a total of 160 spaces and 20 guest spaces; and 36 parking spaces for the commercial uses (i.e., the live-work/shopkeeper units and retail uses).

Offsite (On-street) Parking. The Project would also provide approximately 20 marked offsite on-street parallel parking spaces along Flallon Avenue and Alburdis Avenue. These offsite on-street spaces are not proposed to meet the Project's parking demand (as described above), but are proposed as a community benefit.

⁶ *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2022.

**TABLE 8
SIGNAL WARRANT SUMMARY
Artesia Place**

CA-MUTCD Warrant	Flallon Avenue	Alburtis Avenue
1	NOT SATISFIED	NOT SATISFIED
2	NOT SATISFIED	NOT SATISFIED
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A

Offsite (Vehicle Storage). The fully improved, existing 0.2-acre parking lot located at 17212 Albutis Avenue would be made available to one of the eight proposed shopkeeper units for vehicle storage purposes. The Project does not propose to improve or modify this existing lot. The Specific Plan will detail the land uses permitted on this lot. Also, the spaces on this lot are not included in the Project's parking supply, as discussed above.

Rideshare Parking. An approximately three-space rideshare pickup/drop-off (e.g., Lyft or Uber) location is proposed at the Project site's southern portion, along Artesia Boulevard.

Bicycle Parking. The Project proposes 40 bicycle parking spaces.

Table 9 shows a breakdown of the parking spaces required and provided.

Site Access and Circulation

Vehicular access would be provided at 9 locations: 4 full-access driveways and 1 full-access private street along Flallon Avenue, and 3 full-access driveways and 1 full-access private street along Albutis Avenue. No access to the site is proposed along Artesia Boulevard. The private streets are 20 feet wide, which has been approved by the Los Angeles County Fire Department. All nine access locations would be stop-controlled at outbound approach only. Parking for the residential units would be accessed directly via the four private alley driveways along Flallon Avenue and three private alley driveways along Albutis Avenue. Parking for the commercial uses would be accessed via the two private streets along Flallon Avenue and Albutis Avenue. Striped bulb-outs would be added to the driveways on Albutis Avenue to facilitate line of sight for vehicles leaving the Project site.

The Project would provide pedestrian-oriented accessible walkways to all of its uses. A central pedestrian walkway is provided between the uses and also down the center of the Project site. The walkway leads through landscaped courtyards towards a recreational area and the pool. This pedestrian walkway, causing the private alleys terminate, thereby restricting traffic from "cutting-through" the Project site via the private alleys. The two private streets connect are separated by a drivable mountable raised "plaza". This feature is intended to enhance pedestrian safety, provide "traffic calming" and deter "cut-through" traffic. Sufficient space is provided on-site for vehicles to maneuver into and out of parking stalls and for the proposed internal circulation. Sidewalks would be provided on all Project site frontages and boundaries. The residential units that front the adjacent streets would include lockable gate access to the walkways that connect with the surrounding streets.

**TABLE 9
Parking Summary
Artesia Place Project**

Building / Use	Required Parking ¹	Proposed Parking
Residential (3-4 Bedroom = 76 DU; 2 Bedroom = 4 DU)		
Resident Spaces	158	160
Guest Spaces	26	20
Commercial (Total Retail SF = 8650 SF)	29	36
Total Parking Spaces	214	216

¹ Required Parking per G3Urban, Artesia Development, Conceptual Site Plan, dated July 18, 2022 (Figure 2) and based on City of Artesia Municipal Code, Section 9-2.1103

- Residential (3-4 Bedroom: 2 Parking Spaces / DU; 2 Bedroom: 1.5 Parking Spaces / DU;
- Guests: 0.33 Parking Spaces / DU)
- Commercial (1 Parking Space / 300 SF)

CONCLUSIONS AND RECOMMENDATIONS

Project Trip Generation

The Project is expected to generate 74 PM commuter peak hour pass-by trips (37 inbound / 37 outbound). The Project is estimated to generate a net total of 2,585 daily trips, with 224 trips (121 inbound / 104 outbound) during the AM commuter peak hour and 137 trips (73 inbound / 64 outbound) during the PM commuter peak hour.

Level Of Service Analysis Findings

The traffic operation analysis shows that the Project would degrade the LOS operations at intersections of Flallon Avenue / Artesia Boulevard and Alburdis Avenue / Artesia Boulevard during the PM peak hours (LOS E for the stop-controlled, southbound approach) under Existing (2022) Plus Project Conditions and Opening Year (2025) Plus Project Conditions. These delays are related to outbound traffic making the southbound left-turn movement onto Artesia Boulevards since they are required to wait for “gaps” in traffic for both the eastbound and westbound approaches.

Project Frontage and Access Recommendations

Vehicular access would be provided at 9 locations: 4 full-access driveways and 1 full-access private street along Flallon Avenue, and 3 full-access driveways and 1 full-access private street along Alburdis Avenue. All nine access locations would be stop-controlled at outbound approach only. Striped bulb-outs would be added to the driveways on Alburdis Avenue to facilitate line of sight for vehicles leaving the Project site. Consistent with the improvements proposed by Project, it is recommended that all 9 access locations are stop-controlled for the outbound approach. Other than these proposed stop controls, there are no further access recommendations.

The Project would provide pedestrian-oriented accessible walkways to all of its uses. Sidewalks would be provided on all Project site frontages and boundaries.

Offsite Recommendations

For the deficient intersections of Flallon Avenue / Artesia Boulevard and Alburdis Avenue / Artesia Boulevard, a traffic signal warrant analysis was conducted following CA MUTCD guidelines. Based on CA MUTCD, Warrants 1 and 2, neither intersection satisfies the signal warrants under the Opening Year (2025) Plus Project conditions. Therefore, it is not recommended to install traffic signal at either location.

The following are additional reasons supporting this recommendation:

- Both intersections are located within 700-feet of the adjacent signalized intersections. The Transportation Research Board (TRB)⁷ recommends a minimum spacing of 0.25-mile (1,320-feet) between signalized intersection for general signal operations. Research indicates that when the spacing between signals falls below this threshold, the traffic flow along the route is more likely to be disrupted, traffic speeds/capacity decrease, and delays/queues generally increase for the network.
- The delay of the worst movement is only expected to be 46.4 (LOS E) at Flallon Avenue and 48.7 (LOS E) at Alburdis Avenue during the PM peak hour during Opening Year (2025) Plus Project Conditions, just above acceptable thresholds.
- The roadway volumes are generally low along Artesia Boulevard, allowing opportunities for vehicles to enter intersection, or “gaps” in traffic on the major street. SimTraffic Analysis indicates that sufficient “gaps” in traffic would regularly occur, allowing this movement to be made.
- The adjacent signalized intersections are expected to regulate the flow of traffic along Artesia Boulevard, providing larger “gaps” in traffic when the Artesia Boulevard approaches are stopped.
- SimTraffic queuing analysis indicates that the 95th percentile queue would be less than 50-feet during the PM peak hour, further indicating that turn maneuvers could be made.
- There are relatively low speeds along Artesia Boulevard due to the adjacent signalized intersections.
- Vehicles would have the ability to make a southbound right-turn, then make U-turns at the Roseton Avenue signalized intersection, in order to travel east of the site, if necessary.
- The intersections are expected to operate acceptably (LOS C) during the AM peak hour under Opening Year (2025) Plus Project Conditions.

⁷ TRB Circular E-C019: Urban Street Symposium, Transportation Research Board

APPENDIX A

SCOPING AGREEMENT

Doug Benash

From: Doug Benash
Sent: Wednesday, June 22, 2022 9:11 AM
To: Garcia, Rita
Cc: Art Bashmakian; Fan, Jessie; Planning; Jay Shih; Chandrasekhar, Sowmya
Subject: Re: Artesia Boulevard Corridor Specific Plan Amendment - Intersections

Good morning,

To move the project forward, I recommend completing the warrant analysis for both "T" intersections and with capacity and delay impacts at the two signalized intersections based on the proposed development.

Let us know when we would expect the first draft of the study.

Thanks

Dbenash

Sent from my iPhone

On Jun 15, 2022, at 5:04 PM, Garcia, Rita <Rita.Garcia@kimley-horn.com> wrote:

Hi Doug-

To our knowledge, Okina has not yet returned to the office.

Lets plan on circling back/reevaluating early next week.

Thanks,

RG

<image004.jpg>

Rita Garcia | Project Manager

Kimley-Horn | 1100 W Town and Country Road, Suite 700, Orange, CA 92868

Direct: 714.786.6116 | Mobile: 714.345.7482 | Office: 714.939.1030

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From: Doug Benash <dbenash@infengr.com>

Sent: Wednesday, June 15, 2022 3:44 PM

To: Art Bashmakian <abashmakian@sagecrestplanning.com>; Fan, Jessie <Jessie.Fan@kimley-horn.com>; Planning <Planning@cityofartesia.us>

Cc: Jay Shih <jshih@infengr.com>; Garcia, Rita <Rita.Garcia@kimley-horn.com>; Chandrasekhar, Sowmya <Sowmya.Chandrasekhar@kimley-horn.com>

Subject: RE: Artesia Boulevard Corridor Specific Plan Amendment - Intersections

Some people who received this message don't often get email from dbenash@infengr.com. [Learn why this is important](#)

Good afternoon,

TECHNICAL MEMORANDUM

To: Okina Dor, Community Development Manager, City of Artesia

From: Sowmya Chandrasekhar, PE, TE, PTOE, Transportation Manager
Rita Garcia, Project Manager

Copy: Mitch Gardner, G3 Urban

Date: July 15, 2022

Subject: Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment)
Local Transportation Assessment – Scoping Agreement

INTRODUCTION

This document summarizes the scope of the Local Transportation Assessment (LTA) to be conducted by Kimley-Horn and Associates, Inc. ("Kimley-Horn") for the proposed Project.

PROJECT DESCRIPTION

The Project site consists of one approximately 3.3-acre parcel (APN 7035-016-064) located at 11709 Artesia Boulevard, in the City of Artesia (City). The Project site is generally bound by industrial uses to the north, Artesia Boulevard to the south, Alburdis Avenue to the east, and Fallon Avenue to the west.

The Project site is currently vacant. California Dairies, Inc., a dairy manufacturing plant previously occupied the Project site until it was demolished in 2022. The Project proposes a mixed-use development comprised of two portions- a commercial portion and a residential portion, connected by pedestrian walkways. The proposed development includes up to 8,650 square feet (SF) of commercial uses and 80 dwelling units (DU); **Attachment 1** illustrates the Conceptual Site Plan. The development would include the following components:

- One building with approximately 2,700 SF of commercial uses
- One mixed-use building with approximately 3,450 SF of commercial uses on the ground level with 4 carriage-type townhomes units above
- 8 shopkeeper units – commercial condominiums totaling 2,500 SF on the ground level with townhomes above
- 9 live/work townhome units
- 59 three-story townhome units

For the purpose of the LTA, it is anticipated that the 8,650 SF of commercial use would include 4,325 SF of retail and 4,325 SF of restaurant uses.

The Project proposes 216 vehicle parking spaces, as follows:

D3

- Residential Uses, 180 parking spaces: two spaces per garage for a total of 160 spaces and 20 guest spaces.
- Commercial Uses, 36 parking spaces (i.e., for the livework/shopkeeper units and for the retail uses).

Additionally, 40 bicycle parking spaces are proposed.

The Project would also provide 20 offsite onstreet parking spaces (parallel) along Flallon Avenue and Alburdis Avenue. These offsite onstreet spaces are not proposed to meet the Project's parking demand, but are instead proposed as a community benefit.

Construction is anticipated to occur as three continuous phases, with the Project opening year in 2025, which is when the development would be fully operational.

The Project site is designated Gateway Community Commercial and is zoned Artesia Boulevard Corridor Specific Plan. Hence, the Project requires a Zoning Code Text Amendment (Artesia Boulevard Corridor Specific Plan Amendment) to allow the proposed mixed-use development with residential uses. The requested approvals also include a Design Review and Vesting Tentative Tact Map.

STUDY AREA

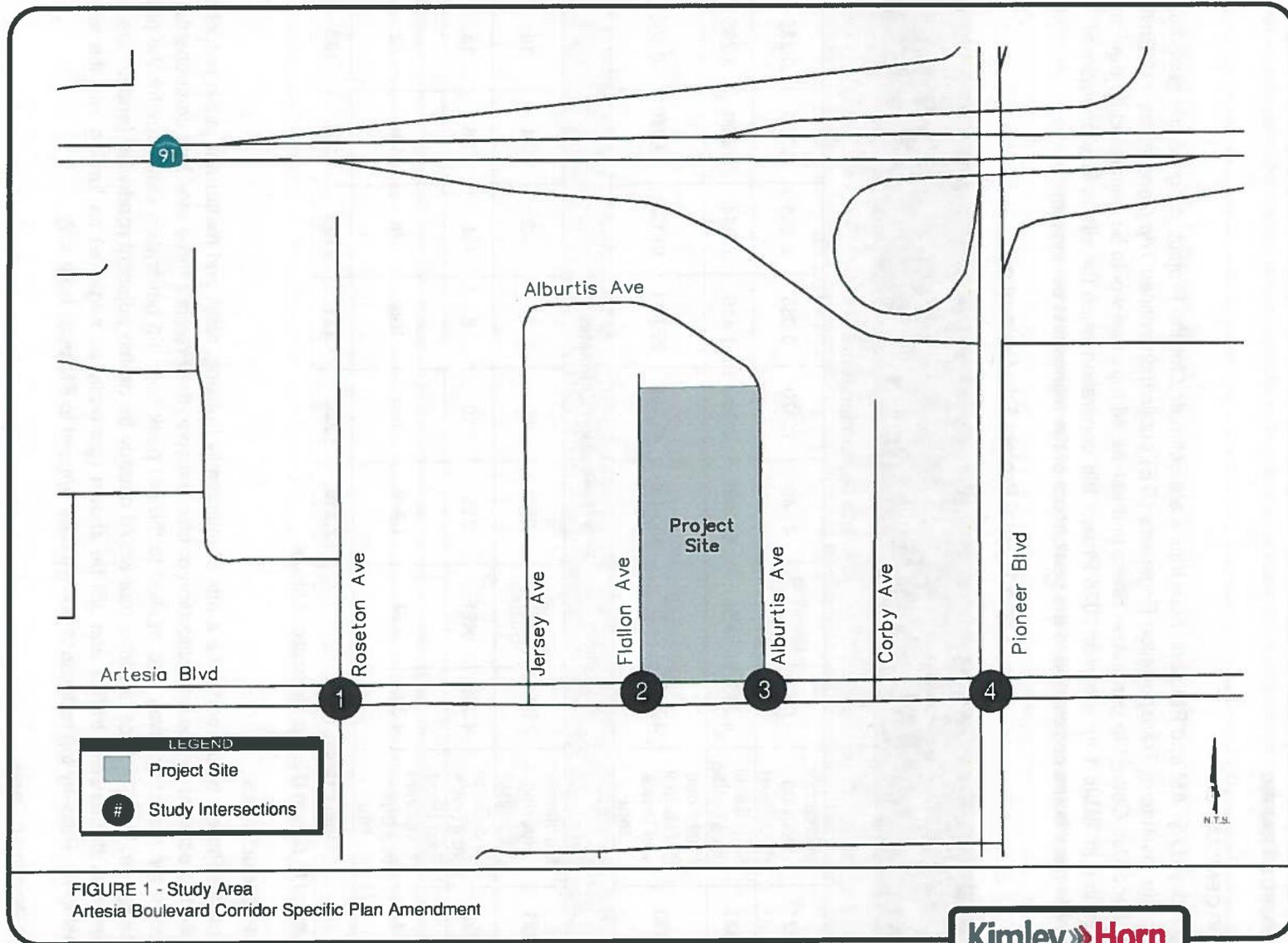
Based on review of the Project area, site, and access points, the following four study area intersections were identified for analysis of weekday peak-hour operations:

- Roseton Avenue and Artesia Boulevard – Signalized
- Pioneer Boulevard & Artesia Boulevard – Signalized
- Flallon Avenue & Artesia Boulevard – Unsignalized
- Alburdis Avenue & Artesia Boulevard – Unsignalized

It is noted that the two signalized intersections listed above were included as part of the Mobility and Circulation analysis for the Artesia Boulevard Corridor Specific Plan (2011). The two unsignalized intersections are minor road stop-controlled intersections. **Figure 1** illustrates the study area and Project site location in its regional setting. All study intersections are within the City of Artesia.

Peak periods (7 to 9 AM and 4 to 6 PM) turning movement counts were collected at the four study area intersections in June 2022. Twenty-four-hour bidirectional traffic volumes were also collected at each approach to the two unsignalized study intersections – at Flallon Avenue and Alburdis Avenue.





DP

PROJECT TRAFFIC

TRIP GENERATION

Weekday daily, AM and PM peak hour trips were estimated for the Project using the trip generation rates from the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation*, 11th Edition. The ITE Land Use Code, trip generation rates, and estimated trips that would be generated by the Project are presented in **Table 1** for the year 2025 Project trip generation when the site is fully operational. The AM and PM peak hours correspond to the peak hours of the adjacent street system.

Table 1: Total Project Trip Generation

ITE Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
Trip Generation Rates										
221	Multifamily Housing (Mid-Rise)	80	Dwelling Unit(s)	4.540	0.370	0.085	0.285	0.390	0.238	0.152
822	Strip Retail Plaza (<40k)	4.325	KSF	54.450	2.360	1.416	0.944	6.590	3.295	3.295
933	Fast-Food Restaurant w/o Drive-thru	4.325	KSF	450.490	43.180	25.044	18.136	33.210	16.605	16.605
Trip Generation Estimates										
221	Multifamily Housing (Mid-Rise)	80	Dwelling Unit(s)	363	30	7	23	31	19	12
822	Strip Retail Plaza (<40k)	4.325	KSF	235	10	6	4	28	14	14
933	Fast-Food Restaurant w/o Drive-thru	4.325	KSF	1,948	186	108	78	144	72	72
Total Project Trips				2,546	226	121	105	203	105	98

Source: 11th Edition ITE Trip Generation Manual.

TRIP REDUCTIONS

Since the Project would comprise a mix of multifamily housing, retail and restaurant, a trip reduction was applied to account for the internalization of trips between the Project's three land use components. Retail pass-by trip reductions was also applied to the net peak hour trip generation estimates for the proposed retail space. Pass-by trips are trips that would already be on the adjacent roadways (and so are already counted in the existing traffic) and will be shown (generally as negative) as turning into the site while passing-by. Pass-by trip reductions are typically applied to PM peak hour only.

NET PROJECT TRIPS

After applying the appropriate trip reductions to the ITE trip rates, the net Project trips are tabulated in **Table 2**.



Table 2: Net Project Trips

ITE Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
221	Multifamily Housing (Mid-Rise)	80	Dwelling Unit(s)	353	30	7	23	21	13	8
822	Strip Retail Plaza (<40k)	4.325	KSF	221	10	6	4	14	7	7
933	Fast-Food Restaurant w/o Drive-thru	4.325	KSF	1,900	186	108	78	96	48	48
Net Project Trips				2,474	226	121	105	131	68	63

TRIP DISTRIBUTION

Trip distribution assumptions for the Project trips were developed based on the existing roadway system and land uses in the Project vicinity. **Figure 2** shows the Project area, study intersections, and trip distribution estimates.

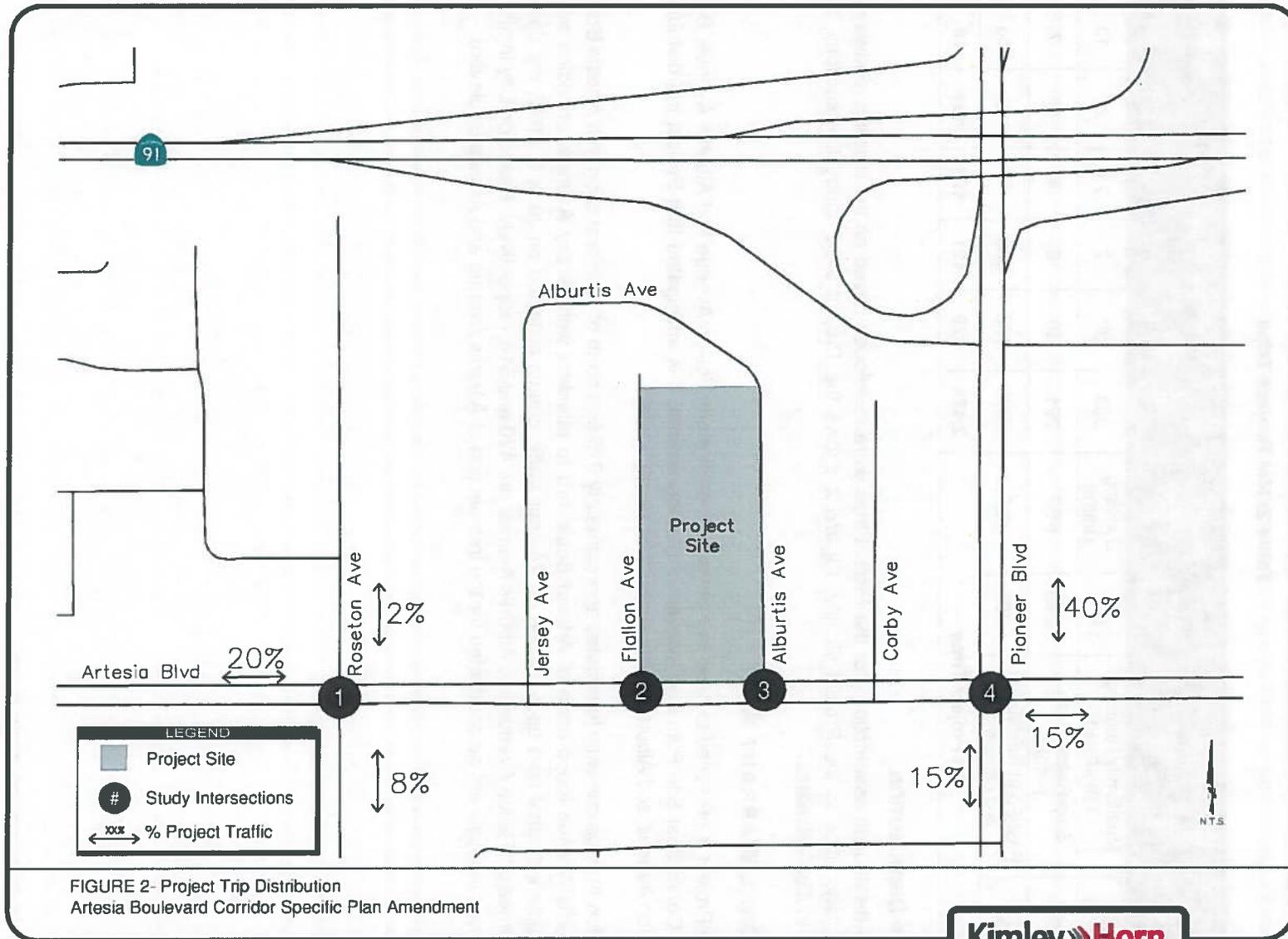
SIGNAL WARRANT ANALYSIS

The Project is proposed to have four driveways each along Flallon Avenue and Albutis Avenue. Based on the Conceptual Site Plan and location of parking spaces, it is anticipated that Project trip distribution on Flallon Avenue and Albutis Avenue would be nearly equal.

Flallon Avenue currently terminates approximately 675 feet north of its intersection with Artesia Boulevard. Albutis Avenue loops north of Artesia Boulevard to intersect with Jersey Avenue, providing access to multiple industrial land uses. Based on 24-hour traffic counts collected on June 6, 2022, the daily traffic volumes on Flallon Avenue and Albutis Avenue are 420 and 518, respectively. Based on City input,¹ signal warrant analysis will be conducted for the intersection of Albutis Avenue and Artesia Boulevard.

DB

¹ Discussed on July 12, 2022.



APPENDIX B

SIGNAL TIMING AND TRAFFIC DATA COLLECTION

INTERSECTION:

	Phase							
	1	2	3	4	5	6	7	8
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								

	Phase							
	1	2	3	4	5	6	7	8
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								

Yellow Change								
Red Clear								

Yellow Change								
Red Clear								

Walk								
Ped Clear - FDW								
Adv / Delay Walk								
PE Min Ped FDW								

Walk								
Ped Clear - FDW								
Adv / Delay Walk								
PE Min Ped FDW								

Type 3 Disconnect								
Added per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								

Type 3 Disconnect								
Added per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								

Phase Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

Alternate Timing - Bank 3

INTERSECTION:

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	
Delay	
Clear Time	
Railroad - 1	

Clear Phases	
Limited Service Phases	
Delay	
Clear Time	
Railroad - 2	

Railroad Preempt Parameters

	Delay	Clear	Clear Phases
EV - A			2, 3, 6
EV - B			4, 7
EV - C			6, 7
EV - D			8, 9
Emergency Vehicle Preempt			

SE - 1	
SE - 2	
EV - A	
EV - B	
EV - C	
EV - D	
Preempt Priority	

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence - 1

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence - 2

Transition Type	
Coord Extra Functions	
Phase 1 - Minimum	
Phase 2 - Minimum	
Phase 3 - Minimum	
Phase 4 - Minimum	
Phase 5 - Minimum	
Phase 6 - Minimum	
Phase 7 - Minimum	
Phase 8 - Minimum	

Coordination - General

Note:
The Ring-Barrier Sum
of these Minimums
will be the Minimum
Cycle Length
During Transition

Transition Type

- 0 X = Shortway
- 1 X = Lengthen
- 2 X = Shorten
- X 1 thru X 4 = Number of Cycles to get "In Step"

Coord Extra

- 1 = Programmed Walk Time for Sync Phases
- 2 = Always Terminate Sync Phase Peds

	1	2	3	4	5	6	7	8	9
Cycle									
Offset - 1									
Offset - 2									
Offset - 3									
Zone Offset									
Ring Offset									
Hold Release									
Ped Adjust									
Force Off - 1									
Force Off - 2									
Force Off - 3									
Force Off - 4									
Force Off - 5									
Force Off - 6									
Force Off - 7									
Force Off - 8									

Coordination - Cycle, Offsets, & Force Offs

	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End									
Perm 1 - Veh Phases									
Perm 1 - Ped Phases									
Perm 2 - Begin									
Perm 2 - End									
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin									
Perm 3 - End									
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases									
Lag Phases									
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

INTERSECTION:

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number								
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance								
Yellow Change								
Red Clearance								

Overlaps

	AND Gates			
	1	2	3	4
Input - A				
Input - B				
Output				

	NAND Gates			
	1	2	3	4
Input - A				
Input - B				
Output				

	2 Input - OR Gates					
	1	2	3	4	5	6
Input - A						
Input - B						
Output						

	4 Input - OR Gates	
	7	8
Input - A		
Input - B		
Input - C		
Input - D		
Output		

	NOT Gates (Inverters)			
	1	2	3	4
Input				
Output				

	DELAY Gates					
	1	2	3	4	5	6
Input						
Delay Time						
Output						

INTERSECTION:

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmmts	Detector Attributes	Detector Set Assignments
1	39			2	4,5,7	1,2,3 8
2	40			6	4,5,7	1,2,3 8
3	41	10		4	4,5,7	1,2,3 8
4	42			8	4,5,7	1,2,3 8
5	43			2	4,5,7	1,2,3 8
6	44			6	4,5,7	1,2,3 8
7	45	10		4	4,5,7	1,2,3 8
8	46			8	4,5,7	1,2,3 8
9	47			2	6,7	1,2,3 8
10	48			6	6,7	1,2,3 8
11	49			4	6,7	1,2,3 8
12	50			8	6,7	1,2,3 8
13	55			5	4,5,7	1,2,3 8
14	56			1	4,5,7	1,2,3 8
15	57			7	4,5,7	1,2,3 8
16	58			3	4,5,7	1,2,3 8
17	59			5	4,5,7	1,2,3 8
18	60			1	4,5,7	1,2,3 8
19	61			7	4,5,7	1,2,3 8
20	62			3	4,5,7	1,2,3 8
21	63			2	4,5,7	1,2,3 8
22	64			6	4,5,7	1,2,3 8
23	65			4	4,5,7	1,2,3 8
24	66			8	4,5,7	1,2,3 8
25	67			2	2	1,2,3 8
26	68			6	2	1,2,3 8
27	69			4	2	1,2,3 8
28	70			8	2	1,2,3 8
29	76			2	4,5,7	1,2,3 8
30	77			6	4,5,7	1,2,3 8
31	78			4	4,5,7	1,2,3 8
32	79			8	4,5,7	1,2,3 8

Detector Assignments

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Detector Assignments

- 1 = Detector Set 1
- 2 = Detector Set 2
- 3 = Detector Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

C-1 Pin #	General Inputs
81	Flash Sense
	External Permit - 1
	External Permit - 2
	Exclusive Ped Omit
	Max. Term Inhibit
	Max. 2
	External Lag Phases
	External Max. Recall
82	Stop Time
	Manual Control Enable
	Manual Cont. Advance
	External Min. Recall

General Inputs

C-1 Pin #	Coordination Plan Inputs
	Plan 1
	Plan 2
	Plan 3
	Plan 4
	Plan 5
	Plan 6
	Plan 7
	Plan 8
	Plan 9
	Free
	Flash

Coordination Plan Inputs

C-1 Pin #	Preempt Inputs
51	Railroad - 1
52	Railroad - 2
	Special Event - 1
	Special Event - 2
	Gate Down
71	EV - A
72	EV - B
73	EV - C
74	EV - D

Preempt Inputs

C-1 Pin #	Bank, Set, & Plan Inputs
	Phase Bank - 2
	Phase Bank - 3
	Detector Set - 2
	Detector Set - 3
	Overlap Vehicle Set - 2
	Overlap Vehicle Set - 3
	Interval Signal Plan - 2
	Interval Signal Plan - 3
	Interval Signal Plan - 4

Bank, Set, & Plan Inputs

C-1 Pin #	Alarm Inputs
	Door Ajar
	UPS Battery
	UPS Power
	Cabinet Temperature

Alarm Inputs

C-1 Pin #	Inputs
	Alarm - 1
	Alarm - 2
	Alarm - 3
	Alarm - 4

INTERSECTION:

C-1 Pin #
Advance Warning - 1
Advance Warning - 2
Detector Failure
Flasher - Alternating 1
Flasher - Alternating 2
Fast Flasher
On Line
Exclusive - Walk
Exclusive - Don't Walk

General Outputs

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Time of Day Outputs

C-1 Pin #
Plan - 1
Plan - 2
Plan - 3
Plan - 4
Plan - 5
Plan - 6
Plan - 7
Plan - 8
Plan - 9
Free
Flash

Coordination Plan Out

Ped Phase
Ped 2-P Loadswitch
Ped 4-P Loadswitch
Ped 6-P Loadswitch
Ped 8-P Loadswitch

Ped Loadswitch Assignment

C-1 Pin #
Dial - 2
Dial - 3
Offset - 1
Offset - 2
Offset - 3
Free
Flash

Seven Wire Outputs

C-1 Pin #	On	Flash
Railroad - 1		
Railroad - 2		
Special Event - 1		
Special Event - 2		
Preempt Failure		
EV - A		
EV - B		
EV - C		
EV - D		
Any Preempt		

Preemption Outputs

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Special Event Outputs

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Special Function Output

Phase Number	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								
Walk								
Don't Walk								

Phase Output Redirection

Overlap Number	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								

Overlap Output Redirection

INTERSECTION:

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Time of Day Function Events

TOD Functions

- 0 = Permitted Phases
- 1 = Red Lock
- 2 = Yellow Lock
- 3 = Vehicle Min Recall
- 4 = Ped Recall
- 5 =
- 6 = Rest In Walk
- 7 = Red Rest
- 8 = Double Entry
- 9 = Vehicle Max Recall
- 10 = Soft Recall
- 11 = Max Extension 2
- 12 = Conditional Service
- 13 = Lag Free Phases
- 14, Bit 1 = Local Override
- 14, Bit 4 = Disable Det Off Monitoring
- 15 = TOD Outputs

INTERSECTION:

#	Holiday Type	Day	Month	Year
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1				
2				
3				
4				
5				
6				
7				
8				

Season Definitions

INTERSECTION:

Red Start Time	5.0
Yellow Start Phases	
First Green Phases	2, 6
Startup Vehicle Calls	2, 4, 6
Startup Ped Calls	2, 4

Startup

Max ON Time	
Max OFF Time	
Chatter	

Detector Check

Phase Number	Sign 1	Sign 2
Time Before Yellow		

Advance Warning Signs

Flash Entry Phases	
Flash Phases Yellow	
Flash Overlaps Yellow	
Flash Type	

Flash Setup

Exclusive Phases	
Protect / Permissive	
Disable Yellow Range	
Extra One	1, 3, 5
Lag Phases - Free	2, 4, 6, 8

Configuration

Permitted Phases	2, 4, 6
Restricted Phases	
Disable Overlap Range	
Extra Two	

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evt 1 - Lid Serv Interval	
Spec Evt 2 - Lid Serv Interval	
Red Revert	5.0

Miscellaneous

Spring Month (Begin)	
Spring Week (Begin)	
Fall Month (End)	
Fall Week (End)	

Daylight Savings Time

Manual Plan	0
Manual Offset	

Manual

- Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One

- 1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two

- 1 =
2 =
3 = Disable Min Walk
4 = QuickNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

Address	
Area Number	
Area Address	
IP Port	
IP Address	
Subnet Mask	
Gateway	

Ethernet Port Address

Flash Type

- 0 = All On - Off (12345678 - 0)
1 = Main - Side (1256 - 3478)
2 = Ping Pong (1234 - 5678)
3 = Ring Pairs (1638 - 5247)

Address	
Area Number	
Area Address	
Comm Time Out	
CTS Delay	
RTS Hold	
Baud Rate	
Data Format	

Communications Parameters

Port 1	Port 2	Port 3	Port 4

utilities, misc

INTERSECTION:

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								
Clear								
Yellow Change								
Red Clear								
Pedestrian Timing								
Walk								
Ped Clear - FDW								
Adv / Delay Walk								
PE Min Ped FDW								
Volume Density								
Type 3 Disconnect								
Added per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								

Phase Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								
Clear								
Yellow Change								
Red Clear								
Pedestrian Timing								
Walk								
Ped Clear - FDW								
Adv / Delay Walk								
PE Min Ped FDW								
Volume Density								
Type 3 Disconnect								
Added per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

Alternate Timing - Bank 3

INTERSECTION:

6-Miscellaneous Pre-empt
 Max EV Pre-empt 60

Clear Phases	
Delay	
Clear Time	
Railroad - 1	

Clear Phases	
Limited Service Phases	
Delay	
Clear Time	
Railroad - 2	

Railroad Preempt Parameters

	Delay	Clear	Clear Phases
EV - A	5	2	2,5
EV - B	5	2	4,7
EV - C	5	2	1,6
EV - D	5	2	3,8

SE - 1	1
SE - 2	1
EV - A	0
EV - B	0
EV - C	0
EV - D	0
Preempt Priority	

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence - 1

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence - 2

INTERSECTION:

Transition Type	0.3
Coord Extra Functions	
Phase 1 - Minimum	15
Phase 2 - Minimum	15
Phase 3 - Minimum	15
Phase 4 - Minimum	15
Phase 5 - Minimum	15
Phase 6 - Minimum	15
Phase 7 - Minimum	15
Phase 8 - Minimum	15
Coordination - General	

Note:
The Ring-Barter Sum of these Minimums will be the Minimum Cycle Length During Transition

Transition Type
0.X = Shortway
1.X = Lengthen
2.X = Shorten
X.1 thru X.4 = Number of Cycles to get "in Step"

Coord Extra
1 = Programmed Walk Time for Sync Phases
2 = Always Terminate Sync Phase Peds

	1	2	3	4	5	6	7	8	9
Cycle									
Offset - 1									
Offset - 2									
Offset - 3									
Zone Offset									
Ring Offset									
Hold Release									
Ped Adjust									
Force Off - 1									
Force Off - 2									
Force Off - 3									
Force Off - 4									
Force Off - 5									
Force Off - 6									
Force Off - 7									
Force Off - 8									

Coordination - Cycle, Offsets, & Force Offs

	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End									
Perm 1 - Veh Phases									
Perm 1 - Ped Phases									
Perm 2 - Begin									
Perm 2 - End									
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin									
Perm 3 - End									
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases									
Lag Phases									
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

INTERSECTION:

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number								
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance								
Yellow Change								
Red Clearance								

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A				
Input - B				
Output				

AND Gates

	NAND 1	NAND 2	NAND 3	NAND 4
Input - A				
Input - B				
Output				

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A						
Input - B						
Output						

OR Gates

	OR 7	OR 8
Input - A		
Input - B		
Input - C		
Input - D		
Output		

OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input				
Output				

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input						
Delay Time						
Output						

DELAY Gates

INTERSECTION:

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignments	Detector Attributes	Detector Set Assignments
1	39			2	4,5,7	1,2,3 8
2	40			6	4,5,7	1,2,3 8
3	41			4	4,5,7	1,2,3 8
4	42			8	4,5,7	1,2,3 8
5	43			2	4,5,7	1,2,3 8
6	44			6	4,5,7	1,2,3 8
7	45			4	4,5,7	1,2,3 8
8	46			8	4,5,7	1,2,3 8
9	47			2	6,7	1,2,3 8
10	48			6	6,7	1,2,3 8
11	49			4	6,7	1,2,3 8
12	50			8	6,7	1,2,3 8
13	55			5	4,5,7	1,2,3 8
14	56			1	4,5,7	1,2,3 8
15	57			7	4,5,7	1,2,3 8
16	58			3	4,5,7	1,2,3 8
17	59			5	4,5,7	1,2,3 8
18	60			1	4,5,7	1,2,3 8
19	61			7	4,5,7	1,2,3 8
20	62			3	4,5,7	1,2,3 8
21	63			2	4,5,7	1,2,3 8
22	64			6	4,5,7	1,2,3 8
23	65			4	4,5,7	1,2,3 8
24	66			8	4,5,7	1,2,3 8
25	67			2	2	1,2,3 8
26	68			6	2	1,2,3 8
27	69			8	2	1,2,3 8
28	70			8	2	1,2,3 8
29	76			2	4,5,7	1,2,3 8
30	77			6	4,5,7	1,2,3 8
31	78			4	4,5,7	1,2,3 8
32	79			8	4,5,7	1,2,3 8

Detector Assignments

5) Inputs

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Detector Assignments

- 1 = Detector Set 1
- 2 = Detector Set 2
- 3 = Detector Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

C-1 Pin #	General Inputs
81	Flash Sense
	External Permit - 1
	External Permit - 2
	Exclusive Ped Omit
	Max. Term Inhibit
	Max. 2
	External Lag Phases
	External Max. Recall
82	Stop Time
	Manual Control Enable
	Manual Cont. Advance
	External Min. Recall

General Inputs

C-1 Pin #	Preempt Inputs
51	Railroad - 1
52	Railroad - 2
	Special Event - 1
	Special Event - 2
	Gate Down
71	EV - A
72	EV - B
73	EV - C
74	EV - D

Preempt Inputs

5) Inputs

C-1 Pin #	Alarm Inputs
	Door Ajar
	UPS Battery
	UPS Power
	Cabinet Temperature

Alarm Inputs

C-1 Pin #	Coordination Plan Inputs
	Plan 1
	Plan 2
	Plan 3
	Plan 4
	Plan 5
	Plan 6
	Plan 7
	Plan 8
	Plan 9
	Free
	Flash

Coordination Plan Inputs

C-1 Pin #	Bank, Set, & Plan Inputs
	Phase Bank - 2
	Phase Bank - 3
	Detector Set - 2
	Detector Set - 3
	Overlap Vehicle Set - 2
	Overlap Vehicle Set - 3
	Interval Signal Plan - 2
	Interval Signal Plan - 3
	Interval Signal Plan - 4

Bank, Set, & Plan Inputs

C-1 Pin #	Alarm Inputs
	Alarm - 1
	Alarm - 2
	Alarm - 3
	Alarm - 4

Alarm Inputs

INTERSECTION:

C-1 Pin #
Advance Warning - 1
Advance Warning - 2
Detector Failure
Flasher - Alternating 1
Flasher - Alternating 2
Fast Flasher
On Line
Exclusive - Walk
Exclusive - Don't Walk

General Outputs

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Time of Day Outputs

C-1 Pin #	On	Flash
Railroad - 1		
Railroad - 2		
Special Event - 1		
Special Event - 2		
Preempt Failure		
EV - A		
EV - B		
EV - C		
EV - D		
Any Preempt		

Preemption Outputs

C-1 Pin #
Dial - 2
Dial - 3
Offset - 1
Offset - 2
Offset - 3
Free
Flash

Seven Wire Outputs

Phase Number	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								
Walk								
Don't Walk								

Phase Output Redirection

C-1 Pin #
Plan - 1
Plan - 2
Plan - 3
Plan - 4
Plan - 5
Plan - 6
Plan - 7
Plan - 8
Plan - 9
Free
Flash

Coordination Plan Out

Ped Loadswitch	Ped Phase
Ped 2-P Loadswitch	2
Ped 4-P Loadswitch	4
Ped 6-P Loadswitch	6
Ped 8-P Loadswitch	8

Ped Loadswitch Assignment

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Special Event Outputs

C-1 Pin #
Output - 1
Output - 2
Output - 3
Output - 4
Output - 5
Output - 6
Output - 7
Output - 8

Special Function Output

Overlap Number	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								

Overlap Output Redirection

INTERSECTION:

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Time of Day Function Events

TOD Functions

- 0 = Permitted Phases
- 1 = Red Lock
- 2 = Yellow Lock
- 3 = Vehicle Min Recall
- 4 = Ped Recall
- 5 =
- 6 = Rest In Walk
- 7 = Red Rest
- 8 = Double Entry
- 9 = Vehicle Max Recall
- 10 = Soft Recall
- 11 = Max Extension 2
- 12 = Conditional Service
- 13 = Lag Free Phases
- 14, Bit 1 = Local Override
- 14, Bit 4 = Disable Det Off Monitoring
- 15 = TOD Outputs

INTERSECTION:

#	Holiday Type	Day	Month	Year
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Holiday Time of Day Function Events

Season #	Start		End	
	Month	Day	Month	Day
1				
2				
3				
4				
5				
6				
7				
8				

Season Definitions

INTERSECTION:

Red Start Time	5.0
Yellow Start Phases	4,8
First Green Phases	2,6
Startup Vehicle Calls	12345678
Startup Ped Calls	2,4,6,8

Startup

Max ON Time	
Max OFF Time	
Chatter	

Detector Check

Phase Number	Sign
Time Before Yellow	1
	2

Advance Warning Signs

Flash Entry Phases	
Flash Phases Yellow	
Flash Overlaps Yellow	
Flash Type	

Flash Setup

Exclusive Phases	
Protect / Permissive	
Disable Yellow Range	
Extra One	1,3,5
Lag Phases - Free	2,4,6,8

Configuration

Permitted Phases	12345678
Restricted Phases	
Disable Overlap Range	
Extra Two	

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evtnt 1 - Ltd Serv Interval	
Spec Evtnt 2 - Ltd Serv Interval	
Red Revert	2.0

Miscellaneous

Spring Month (Begin)	3
Spring Week (Begin)	2
Fall Month (End)	11
Fall Week (End)	1

Daylight Savings Time

Manual Plan	14
Manual Offset	

Manual

Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two
1 =
2 =
3 = Disable Min Walk
4 = QuickNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

Address	0
Area Number	1
Area Address	1
IP Port	8081
IP Address	192.168.2.179
Subnet Mask	255.255.255.0
Gateway	192.168.2.1

Ethernet Port Address

Address	0
Area Number	1
Area Address	1
Comm Time Out	5
CTS Delay	615044
RTS Hold	3840
Baud Rate	7
Data Format	

Communications Parameters

Flash Type
0 = All On - Off (12345678 - 0)
1 = Main - Side (1256 - 3478)
2 = Ping Pong (1234 - 5678)
3 = Ring Pairs (1638 - 5247)

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Jun 9, 22

LOCATION:
NORTH & SOUTH: Artesia
EAST & WEST: Flallon
Artesia

PROJECT #: SC3504
LOCATION #: 1
CONTROL: STOP S

NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼	
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Add U-Turns to Left Turns

LANES:	NORTHBOUND Flallon			SOUTHBOUND Flallon			EASTBOUND Artesia			WESTBOUND Artesia			TOTAL
	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 1	ET 2	ER X	WL X	WT 2	WR 0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	7:00 AM	0	0	0	1	0	0	0	51	0	0	75	2	129
	7:15 AM	0	0	0	1	0	0	1	55	0	0	84	3	144
	7:30 AM	0	0	0	2	0	0	0	54	0	0	98	3	157
	7:45 AM	0	0	0	1	0	0	0	71	0	0	102	3	177
	8:00 AM	0	0	0	0	0	0	1	75	0	0	109	1	186
	8:15 AM	0	0	0	1	0	0	2	75	0	0	115	1	194
	8:30 AM	0	0	0	2	0	0	0	87	0	0	109	4	202
	8:45 AM	0	0	0	0	0	1	1	107	0	0	118	1	228

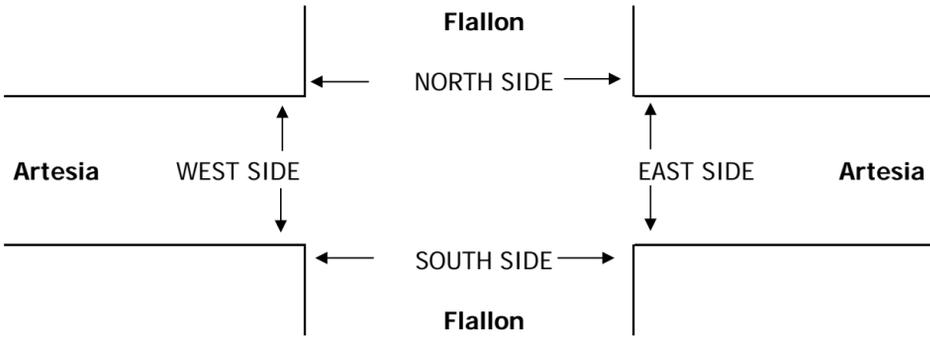
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	3	0	3

VOLUMES	0	0	0	8	0	1	5	575	0	0	810	18	1,417
APPROACH %	0%	0%	0%	89%	0%	11%	1%	99%	0%	0%	98%	2%	
APP/DEPART	0	/	20	9	/	0	580	/	583	828	/	814	0

PM	4:00 PM	0	0	0	2	0	2	4	178	0	0	156	5	347
	4:15 PM	0	0	0	4	0	1	0	163	0	0	166	4	338
	4:30 PM	0	0	0	5	0	2	1	178	0	0	187	1	374
	4:45 PM	0	0	0	1	0	5	2	171	0	0	160	1	340
	5:00 PM	0	0	0	0	0	2	1	186	0	0	158	2	349
	5:15 PM	0	0	0	3	0	2	0	147	0	0	158	2	312
	5:30 PM	0	0	0	3	0	3	0	174	0	0	158	2	340
	5:45 PM	0	0	0	0	0	1	2	206	0	0	193	2	404

0	0	2	0	2
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	5	0	5

VOLUMES	0	0	0	18	0	18	10	1,403	0	0	1,336	19	2,804
APPROACH %	0%	0%	0%	50%	0%	50%	1%	99%	0%	0%	99%	1%	
APP/DEPART	0	/	24	36	/	0	1,413	/	1,421	1,355	/	1,359	0
BEGIN PEAK HR	5:00 PM												
VOLUMES	0	0	0	6	0	8	3	713	0	0	667	8	1,405
APPROACH %	0%	0%	0%	43%	0%	57%	0%	100%	0%	0%	99%	1%	
PEAK HR FACTOR	0.000			0.583			0.861			0.865			0.869
APP/DEPART	0	/	10	14	/	0	716	/	719	675	/	676	0



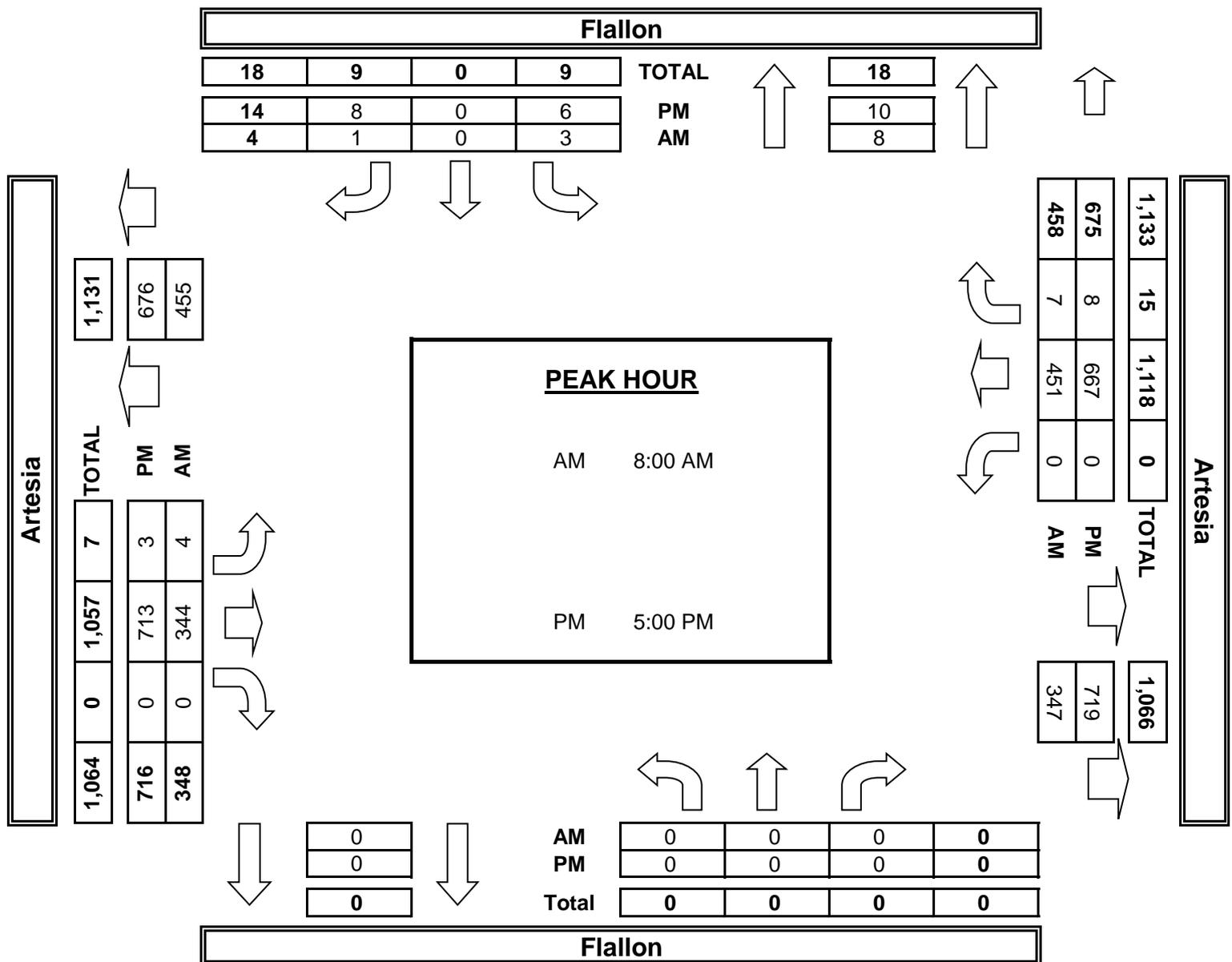
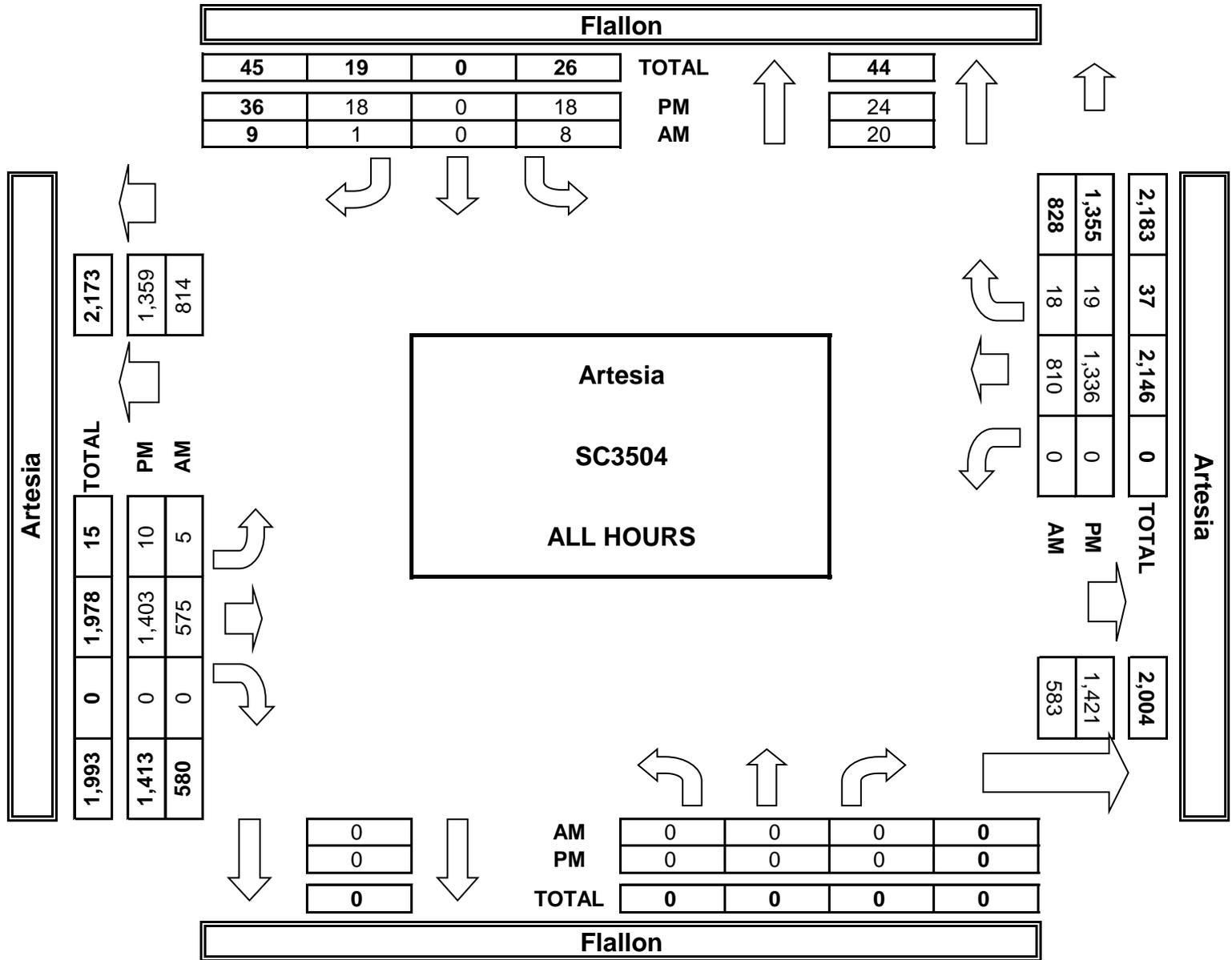
AM	7:00 AM	2	0	1	0	3
	7:15 AM	1	0	0	0	1
	7:30 AM	0	0	0	0	0
	7:45 AM	1	0	0	0	1
	8:00 AM	1	0	0	0	1
	8:15 AM	5	0	0	0	5
	8:30 AM	2	0	0	0	2
	8:45 AM	3	0	0	0	3
	TOTAL	15	0	1	0	16
	AM BEGIN PEAK HR	8:00 AM				
PM	4:00 PM	1	0	0	0	1
	4:15 PM	1	0	0	0	1
	4:30 PM	3	0	0	0	3
	4:45 PM	0	0	0	0	0
	5:00 PM	3	1	0	0	4
	5:15 PM	0	0	0	0	0
	5:30 PM	5	0	0	0	5
	5:45 PM	0	0	0	0	0
	TOTAL	13	1	0	0	14
	PM BEGIN PEAK HR	5:00 PM				

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	0	1	0	3
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
5	0	0	0	5
2	0	0	0	2
3	0	0	0	3
15	0	1	0	16
8:00 AM				
1	0	0	0	1
1	0	0	0	1
3	0	0	0	3
0	0	0	0	0
3	1	0	0	4
0	0	0	0	0
5	0	0	0	5
0	0	0	0	0
13	1	0	0	14
5:00 PM				

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	0	1	0	3
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
6	0	1	0	7
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
3	0	0	0	3
0	0	0	0	0
0	0	0	0	0
4	0	0	0	4
3	0	0	0	3

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
3	0	0	0	3
2	0	0	0	2
3	0	0	0	3
9	0	0	0	9
1	0	0	0	1
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
5	0	0	0	5
0	0	0	0	0
9	1	0	0	10

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Jun 9, 22

LOCATION:
NORTH & SOUTH: Artesia
EAST & WEST: Alburdis

PROJECT #: SC3504
LOCATION #: 2
CONTROL: STOP S

NOTES: <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px 0;">Queue EB PM</div>	AM PM MD OTHER OTHER	▲ N E ► S ▼	
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Add U-Turns to Left Turns

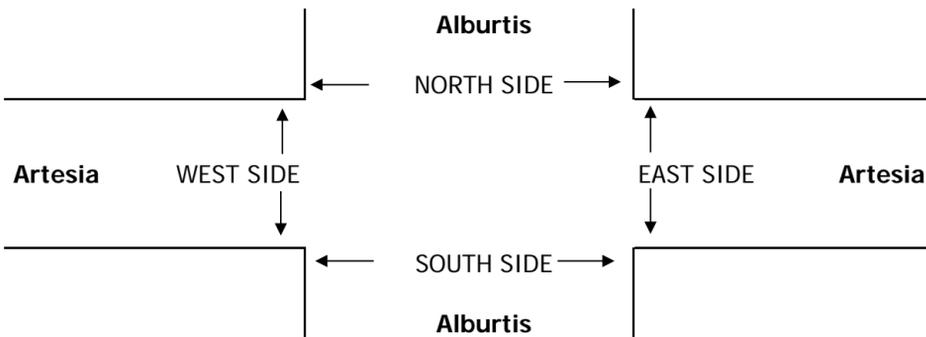
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	1	2	X	X	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	7:00 AM	0	0	0	4	0	2	0	52	0	0	79	2	139
	7:15 AM	0	0	0	4	0	0	0	61	0	0	83	0	148
	7:30 AM	0	0	0	4	0	0	0	55	0	0	99	3	161
	7:45 AM	0	0	0	2	0	1	1	69	0	0	97	1	171
	8:00 AM	0	0	0	1	0	0	0	69	0	0	112	0	182
	8:15 AM	0	0	0	5	0	0	1	73	0	0	105	3	187
	8:30 AM	0	0	0	5	0	1	0	96	0	0	114	2	218
	8:45 AM	0	0	0	4	0	1	0	99	0	0	122	2	228
	VOLUMES	0	0	0	29	0	5	2	574	0	0	811	13	1,439
	APPROACH %	0%	0%	0%	85%	0%	15%	0%	99%	0%	0%	98%	2%	
APP/DEPART	0	/	15	34	/	0	580	/	604	825	/	820	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	0	0	15	0	2	1	337	0	0	453	7	818	
APPROACH %	0%	0%	0%	88%	0%	12%	0%	99%	0%	0%	98%	2%		
PEAK HR FACTOR	0.000			0.708			0.853			0.927			0.893	
APP/DEPART	0	/	8	17	/	0	341	/	352	460	/	458	0	
PM	4:00 PM	0	0	0	4	0	2	0	185	0	0	161	7	359
	4:15 PM	0	0	0	11	0	2	2	166	0	0	168	5	354
	4:30 PM	0	0	0	5	0	1	0	181	0	0	181	3	371
	4:45 PM	0	0	0	3	0	0	1	168	0	0	166	2	340
	5:00 PM	0	0	0	5	0	1	0	184	0	0	158	1	349
	5:15 PM	0	0	0	3	0	1	0	145	0	0	150	2	301
	5:30 PM	0	0	0	2	0	1	0	185	0	0	165	3	356
	5:45 PM	0	0	0	5	0	1	0	200	0	0	199	1	406
	VOLUMES	0	0	0	38	0	9	3	1,414	0	0	1,348	24	2,847
	APPROACH %	0%	0%	0%	81%	0%	19%	0%	99%	0%	0%	98%	2%	
APP/DEPART	0	/	27	47	/	0	1,428	/	1,452	1,372	/	1,368	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	0	0	23	0	5	3	700	0	0	676	17	1,430	
APPROACH %	0%	0%	0%	82%	0%	18%	0%	99%	0%	0%	98%	2%		
PEAK HR FACTOR	0.000			0.538			0.948			0.942			0.964	
APP/DEPART	0	/	20	28	/	0	709	/	723	693	/	687	0	

0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	1	0	1
0	0	4	1	5

0	0	2	0	2
0	0	2	0	2
0	0	0	0	0
0	0	2	0	2
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	2	0	2
0	0	11	0	11



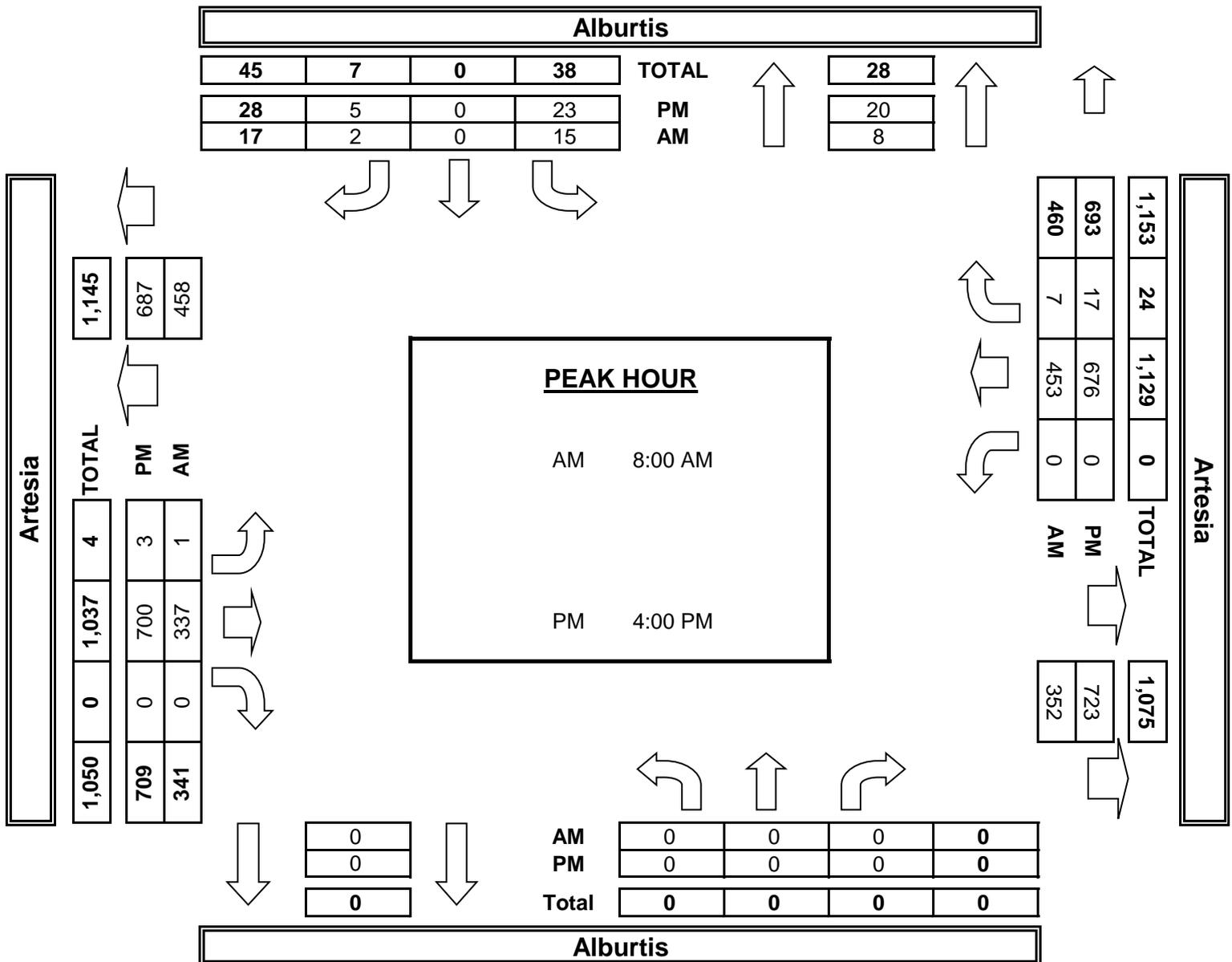
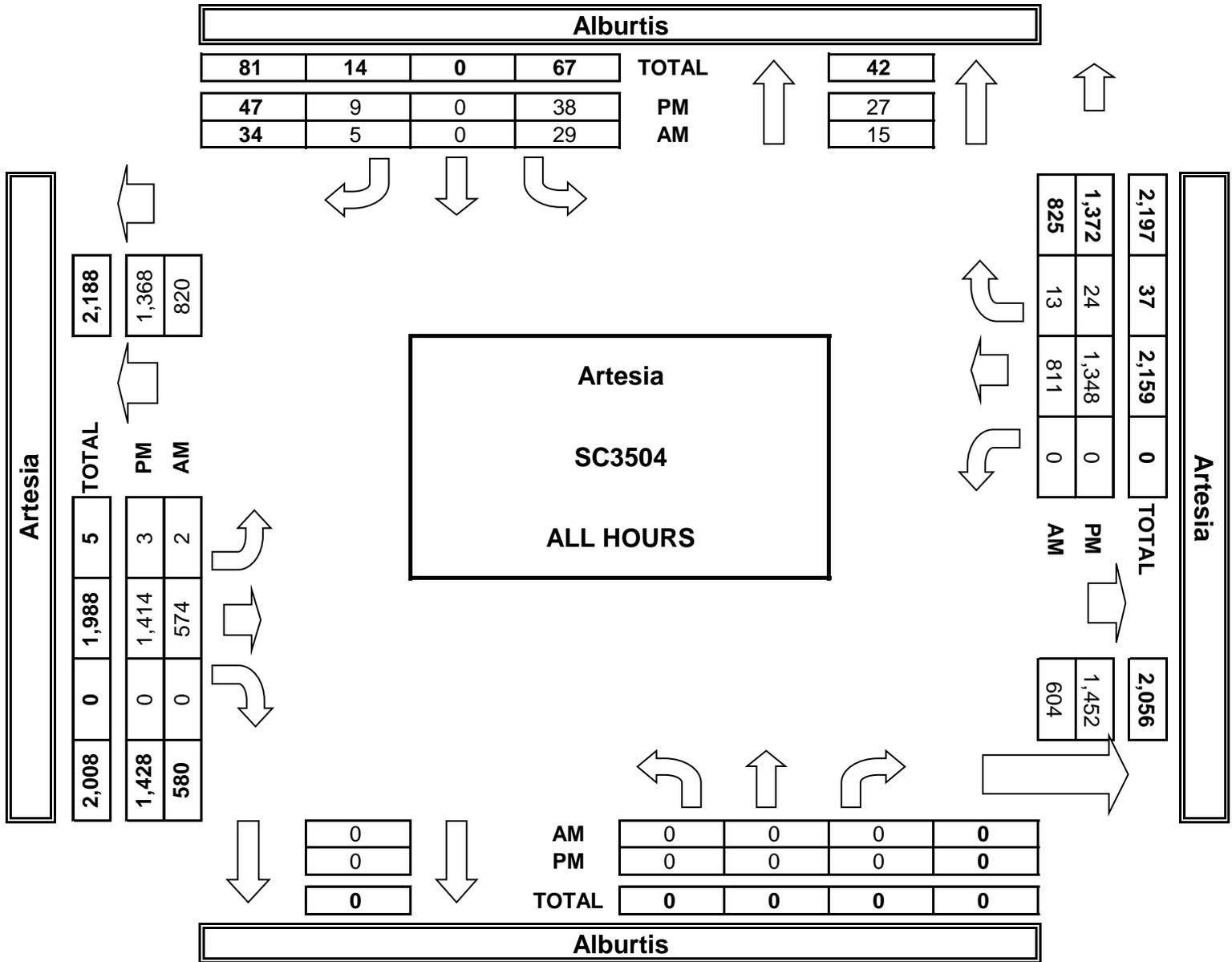
AM	7:00 AM				
	7:15 AM				
	7:30 AM				
	7:45 AM				
	8:00 AM				
	8:15 AM				
	8:30 AM				
	8:45 AM				
	TOTAL	13	0	0	13
AM BEGIN PEAK HR	8:00 AM				
PM	4:00 PM				
	4:15 PM				
	4:30 PM				
	4:45 PM				
	5:00 PM				
	5:15 PM				
	5:30 PM				
	5:45 PM				
	TOTAL	15	3	0	18
PM BEGIN PEAK HR	4:00 PM				

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
5	0	0	0	5
2	0	0	0	2
2	0	0	0	2
TOTAL	13	0	0	13
8:00 AM				
1	0	0	0	1
2	0	0	0	2
3	0	0	0	3
0	0	0	0	0
2	1	0	0	3
2	1	0	0	3
5	1	0	0	6
0	0	0	0	0
TOTAL	15	3	0	18
4:00 PM				

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
TOTAL	5	0	0	5
8:00 AM				
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
TOTAL	4	0	0	4
4:00 PM				
1	0	0	0	1

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
3	0	0	0	3
2	0	0	0	2
2	0	0	0	2
TOTAL	8	0	0	8
8:00 AM				
1	0	0	0	1
2	0	0	0	2
2	0	0	0	2
0	0	0	0	0
1	1	0	0	2
0	1	0	0	1
5	1	0	0	6
0	0	0	0	0
TOTAL	11	3	0	14

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Jun 9, 22

LOCATION:
NORTH & SOUTH: Roseton
EAST & WEST: Artesia

PROJECT #: SC3504
LOCATION #: 3
CONTROL: SIGNAL

NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N ▼ S	E ▶
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Add U-Turns to Left Turns

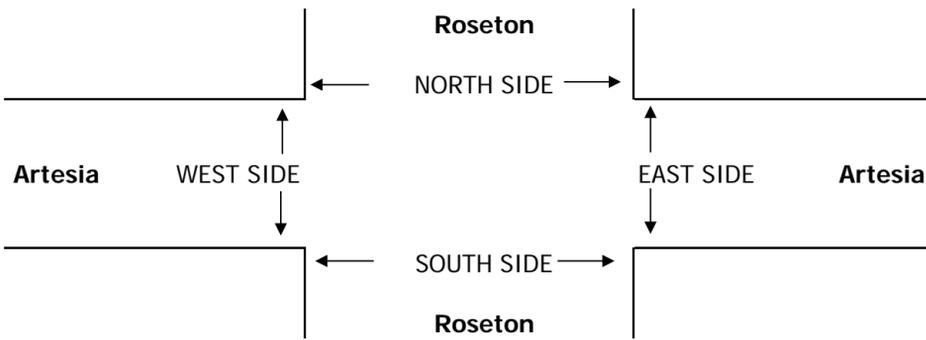
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	1	2	0	1	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	0	1	3	4	0	1	1	44	1	5	53	4	117
	7:15 AM	1	0	2	3	0	1	2	54	0	3	75	3	144
	7:30 AM	1	1	4	3	0	1	2	41	0	5	76	7	141
	7:45 AM	2	1	3	5	0	1	4	55	1	5	80	7	164
	8:00 AM	0	0	5	8	0	1	2	63	4	8	77	6	174
	8:15 AM	1	1	5	7	0	0	0	54	4	7	103	8	190
	8:30 AM	2	1	4	1	0	5	6	74	3	4	84	6	190
	8:45 AM	1	0	4	7	0	0	5	94	1	4	96	7	219
	VOLUMES	8	5	30	38	0	10	22	479	14	41	644	48	1,339
	APPROACH %	19%	12%	70%	79%	0%	21%	4%	93%	3%	6%	88%	7%	
APP/DEPART	43	/	68	48	/	43	515	/	559	733	/	669	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	4	2	18	23	0	6	13	285	12	23	360	27	773	
APPROACH %	17%	8%	75%	79%	0%	21%	4%	92%	4%	6%	88%	7%		
PEAK HR FACTOR	0.857			0.806			0.775			0.869			0.882	
APP/DEPART	24	/	37	29	/	26	310	/	335	410	/	375	0	
PM	4:00 PM	0	0	6	13	0	4	2	153	2	8	150	2	340
	4:15 PM	2	0	4	8	0	1	5	132	1	8	154	7	322
	4:30 PM	0	1	4	13	1	2	6	143	2	8	159	7	346
	4:45 PM	1	1	2	3	1	4	2	170	2	5	154	7	352
	5:00 PM	2	0	3	9	1	3	2	139	3	6	152	4	324
	5:15 PM	3	0	3	3	0	0	3	140	4	6	145	4	311
	5:30 PM	1	0	8	4	0	1	1	162	5	6	159	4	351
	5:45 PM	2	0	5	8	0	0	3	180	4	4	180	4	390
	VOLUMES	11	2	35	61	3	15	24	1,219	23	51	1,253	39	2,736
	APPROACH %	23%	4%	73%	77%	4%	19%	2%	96%	2%	4%	93%	3%	
APP/DEPART	48	/	46	79	/	67	1,266	/	1,325	1,343	/	1,298	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	8	0	19	24	1	4	9	621	16	22	636	16	1,376	
APPROACH %	30%	0%	70%	83%	3%	14%	1%	96%	2%	3%	94%	2%		
PEAK HR FACTOR	0.750			0.558			0.864			0.896			0.882	
APP/DEPART	27	/	18	29	/	38	646	/	665	674	/	655	0	

0	0	1	2	3
0	0	0	0	0
0	0	1	0	1
0	0	0	1	1
0	0	0	2	2
0	0	0	1	1
0	0	3	4	7
0	0	2	2	4
0	0	7	12	19

0	0	1	2	3
0	0	3	4	7
0	0	6	1	7
0	0	2	2	4
0	0	2	0	2
0	0	2	0	2
0	0	1	0	1
0	0	2	1	3
0	0	19	10	29



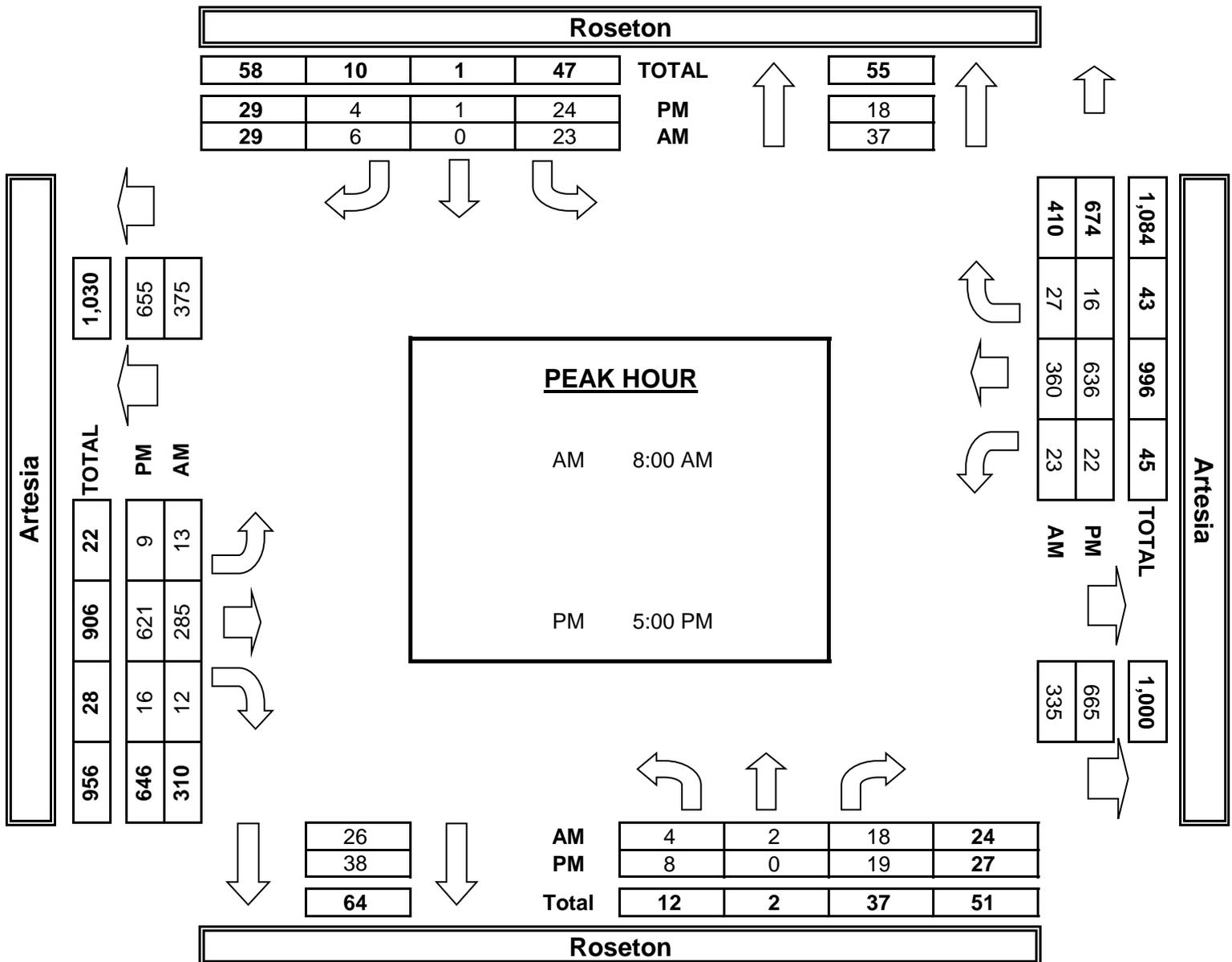
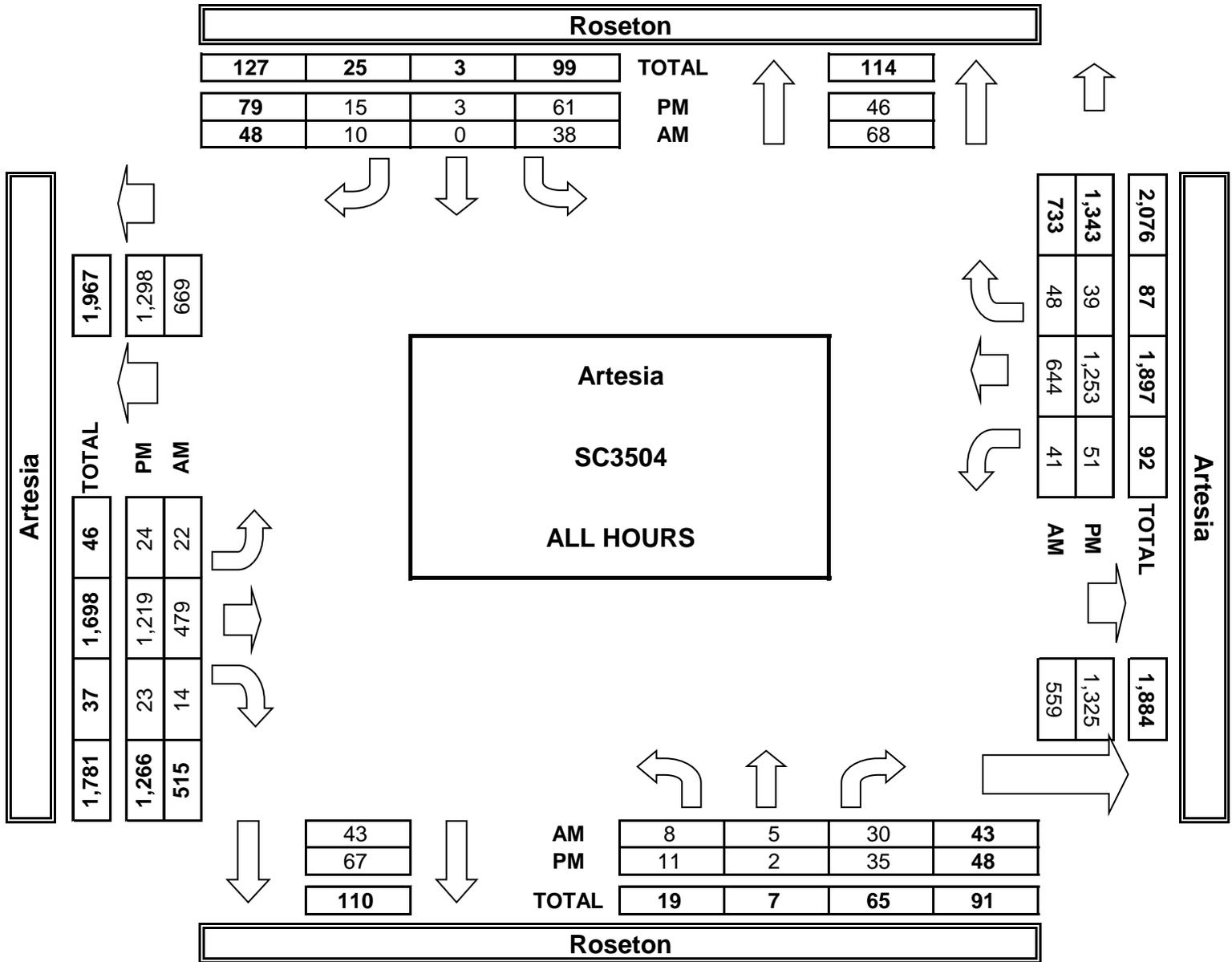
AM	7:00 AM	0	1	3	4	0	1	1	44	1	5	53	4	117
	7:15 AM	1	0	2	3	0	1	2	54	0	3	75	3	144
	7:30 AM	1	1	4	3	0	1	2	41	0	5	76	7	141
	7:45 AM	2	1	3	5	0	1	4	55	1	5	80	7	164
	8:00 AM	0	0	5	8	0	1	2	63	4	8	77	6	174
	8:15 AM	1	1	5	7	0	0	0	54	4	7	103	8	190
	8:30 AM	2	1	4	1	0	5	6	74	3	4	84	6	190
	8:45 AM	1	0	4	7	0	0	5	94	1	4	96	7	219
	TOTAL	8	5	30	38	0	10	22	479	14	41	644	48	1,339
AM BEGIN PEAK HR	8:00 AM													
PM	4:00 PM	0	0	6	13	0	4	2	153	2	8	150	2	340
	4:15 PM	2	0	4	8	0	1	5	132	1	8	154	7	322
	4:30 PM	0	1	4	13	1	2	6	143	2	8	159	7	346
	4:45 PM	1	1	2	3	1	4	2	170	2	5	154	7	352
	5:00 PM	2	0	3	9	1	3	2	139	3	6	152	4	324
	5:15 PM	3	0	3	3	0	0	3	140	4	6	145	4	311
	5:30 PM	1	0	8	4	0	1	1	162	5	6	159	4	351
	5:45 PM	2	0	5	8	0	0	3	180	4	4	180	4	390
	TOTAL	11	2	35	61	3	15	24	1,219	23	51	1,253	39	2,736
PM BEGIN PEAK HR	5:00 PM													

PEDESTRIAN + BIKE CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
0	1	0	0	1	
1	2	0	0	3	
0	3	0	0	3	
1	1	0	0	2	
0	1	0	0	1	
3	0	0	0	3	
2	2	1	0	5	
2	2	0	3	7	
TOTAL	9	12	1	3	25
8:00 AM					
1	2	0	0	3	
4	1	0	0	5	
1	5	0	0	6	
1	1	0	0	2	
0	3	2	0	5	
1	4	0	0	5	
4	0	0	0	4	
0	2	0	0	2	
TOTAL	12	18	2	0	32
5:00 PM					
0	4	2	0	6	

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
0	1	0	0	1	
1	1	0	0	2	
0	2	0	0	2	
1	1	0	0	2	
0	1	0	0	1	
1	0	0	0	1	
0	2	0	0	2	
0	2	0	1	3	
TOTAL	3	10	0	1	14
8:00 AM					
1	5	0	1	7	
0	2	0	0	2	
2	1	0	0	3	
0	4	0	0	4	
0	0	0	0	0	
0	2	2	0	4	
0	0	0	0	0	
0	0	0	0	0	
0	2	0	0	2	
TOTAL	2	11	2	0	15
5:00 PM					
0	4	2	0	6	

BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
0	0	0	0	0	
0	1	0	0	1	
0	1	0	0	1	
0	0	0	0	0	
0	0	0	0	0	
2	0	0	0	2	
2	0	1	0	3	
2	0	0	2	4	
TOTAL	6	2	1	2	11
8:00 AM					
1	0	0	0	1	
2	0	0	0	2	
1	1	0	0	2	
1	1	0	0	2	
0	1	0	0	1	
1	4	0	0	5	
4	0	0	0	4	
0	0	0	0	0	
TOTAL	10	7	0	0	17
5:00 PM					
0	4	2	0	6	

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Jun 9, 22

LOCATION:
NORTH & SOUTH: Artesia
Pioneer
EAST & WEST: Artesia

PROJECT #: SC3504
LOCATION #: 4
CONTROL: SIGNAL

NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N ▼ S	E ▶
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☑ Add U-Turns to Left Turns

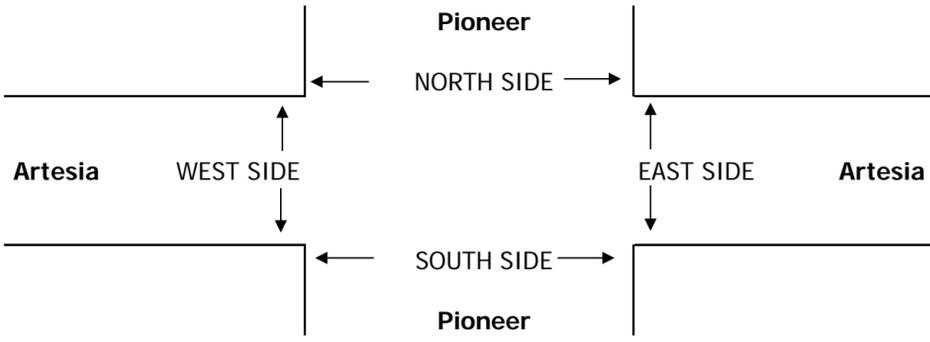
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Pioneer			Pioneer			Artesia			Artesia			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	1	1	2	1	2	2	0	2	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	7	45	6	19	44	34	28	26	5	9	43	19	285
	7:15 AM	6	60	7	16	49	28	22	28	4	13	57	17	307
	7:30 AM	6	63	10	25	64	37	25	29	6	17	59	13	354
	7:45 AM	10	55	8	15	61	30	30	35	7	15	64	25	355
	8:00 AM	9	82	6	21	57	34	27	41	9	17	72	18	393
	8:15 AM	11	77	14	31	75	32	34	38	5	30	76	17	440
	8:30 AM	9	82	12	16	95	47	33	42	15	30	52	16	449
	8:45 AM	15	74	10	25	107	40	28	63	14	21	76	23	496
	VOLUMES	73	538	73	168	552	282	227	302	65	152	499	148	3,079
	APPROACH %	11%	79%	11%	17%	55%	28%	38%	51%	11%	19%	62%	19%	
APP/DEPART	684	/	939	1,002	/	763	594	/	518	799	/	859	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	44	315	42	93	334	153	122	184	43	98	276	74	1,778	
APPROACH %	11%	79%	10%	16%	58%	26%	35%	53%	12%	22%	62%	17%		
PEAK HR FACTOR	0.973			0.843			0.831			0.911			0.896	
APP/DEPART	401	/	520	580	/	469	349	/	313	448	/	476	0	
PM	4:00 PM	12	128	29	29	135	44	45	104	24	38	101	29	718
	4:15 PM	23	141	20	28	120	29	71	96	22	38	128	36	752
	4:30 PM	18	140	28	34	125	32	63	97	22	39	139	21	758
	4:45 PM	21	108	27	27	111	30	61	96	21	52	115	36	705
	5:00 PM	15	144	32	32	107	24	79	105	14	55	125	30	762
	5:15 PM	17	121	31	36	131	23	32	92	23	38	119	16	679
	5:30 PM	18	117	24	37	123	49	57	96	21	26	97	23	688
	5:45 PM	25	118	24	35	147	39	64	125	28	41	134	22	802
	VOLUMES	149	1,017	215	258	999	270	472	811	175	327	958	213	5,864
	APPROACH %	11%	74%	16%	17%	65%	18%	32%	56%	12%	22%	64%	14%	
APP/DEPART	1,381	/	1,700	1,527	/	1,490	1,458	/	1,287	1,498	/	1,387	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	77	533	107	121	463	115	274	394	79	184	507	123	2,977	
APPROACH %	11%	74%	15%	17%	66%	16%	37%	53%	11%	23%	62%	15%		
PEAK HR FACTOR	0.938			0.915			0.943			0.969			0.977	
APP/DEPART	717	/	926	699	/	718	747	/	628	814	/	705	0	

0	7	0	0	7
0	3	0	1	4
0	7	2	0	9
1	3	1	0	5
1	4	1	1	7
0	5	1	3	9
0	3	2	2	7
0	1	0	1	2
2	33	7	8	50

1	4	2	3	10
0	1	5	1	7
0	0	0	1	1
2	1	3	3	9
0	2	0	5	7
2	1	0	1	4
0	2	5	2	9
1	3	1	1	6
6	14	16	17	53



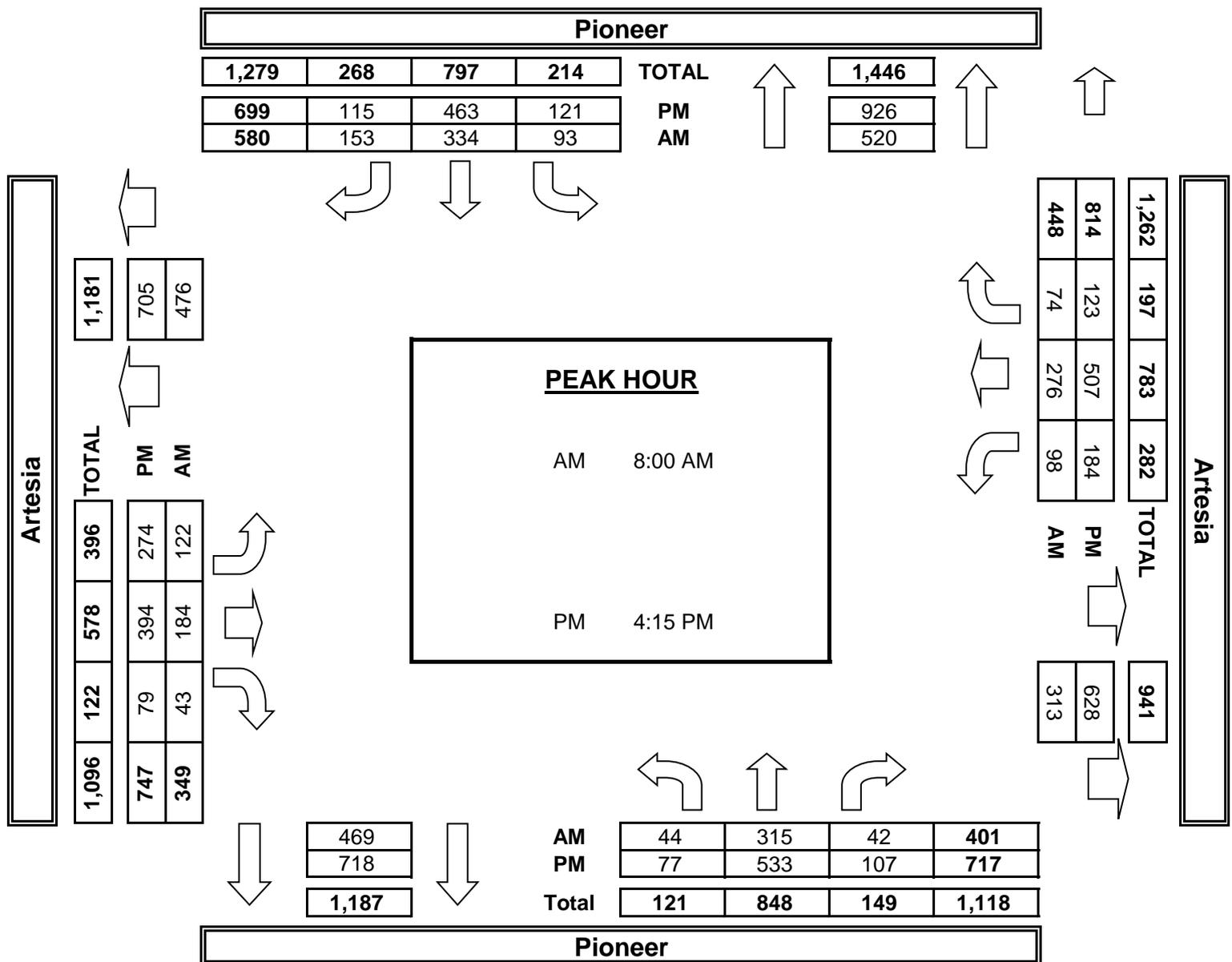
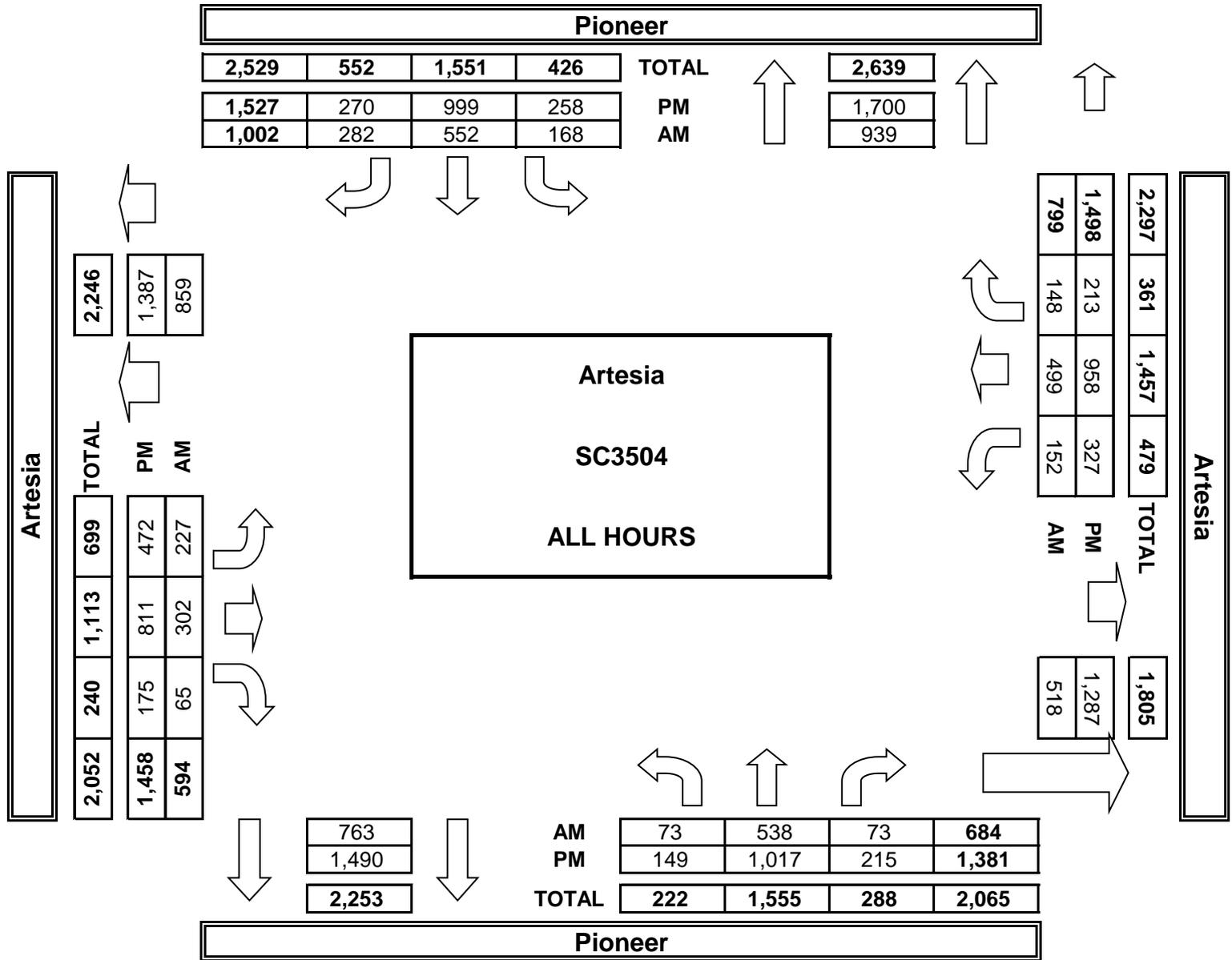
AM	7:00 AM	2	2	5	0	9
	7:15 AM	1	1	3	0	5
	7:30 AM	2	3	6	1	12
	7:45 AM	0	2	3	0	5
	8:00 AM	3	0	2	2	7
	8:15 AM	4	0	3	0	7
	8:30 AM	0	5	7	5	17
	8:45 AM	5	3	3	2	13
	TOTAL	17	16	32	10	75
AM BEGIN PEAK HR	8:00 AM					
PM	4:00 PM	2	3	7	2	14
	4:15 PM	2	1	3	3	9
	4:30 PM	9	10	11	6	36
	4:45 PM	0	1	2	6	9
	5:00 PM	1	2	0	0	3
	5:15 PM	4	4	2	5	15
	5:30 PM	5	1	2	2	10
	5:45 PM	0	3	2	1	6
	TOTAL	23	25	29	25	102
PM BEGIN PEAK HR	4:15 PM					

PEDESTRIAN + BIKE CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
2	2	5	0	9	
1	1	3	0	5	
2	3	6	1	12	
0	2	3	0	5	
3	0	2	2	7	
4	0	3	0	7	
0	5	7	5	17	
5	3	3	2	13	
TOTAL	17	16	32	10	75
8:00 AM					
2	3	7	2	14	
2	1	3	3	9	
9	10	11	6	36	
0	1	2	6	9	
1	2	0	0	3	
4	4	2	5	15	
5	1	2	2	10	
0	3	2	1	6	
TOTAL	23	25	29	25	102
4:15 PM					

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
2	2	2	0	6	
1	0	0	0	1	
2	2	4	0	8	
0	2	1	0	3	
1	0	2	0	3	
2	0	2	0	4	
0	4	5	3	12	
1	3	1	1	6	
TOTAL	9	13	17	4	43
8:00 AM					
4	7	10	4	25	
1	3	6	1	11	
1	1	3	0	5	
6	10	8	6	30	
0	0	2	2	4	
0	0	0	0	0	
0	1	0	0	1	
0	0	1	1	2	
0	3	2	0	5	
TOTAL	8	18	22	10	58
4:15 PM					
7	11	13	8	39	

BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
0	0	3	0	3	
0	1	3	0	4	
0	1	2	1	4	
0	0	2	0	2	
2	0	0	2	4	
2	0	1	0	3	
0	1	2	2	5	
4	0	2	1	7	
TOTAL	8	3	15	6	32
4:15 PM					
1	0	1	1	3	
1	0	0	3	4	
3	0	3	0	6	
0	1	0	4	5	
1	2	0	0	3	
4	3	2	5	14	
5	1	1	1	8	
0	0	0	1	1	
TOTAL	15	7	7	15	44

AimTD LLC
TURNING MOVEMENT COUNTS



ADT1 Artesia west of Flallon.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
0:00	0	0	7	14	12:00	0	0	121	161			
0:15	0	0	7	8	12:15	0	0	168	118			
0:30	0	0	5	12	12:30	0	0	131	147			
0:45	0	0	4	23	8	42	65	153	573	153	579	1152
1:00	0	0	4	7	13:00	0	0	122	131			
1:15	0	0	3	4	13:15	0	0	121	162			
1:30	0	0	3	4	13:30	0	0	147	137			
1:45	0	0	2	12	4	19	31	130	520	162	592	1112
2:00	0	0	6	10	14:00	0	0	143	152			
2:15	0	0	6	6	14:15	0	0	133	139			
2:30	0	0	8	6	14:30	0	0	141	149			
2:45	0	0	4	24	4	26	50	129	546	171	611	1157
3:00	0	0	3	3	15:00	0	0	150	123			
3:15	0	0	7	0	15:15	0	0	141	146			
3:30	0	0	2	4	15:30	0	0	161	168			
3:45	0	0	10	22	7	14	36	151	603	175	612	1215
4:00	0	0	11	4	16:00	0	0	182	160			
4:15	0	0	13	3	16:15	0	0	163	167			
4:30	0	0	15	5	16:30	0	0	179	190			
4:45	0	0	24	63	15	27	90	173	697	166	683	1380
5:00	0	0	13	17	17:00	0	0	187	161			
5:15	0	0	19	14	17:15	0	0	147	160			
5:30	0	0	34	18	17:30	0	0	174	161			
5:45	0	0	29	95	28	77	172	208	716	194	676	1392
6:00	0	0	32	42	18:00	0	0	174	149			
6:15	0	0	53	47	18:15	0	0	136	164			
6:30	0	0	58	60	18:30	0	0	125	132			
6:45	0	0	50	193	65	214	407	114	549	139	584	1133
7:00	0	0	51	75	19:00	0	0	119	124			
7:15	0	0	56	84	19:15	0	0	118	98			
7:30	0	0	54	98	19:30	0	0	110	116			
7:45	0	0	71	232	102	359	591	80	427	102	440	867
8:00	0	0	76	110	20:00	0	0	83	96			
8:15	0	0	77	116	20:15	0	0	97	81			
8:30	0	0	87	109	20:30	0	0	86	100			
8:45	0	0	108	348	120	455	803	78	344	73	350	694
9:00	0	0	96	108	21:00	0	0	87	81			
9:15	0	0	99	95	21:15	0	0	72	80			
9:30	0	0	108	109	21:30	0	0	97	48			
9:45	0	0	91	394	116	428	822	41	297	43	252	549
10:00	0	0	92	107	22:00	0	0	59	50			
10:15	0	0	129	94	22:15	0	0	30	49			
10:30	0	0	106	107	22:30	0	0	40	41			
10:45	0	0	128	455	114	422	877	50	179	31	171	350
11:00	0	0	128	122	23:00	0	0	25	33			
11:15	0	0	134	135	23:15	0	0	19	26			
11:30	0	0	130	131	23:30	0	0	20	26			
11:45	0	0	109	501	144	532	1033	23	87	19	104	191

Total Vol. 2362 2615 **4977** 5538 5654 **11192**

Daily Totals				
NB	SB	EB	WB	Combined
		7900	8269	16169

AM **PM**

Split %	47.5%	52.5%	30.8%	49.5%	50.5%	69.2%
Peak Hour	11:45	11:15	11:45	17:00	15:45	17:00
Volume	529	571	1099	716	692	1392
P.H.F.	0.79	0.89	0.96	0.86	0.91	0.87

ADT2 Artesia east of Fallon.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	0	0	7	14	12:00	0	0	124	160
0:15	0	0	7	7	12:15	0	0	168	119
0:30	0	0	5	11	12:30	0	0	129	147
0:45	0	0	4	23	12:45	0	0	153	574
1:00	0	0	5	7	13:00	0	0	120	131
1:15	0	0	3	4	13:15	0	0	123	161
1:30	0	0	3	4	13:30	0	0	148	136
1:45	0	0	2	13	13:45	0	0	132	523
2:00	0	0	6	12	14:00	0	0	144	151
2:15	0	0	6	6	14:15	0	0	138	139
2:30	0	0	8	6	14:30	0	0	145	151
2:45	0	0	4	24	14:45	0	0	131	558
3:00	0	0	3	3	15:00	0	0	150	124
3:15	0	0	7	0	15:15	0	0	139	143
3:30	0	0	2	5	15:30	0	0	162	168
3:45	0	0	9	21	15:45	0	0	157	608
4:00	0	0	11	4	16:00	0	0	180	161
4:15	0	0	13	3	16:15	0	0	167	170
4:30	0	0	15	7	16:30	0	0	183	188
4:45	0	0	24	63	16:45	0	0	172	702
5:00	0	0	13	21	17:00	0	0	186	160
5:15	0	0	19	16	17:15	0	0	150	160
5:30	0	0	37	21	17:30	0	0	177	160
5:45	0	0	29	98	17:45	0	0	206	719
6:00	0	0	33	45	18:00	0	0	174	152
6:15	0	0	53	47	18:15	0	0	137	166
6:30	0	0	61	65	18:30	0	0	127	133
6:45	0	0	53	200	18:45	0	0	113	551
7:00	0	0	52	77	19:00	0	0	120	123
7:15	0	0	56	87	19:15	0	0	117	97
7:30	0	0	56	101	19:30	0	0	111	116
7:45	0	0	72	236	19:45	0	0	81	429
8:00	0	0	75	110	20:00	0	0	81	94
8:15	0	0	76	116	20:15	0	0	96	81
8:30	0	0	89	113	20:30	0	0	84	101
8:45	0	0	107	347	20:45	0	0	79	340
9:00	0	0	97	109	21:00	0	0	89	80
9:15	0	0	102	96	21:15	0	0	73	82
9:30	0	0	110	109	21:30	0	0	98	49
9:45	0	0	91	400	21:45	0	0	42	302
10:00	0	0	94	109	22:00	0	0	59	51
10:15	0	0	130	96	22:15	0	0	32	50
10:30	0	0	106	108	22:30	0	0	40	43
10:45	0	0	127	457	22:45	0	0	52	183
11:00	0	0	128	121	23:00	0	0	28	33
11:15	0	0	134	134	23:15	0	0	19	29
11:30	0	0	132	131	23:30	0	0	20	26
11:45	0	0	109	503	23:45	0	0	24	91

Total Vol. 2385 2670 **5055** 5580 5660 **11240**

Daily Totals				
NB	SB	EB	WB	Combined
		7965	8330	16295

AM

PM

Split %	47.2%	52.8%	31.0%	49.6%	50.4%	69.0%
Peak Hour	11:30	11:45	11:45	17:00	15:45	17:00
Volume	533	572	1102	719	697	1394
P.H.F.	0.79	0.89	0.96	0.87	0.93	0.87

ADT3 Artesia east of Alburdis.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB								
0:00	0	0	10	18	12:00	0	0	132	154								
0:15	0	0	6	9	12:15	0	0	167	134								
0:30	0	0	7	10	12:30	0	0	142	154								
0:45	0	0	5	28	8	45	73	12:45	0	0	0	0	149	590	153	595	1185
1:00	0	0	5	8	13:00	0	0	134	129								
1:15	0	0	3	5	13:15	0	0	113	165								
1:30	0	0	5	4	13:30	0	0	150	130								
1:45	0	0	4	17	4	21	38	13:45	0	0	0	0	128	525	158	582	1107
2:00	0	0	4	11	14:00	0	0	143	161								
2:15	0	0	7	7	14:15	0	0	139	130								
2:30	0	0	9	5	14:30	0	0	144	149								
2:45	0	0	4	24	5	28	52	14:45	0	0	0	0	150	576	167	607	1183
3:00	0	0	3	4	15:00	0	0	151	124								
3:15	0	0	6	0	15:15	0	0	141	150								
3:30	0	0	3	5	15:30	0	0	162	159								
3:45	0	0	11	23	7	16	39	15:45	0	0	0	0	150	604	175	608	1212
4:00	0	0	10	4	16:00	0	0	189	168								
4:15	0	0	11	3	16:15	0	0	177	173								
4:30	0	0	13	7	16:30	0	0	186	184								
4:45	0	0	28	62	22	36	98	16:45	0	0	0	0	171	723	168	693	1416
5:00	0	0	16	18	17:00	0	0	189	159								
5:15	0	0	21	18	17:15	0	0	148	152								
5:30	0	0	34	25	17:30	0	0	187	168								
5:45	0	0	32	103	34	95	198	17:45	0	0	0	0	205	729	200	679	1408
6:00	0	0	38	45	18:00	0	0	185	160								
6:15	0	0	52	41	18:15	0	0	149	157								
6:30	0	0	69	64	18:30	0	0	126	138								
6:45	0	0	55	214	71	221	435	18:45	0	0	0	0	120	580	141	596	1176
7:00	0	0	56	81	19:00	0	0	119	121								
7:15	0	0	66	84	19:15	0	0	128	99								
7:30	0	0	59	102	19:30	0	0	109	124								
7:45	0	0	71	252	98	365	617	19:45	0	0	0	0	84	440	95	439	879
8:00	0	0	70	112	20:00	0	0	79	98								
8:15	0	0	78	108	20:15	0	0	95	79								
8:30	0	0	101	116	20:30	0	0	83	100								
8:45	0	0	103	352	124	460	812	20:45	0	0	0	0	87	344	74	351	695
9:00	0	0	106	104	21:00	0	0	91	80								
9:15	0	0	94	102	21:15	0	0	69	86								
9:30	0	0	114	111	21:30	0	0	96	51								
9:45	0	0	97	411	113	430	841	21:45	0	0	0	0	50	306	43	260	566
10:00	0	0	94	115	22:00	0	0	58	49								
10:15	0	0	139	96	22:15	0	0	35	52								
10:30	0	0	112	104	22:30	0	0	33	47								
10:45	0	0	121	466	120	435	901	22:45	0	0	0	0	57	183	29	177	360
11:00	0	0	121	120	23:00	0	0	25	37								
11:15	0	0	144	126	23:15	0	0	23	27								
11:30	0	0	139	141	23:30	0	0	16	27								
11:45	0	0	109	513	148	535	1048	23:45	0	0	0	0	28	92	21	112	204

Total Vol. 2465 2687 **5152** 5692 5699 **11391**

Daily Totals				
NB	SB	EB	WB	Combined
		8157	8386	16543

AM

PM

Split %	47.8%	52.2%	31.1%	50.0%	50.0%	68.9%
Peak Hour	11:45	11:45	11:45	17:00	15:45	16:00
Volume	550	590	1140	729	700	1416
P.H.F.	0.82	0.96	0.95	0.89	0.95	0.96

ADT4 Flallon north of Artesia.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB											
0:00	0	0	0	0	12:00	1	5	0	0											
0:15	0	1	0	0	12:15	3	2	0	0											
0:30	1	2	0	0	12:30	6	4	0	0											
0:45	0	1	0	3	0	0	0	0	0	4	12:45	1	11	3	14	0	0	0	0	25
1:00	1	2	0	0	13:00	5	3	0	0											
1:15	0	0	0	0	13:15	3	6	0	0											
1:30	0	0	0	0	13:30	0	2	0	0											
1:45	1	2	1	3	0	0	0	0	0	5	13:45	4	12	6	17	0	0	0	0	29
2:00	2	0	0	0	14:00	2	4	0	0											
2:15	0	0	0	0	14:15	1	6	0	0											
2:30	0	0	0	0	14:30	1	3	0	0											
2:45	0	2	0	0	0	0	0	0	0	2	14:45	1	5	5	18	0	0	0	0	23
3:00	0	0	0	0	15:00	5	4	0	0											
3:15	0	0	0	0	15:15	3	4	0	0											
3:30	1	0	0	0	15:30	2	3	0	0											
3:45	0	1	0	0	0	0	0	0	0	1	15:45	6	16	9	20	0	0	0	0	36
4:00	0	0	0	0	16:00	7	4	0	0											
4:15	0	0	0	0	16:15	4	5	0	0											
4:30	2	0	0	0	16:30	1	7	0	0											
4:45	7	9	0	0	0	0	0	0	0	9	16:45	2	14	6	22	0	0	0	0	36
5:00	6	2	0	0	17:00	2	2	0	0											
5:15	3	1	0	0	17:15	2	5	0	0											
5:30	3	3	0	0	17:30	2	6	0	0											
5:45	1	13	0	6	0	0	0	0	0	19	17:45	4	10	1	14	0	0	0	0	24
6:00	3	1	0	0	18:00	3	0	0	0											
6:15	1	1	0	0	18:15	4	3	0	0											
6:30	4	2	0	0	18:30	1	2	0	0											
6:45	5	13	4	8	0	0	0	0	0	21	18:45	5	13	2	7	0	0	0	0	20
7:00	2	1	0	0	19:00	0	2	0	0											
7:15	4	1	0	0	19:15	1	1	0	0											
7:30	3	2	0	0	19:30	1	2	0	0											
7:45	3	12	1	5	0	0	0	0	0	17	19:45	0	2	4	9	0	0	0	0	11
8:00	1	0	0	0	20:00	0	0	0	0											
8:15	2	1	0	0	20:15	3	2	0	0											
8:30	4	2	0	0	20:30	4	1	0	0											
8:45	1	8	1	4	0	0	0	0	0	12	20:45	1	8	1	4	0	0	0	0	12
9:00	1	1	0	0	21:00	0	3	0	0											
9:15	2	4	0	0	21:15	5	4	0	0											
9:30	3	5	0	0	21:30	1	1	0	0											
9:45	3	9	2	12	0	0	0	0	0	21	21:45	1	7	2	10	0	0	0	0	17
10:00	5	5	0	0	22:00	2	1	0	0											
10:15	2	1	0	0	22:15	1	2	0	0											
10:30	4	3	0	0	22:30	3	1	0	0											
10:45	5	16	2	11	0	0	0	0	0	27	22:45	2	8	2	6	0	0	0	0	14
11:00	2	3	0	0	23:00	1	4	0	0											
11:15	4	5	0	0	23:15	3	0	0	0											
11:30	2	4	0	0	23:30	1	1	0	0											
11:45	3	11	1	13	0	0	0	0	0	24	23:45	0	5	1	6	0	0	0	0	11

Total Vol. 97 65 162 111 147 258

Daily Totals

NB	SB	EB	WB	Combined
208	212			420

AM

PM

Split %	59.9%	40.1%	38.6%	43.0%	57.0%	61.4%
Peak Hour	4:45	9:15	9:15	15:30	15:45	15:45
Volume	19	16	29	19	25	43
P.H.F.	0.68	0.80	0.73	0.79	0.69	0.72

ADT5 Alburdis north of Artesia.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB											
0:00	0	0	0	0	12:00	2	7	0	0											
0:15	0	0	0	0	12:15	5	5	0	0											
0:30	0	0	0	0	12:30	4	5	0	0											
0:45	0	0	0	0	12:45	3	14	7	24	0	0	0	0	38						
1:00	0	0	0	0	13:00	3	6	0	0											
1:15	0	0	0	0	13:15	12	3	0	0											
1:30	0	2	0	0	13:30	5	9	0	0											
1:45	0	0	1	3	0	0	0	0	0	3	13:45	5	25	1	19	0	0	0	0	44
2:00	1	0	0	0	14:00	4	6	0	0											
2:15	0	0	0	0	14:15	1	6	0	0											
2:30	0	0	0	0	14:30	5	7	0	0											
2:45	0	1	0	0	0	0	0	0	0	1	14:45	5	15	13	32	0	0	0	0	47
3:00	0	0	0	0	15:00	4	5	0	0											
3:15	0	0	0	0	15:15	1	4	0	0											
3:30	0	0	0	0	15:30	2	7	0	0											
3:45	0	0	1	1	0	0	0	0	0	1	15:45	3	10	3	19	0	0	0	0	29
4:00	1	0	0	0	16:00	7	6	0	0											
4:15	1	0	0	0	16:15	7	13	0	0											
4:30	1	2	0	0	16:30	3	6	0	0											
4:45	1	4	4	6	0	0	0	0	0	10	16:45	3	20	3	28	0	0	0	0	48
5:00	0	4	0	0	17:00	1	6	0	0											
5:15	1	1	0	0	17:15	2	4	0	0											
5:30	4	1	0	0	17:30	3	3	0	0											
5:45	6	11	3	9	0	0	0	0	0	20	17:45	1	7	6	19	0	0	0	0	26
6:00	4	2	0	0	18:00	3	2	0	0											
6:15	2	9	0	0	18:15	0	6	0	0											
6:30	2	8	0	0	18:30	3	3	0	0											
6:45	2	10	3	22	0	0	0	0	0	32	18:45	0	6	4	15	0	0	0	0	21
7:00	2	6	0	0	19:00	2	1	0	0											
7:15	0	4	0	0	19:15	0	1	0	0											
7:30	3	4	0	0	19:30	4	2	0	0											
7:45	2	7	3	17	0	0	0	0	0	24	19:45	1	7	0	4	0	0	0	0	11
8:00	0	1	0	0	20:00	0	0	0	0											
8:15	4	5	0	0	20:15	0	0	0	0											
8:30	2	6	0	0	20:30	0	3	0	0											
8:45	2	8	5	17	0	0	0	0	0	25	20:45	0	0	1	4	0	0	0	0	4
9:00	2	7	0	0	21:00	1	0	0	0											
9:15	5	4	0	0	21:15	1	4	0	0											
9:30	1	6	0	0	21:30	1	0	0	0											
9:45	7	15	6	23	0	0	0	0	0	38	21:45	0	3	0	4	0	0	0	0	7
10:00	2	5	0	0	22:00	1	0	0	0											
10:15	4	8	0	0	22:15	0	0	0	0											
10:30	4	4	0	0	22:30	0	0	0	0											
10:45	5	15	4	21	0	0	0	0	0	36	22:45	0	1	0	0	0	0	0	0	1
11:00	6	1	0	0	23:00	0	0	0	0											
11:15	7	8	0	0	23:15	0	0	0	0											
11:30	8	7	0	0	23:30	0	0	0	0											
11:45	5	26	10	26	0	0	0	0	0	52	23:45	0	0	0	0	0	0	0	0	

Total Vol. 97 145 **242** 108 168 **276**

Daily Totals

NB	SB	EB	WB	Combined
205	313			518

AM

PM

Split %	40.1%	59.9%	46.7%	39.1%	60.9%	53.3%
Peak Hour	10:45	11:15	11:15	13:15	14:00	12:45
Volume	26	32	54	26	32	48
P.H.F.	0.81	0.80	0.90	0.56	0.62	0.80

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Existing Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↖	↗
Traffic Volume (veh/h)	15	314	14	26	396	30	5	3	20	26	0	7
Future Volume (veh/h)	15	314	14	26	396	30	5	3	20	26	0	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	357	16	30	450	34	6	3	23	30	0	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	715	2380	106	789	2304	174	110	32	131	132	0	131
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	911	3460	155	1007	3349	252	3	381	1585	4	0	1579
Grp Volume(v), veh/h	17	183	190	30	238	246	9	0	23	30	0	8
Grp Sat Flow(s),veh/h/ln	911	1777	1838	1007	1777	1825	384	0	1585	4	0	1579
Q Serve(g_s), s	0.4	2.0	2.0	0.6	2.6	2.7	0.0	0.0	0.7	0.0	0.0	0.3
Cycle Q Clear(g_c), s	3.0	2.0	2.0	2.5	2.6	2.7	4.5	0.0	0.7	4.5	0.0	0.3
Prop In Lane	1.00		0.08	1.00		0.14	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	715	1222	1264	789	1222	1255	142	0	131	132	0	131
V/C Ratio(X)	0.02	0.15	0.15	0.04	0.19	0.20	0.06	0.00	0.18	0.23	0.00	0.06
Avail Cap(c_a), veh/h	715	1222	1264	789	1222	1255	858	0	872	780	0	869
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.6	3.0	3.0	3.4	3.1	3.1	23.2	0.0	23.3	27.3	0.0	23.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.4	0.3	0.2	0.0	0.6	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.4	0.1	0.5	0.5	0.1	0.0	0.3	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.7	3.2	3.2	3.5	3.4	3.4	23.3	0.0	23.9	28.1	0.0	23.2
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		390			514			32				38
Approach Delay, s/veh		3.2			3.4			23.7				27.1
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		10.5		44.0		10.5				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+l1), s		5.0		6.5		4.7		6.5				
Green Ext Time (p_c), s		3.3		0.1		4.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				4.9								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔			↖	↗
Traffic Vol, veh/h	5	379	0	0	497	8	0	0	0	4	0	2
Future Vol, veh/h	5	379	0	0	497	8	0	0	0	4	0	2
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	426	0	0	558	9	0	0	0	4	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	569	0	0	-	-	0	717	1007	213	790	1003	286
Stage 1	-	-	-	-	-	-	438	438	-	565	565	-
Stage 2	-	-	-	-	-	-	279	569	-	225	438	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	999	-	-	0	-	-	317	239	792	281	241	711
Stage 1	-	-	-	0	-	-	567	577	-	477	506	-
Stage 2	-	-	-	0	-	-	704	504	-	757	577	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	997	-	-	-	-	-	314	237	792	279	239	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	314	237	-	279	239	-
Stage 1	-	-	-	-	-	-	564	574	-	473	505	-
Stage 2	-	-	-	-	-	-	702	503	-	752	574	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	15.4
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	997	-	-	-	-	279	710
HCM Lane V/C Ratio	-	0.006	-	-	-	-	0.016	0.003
HCM Control Delay (s)	0	8.6	-	-	-	-	18.1	10.1
HCM Lane LOS		A	A	-	-	-	C	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0	0

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔			↖	↗
Traffic Vol, veh/h	2	371	0	0	499	8	0	0	0	17	0	3
Future Vol, veh/h	2	371	0	0	499	8	0	0	0	17	0	3
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	417	0	0	561	9	0	0	0	19	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	-	-	0	702	993	209	781	989	287
Stage 1	-	-	-	-	-	-	421	421	-	568	568	-
Stage 2	-	-	-	-	-	-	281	572	-	213	421	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	997	-	-	0	-	-	325	244	797	285	245	710
Stage 1	-	-	-	0	-	-	581	587	-	475	505	-
Stage 2	-	-	-	0	-	-	702	502	-	769	587	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	995	-	-	-	-	-	323	243	797	284	244	709
Mov Cap-2 Maneuver	-	-	-	-	-	-	323	243	-	284	244	-
Stage 1	-	-	-	-	-	-	580	586	-	473	504	-
Stage 2	-	-	-	-	-	-	699	501	-	767	586	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			17.3		
HCM LOS							A			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	995	-	-	-	-	284	709
HCM Lane V/C Ratio	-	0.002	-	-	-	-	0.067	0.005
HCM Control Delay (s)	-	0	8.6	-	-	-	18.6	10.1
HCM Lane LOS	-	A	A	-	-	-	C	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.2	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Existing Conditions
Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	 
Traffic Volume (veh/h)	135	203	48	108	304	82	49	347	47	103	368	169
Future Volume (veh/h)	135	203	48	108	304	82	49	347	47	103	368	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	226	53	120	338	91	54	386	52	114	409	188
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	637	146	148	675	179	70	1481	647	141	1623	713
Arrive On Green	0.06	0.22	0.22	0.08	0.24	0.24	0.04	0.42	0.42	0.08	0.46	0.46
Sat Flow, veh/h	3456	2864	657	1781	2774	736	1781	3554	1552	1781	3554	1560
Grp Volume(v), veh/h	150	138	141	120	215	214	54	386	52	114	409	188
Grp Sat Flow(s),veh/h/ln	1728	1777	1745	1781	1777	1734	1781	1777	1552	1781	1777	1560
Q Serve(g_s), s	4.6	7.1	7.4	7.2	11.2	11.5	3.2	7.7	2.2	6.8	7.6	8.0
Cycle Q Clear(g_c), s	4.6	7.1	7.4	7.2	11.2	11.5	3.2	7.7	2.2	6.8	7.6	8.0
Prop In Lane	1.00		0.38	1.00		0.42	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	395	388	148	433	422	70	1481	647	141	1623	713
V/C Ratio(X)	0.70	0.35	0.36	0.81	0.50	0.51	0.78	0.26	0.08	0.81	0.25	0.26
Avail Cap(c_a), veh/h	640	395	388	247	433	422	247	1481	647	247	1623	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	35.4	35.5	48.7	35.2	35.3	51.4	20.6	19.0	48.9	18.0	18.1
Incr Delay (d2), s/veh	1.6	2.4	2.6	4.1	4.0	4.3	6.7	0.4	0.2	4.1	0.4	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(50%),veh/ln	2.0	3.3	3.3	3.3	5.2	5.2	1.6	3.2	0.8	3.1	3.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	37.9	38.1	52.8	39.2	39.6	58.1	21.0	19.3	53.0	18.4	19.0
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	B	B
Approach Vol, veh/h		429			549			492			711	
Approach Delay, s/veh		42.7			42.3			24.9			24.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	30.0	9.2	54.8	11.7	32.3	13.5	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	9.2	9.4	5.2	10.0	6.6	13.5	8.8	9.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	5.2	0.1	1.7	0.0	4.1				
Intersection Summary												
HCM 6th Ctrl Delay				32.5								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Existing Conditions
Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	621	16	22	636	16	8	0	19	24	1	4
Future Volume (veh/h)	9	621	16	22	636	16	8	0	19	24	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	706	18	25	723	18	9	0	22	27	1	5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	570	2437	62	578	2439	61	132	0	128	130	3	129
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.08	0.00	0.08	0.08	0.08	0.08
Sat Flow, veh/h	718	3538	90	729	3541	88	2	0	1573	2	31	1585
Grp Volume(v), veh/h	10	354	370	25	363	378	9	0	22	28	0	5
Grp Sat Flow(s),veh/h/ln	718	1777	1851	729	1777	1852	2	0	1573	33	0	1585
Q Serve(g_s), s	0.3	4.2	4.2	0.8	4.3	4.3	0.0	0.0	0.7	0.0	0.0	0.2
Cycle Q Clear(g_c), s	4.6	4.2	4.2	5.0	4.3	4.3	4.4	0.0	0.7	4.4	0.0	0.2
Prop In Lane	1.00		0.05	1.00		0.05	1.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	570	1224	1275	578	1224	1276	132	0	128	133	0	129
V/C Ratio(X)	0.02	0.29	0.29	0.04	0.30	0.30	0.07	0.00	0.17	0.21	0.00	0.04
Avail Cap(c_a), veh/h	570	1224	1275	578	1224	1276	794	0	867	789	0	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	3.3	3.3	4.3	3.3	3.3	27.2	0.0	23.3	26.8	0.0	23.0
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.1	0.6	0.6	0.2	0.0	0.6	0.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.8	0.1	0.8	0.9	0.1	0.0	0.3	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	3.9	3.9	4.4	3.9	3.9	27.4	0.0	23.9	27.6	0.0	23.2
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		734			766			31				33
Approach Delay, s/veh		3.9			3.9			24.9				26.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		10.5		44.0		10.5				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		6.6		6.4		7.0		6.4				
Green Ext Time (p_c), s		6.9		0.1		7.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				4.8								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗			↔			↖	↗
Traffic Vol, veh/h	3	713	0	0	667	8	0	0	0	6	0	8
Future Vol, veh/h	3	713	0	0	667	8	0	0	0	6	0	8
Conflicting Peds, #/hr	0	0	0	0	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	820	0	0	767	9	0	0	0	7	0	9

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	779	0	0	-	-	-	0	1210	1605	410	1191	1601	391
Stage 1	-	-	-	-	-	-	-	826	826	-	775	775	-
Stage 2	-	-	-	-	-	-	-	384	779	-	416	826	-
Critical Hdwy	4.14	-	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	834	-	-	0	-	-	-	138	104	591	143	105	608
Stage 1	-	-	-	0	-	-	-	332	385	-	357	406	-
Stage 2	-	-	-	0	-	-	-	611	404	-	585	385	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	832	-	-	-	-	-	-	136	103	591	142	104	606
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	136	103	-	142	104	-
Stage 1	-	-	-	-	-	-	-	331	383	-	355	405	-
Stage 2	-	-	-	-	-	-	-	602	403	-	583	383	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			19.8		
HCM LOS							A			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	832	-	-	-	-	142	606
HCM Lane V/C Ratio	-	0.004	-	-	-	-	0.049	0.015
HCM Control Delay (s)	0	9.3	-	-	-	-	31.6	11
HCM Lane LOS	A	A	-	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.2	0

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔			↖	↗
Traffic Vol, veh/h	3	700	0	0	676	17	0	0	0	23	0	5
Future Vol, veh/h	3	700	0	0	676	17	0	0	0	23	0	5
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	729	0	0	704	18	0	0	0	24	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	723	0	0	-	-	0	1087	1458	365	1085	1449	362
Stage 1	-	-	-	-	-	-	735	735	-	714	714	-
Stage 2	-	-	-	-	-	-	352	723	-	371	735	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	875	-	-	0	-	-	170	128	632	171	130	635
Stage 1	-	-	-	0	-	-	377	424	-	388	433	-
Stage 2	-	-	-	0	-	-	638	429	-	622	424	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	874	-	-	-	-	-	168	127	632	170	129	634
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	127	-	170	129	-
Stage 1	-	-	-	-	-	-	376	423	-	386	433	-
Stage 2	-	-	-	-	-	-	633	429	-	620	423	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	874	-	-	-	-	170	634
HCM Lane V/C Ratio	-	0.004	-	-	-	-	0.141	0.008
HCM Control Delay (s)	0	9.1	-	-	-	-	29.6	10.7
HCM Lane LOS	A	A	-	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.5	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Existing Conditions
Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	394	79	184	507	123	77	533	107	121	463	115
Future Volume (veh/h)	274	394	79	184	507	123	77	533	107	121	463	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	280	402	81	188	517	126	79	544	109	123	472	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	620	124	216	659	160	101	1404	612	150	1502	658
Arrive On Green	0.10	0.21	0.21	0.12	0.23	0.23	0.06	0.40	0.40	0.08	0.42	0.42
Sat Flow, veh/h	3456	2943	587	1781	2830	686	1781	3554	1549	1781	3554	1556
Grp Volume(v), veh/h	280	241	242	188	324	319	79	544	109	123	472	117
Grp Sat Flow(s),veh/h/ln	1728	1777	1754	1781	1777	1739	1781	1777	1549	1781	1777	1556
Q Serve(g_s), s	9.0	14.1	14.4	11.8	19.5	19.6	5.0	12.4	5.2	7.7	10.1	5.3
Cycle Q Clear(g_c), s	9.0	14.1	14.4	11.8	19.5	19.6	5.0	12.4	5.2	7.7	10.1	5.3
Prop In Lane	1.00		0.33	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	375	370	216	414	405	101	1404	612	150	1502	658
V/C Ratio(X)	0.82	0.64	0.65	0.87	0.78	0.79	0.78	0.39	0.18	0.82	0.31	0.18
Avail Cap(c_a), veh/h	607	375	370	235	414	405	235	1404	612	235	1502	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	41.0	41.1	49.2	41.0	41.0	53.0	24.6	22.4	51.3	21.9	20.5
Incr Delay (d2), s/veh	1.8	8.3	8.7	25.0	13.7	14.4	5.0	0.8	0.6	6.4	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	6.9	7.0	6.6	9.9	9.8	2.3	5.3	2.0	3.7	4.2	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	49.3	49.9	74.2	54.7	55.4	58.0	25.4	23.0	57.7	22.4	21.1
LnGrp LOS	D	D	D	E	D	E	E	C	C	E	C	C
Approach Vol, veh/h		763			831			732			712	
Approach Delay, s/veh		50.5			59.4			28.6			28.3	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	30.0	11.4	53.6	16.3	32.5	14.6	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	13.8	16.4	7.0	12.1	11.0	21.6	9.7	14.4				
Green Ext Time (p_c), s	0.0	1.6	0.0	5.4	0.2	0.9	0.0	6.1				
Intersection Summary												
HCM 6th Ctrl Delay			42.4									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Existing + Project Conditions
Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	339	14	34	417	32	5	3	30	28	0	7
Future Volume (veh/h)	15	339	14	34	417	32	5	3	30	28	0	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	385	16	39	474	36	6	3	34	32	0	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	674	2322	96	744	2238	169	108	33	172	130	0	172
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.11	0.11	0.11	0.11	0.00	0.11
Sat Flow, veh/h	890	3473	144	982	3348	254	6	299	1585	13	0	1581
Grp Volume(v), veh/h	17	196	205	39	251	259	9	0	34	32	0	8
Grp Sat Flow(s),veh/h/ln	890	1777	1840	982	1777	1825	305	0	1585	13	0	1581
Q Serve(g_s), s	0.4	2.3	2.3	0.9	3.1	3.1	0.0	0.0	1.1	0.1	0.0	0.3
Cycle Q Clear(g_c), s	3.5	2.3	2.3	3.2	3.1	3.1	6.1	0.0	1.1	6.1	0.0	0.3
Prop In Lane	1.00		0.08	1.00		0.14	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	674	1188	1230	744	1188	1220	140	0	172	130	0	172
V/C Ratio(X)	0.03	0.17	0.17	0.05	0.21	0.21	0.06	0.00	0.20	0.25	0.00	0.05
Avail Cap(c_a), veh/h	674	1188	1230	744	1188	1220	793	0	848	714	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	3.5	3.5	4.1	3.6	3.6	22.6	0.0	22.8	28.0	0.0	22.4
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.4	0.4	0.2	0.0	0.6	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.5	0.1	0.7	0.7	0.1	0.0	0.4	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	3.8	3.8	4.2	4.0	4.0	22.8	0.0	23.3	29.0	0.0	22.5
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		418			549			43				40
Approach Delay, s/veh		3.8			4.0			23.2				27.7
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		12.1		44.0		12.1				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		5.5		8.1		5.2		8.1				
Green Ext Time (p_c), s		3.5		0.1		4.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				5.6								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↗			↖	↗
Traffic Vol, veh/h	23	397	0	0	512	50	0	0	0	40	0	17
Future Vol, veh/h	23	397	0	0	512	50	0	0	0	40	0	17
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	446	0	0	575	56	0	0	0	45	0	19

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	633	0	0	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	-
Pot Cap-1 Maneuver	946	-	0	-
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	944	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	19.9
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	944	-	-	-	-	235	677
HCM Lane V/C Ratio	-	0.027	-	-	-	-	0.191	0.028
HCM Control Delay (s)	0	8.9	-	-	-	-	23.9	10.5
HCM Lane LOS	A	A	-	-	-	-	C	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	0.7	0.1

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↗			↖	↗
Traffic Vol, veh/h	20	407	0	0	541	50	0	0	0	53	0	18
Future Vol, veh/h	20	407	0	0	541	50	0	0	0	53	0	18
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	457	0	0	608	56	0	0	0	60	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	666	0	0	-	-	0	805	1167	229	911	1139	334
Stage 1	-	-	-	-	-	-	501	501	-	638	638	-
Stage 2	-	-	-	-	-	-	304	666	-	273	501	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	919	-	-	0	-	-	274	192	774	229	200	662
Stage 1	-	-	-	0	-	-	521	541	-	431	469	-
Stage 2	-	-	-	0	-	-	681	456	-	710	541	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	917	-	-	-	-	-	261	187	774	224	195	661
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	187	-	224	195	-
Stage 1	-	-	-	-	-	-	508	528	-	420	468	-
Stage 2	-	-	-	-	-	-	660	455	-	693	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	22.7
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	917	-	-	-	-	224	661
HCM Lane V/C Ratio	-	0.025	-	-	-	-	0.266	0.031
HCM Control Delay (s)	0	9	-	-	-	-	26.8	10.6
HCM Lane LOS		A	A	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	1	0.1

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Existing + Project Conditions
Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	219	64	108	322	82	67	347	47	103	368	217
Future Volume (veh/h)	176	219	64	108	322	82	67	347	47	103	368	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	243	71	120	358	91	74	386	52	114	409	241
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	605	173	148	645	162	95	1481	647	141	1573	691
Arrive On Green	0.08	0.22	0.22	0.08	0.23	0.23	0.05	0.42	0.42	0.08	0.44	0.44
Sat Flow, veh/h	3456	2722	776	1781	2811	705	1781	3554	1552	1781	3554	1560
Grp Volume(v), veh/h	196	157	157	120	225	224	74	386	52	114	409	241
Grp Sat Flow(s),veh/h/ln	1728	1777	1722	1781	1777	1739	1781	1777	1552	1781	1777	1560
Q Serve(g_s), s	6.0	8.1	8.5	7.2	12.0	12.3	4.4	7.7	2.2	6.8	7.8	11.0
Cycle Q Clear(g_c), s	6.0	8.1	8.5	7.2	12.0	12.3	4.4	7.7	2.2	6.8	7.8	11.0
Prop In Lane	1.00		0.45	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	395	383	148	408	399	95	1481	647	141	1573	691
V/C Ratio(X)	0.75	0.40	0.41	0.81	0.55	0.56	0.78	0.26	0.08	0.81	0.26	0.35
Avail Cap(c_a), veh/h	640	395	383	247	408	399	247	1481	647	247	1573	691
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	35.8	36.0	48.7	36.7	36.8	50.5	20.6	19.0	48.9	19.0	19.8
Incr Delay (d2), s/veh	1.6	3.0	3.2	4.1	5.3	5.6	5.1	0.4	0.2	4.1	0.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.8	3.8	3.3	5.7	5.7	2.1	3.2	0.8	3.1	3.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	38.8	39.2	52.8	42.0	42.4	55.6	21.0	19.3	53.0	19.4	21.2
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	B	C
Approach Vol, veh/h		510			569			512			764	
Approach Delay, s/veh		43.4			44.4			25.9			25.0	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	30.0	10.8	53.3	13.2	30.8	13.5	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	9.2	10.5	6.4	13.0	8.0	14.3	8.8	9.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	5.5	0.2	1.7	0.0	4.1				

Intersection Summary

HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Existing + Project Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↖	↗
Traffic Volume (veh/h)	9	644	16	30	656	18	8	0	28	26	1	4
Future Volume (veh/h)	9	644	16	30	656	18	8	0	28	26	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	732	18	34	745	20	9	0	32	30	1	5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	537	2371	58	544	2365	63	129	0	169	127	2	170
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.11	0.00	0.11	0.11	0.11	0.11
Sat Flow, veh/h	702	3542	87	712	3533	95	6	0	1576	6	21	1585
Grp Volume(v), veh/h	10	367	383	34	375	390	9	0	32	31	0	5
Grp Sat Flow(s),veh/h/ln	702	1777	1852	712	1777	1851	6	0	1576	27	0	1585
Q Serve(g_s), s	0.3	4.8	4.8	1.2	4.9	5.0	0.0	0.0	1.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	5.3	4.8	4.8	6.0	4.9	5.0	6.0	0.0	1.0	6.0	0.0	0.2
Prop In Lane	1.00		0.05	1.00		0.05	1.00		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	537	1189	1240	544	1189	1239	129	0	169	129	0	170
V/C Ratio(X)	0.02	0.31	0.31	0.06	0.31	0.32	0.07	0.00	0.19	0.24	0.00	0.03
Avail Cap(c_a), veh/h	537	1189	1240	544	1189	1239	733	0	844	722	0	849
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.0	3.9	3.9	5.1	3.9	3.9	28.0	0.0	22.8	27.6	0.0	22.4
Incr Delay (d2), s/veh	0.1	0.7	0.6	0.2	0.7	0.7	0.2	0.0	0.5	0.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.1	0.1	1.1	1.1	0.1	0.0	0.4	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.0	4.5	4.5	5.3	4.6	4.5	28.2	0.0	23.3	28.5	0.0	22.5
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		760			799			41				36
Approach Delay, s/veh		4.5			4.6			24.4				27.7
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		12.0		44.0		12.0				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		7.3		8.0		8.0		8.0				
Green Ext Time (p_c), s		7.1		0.1		7.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				5.6								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗			↔			↖	↗
Traffic Vol, veh/h	14	736	0	0	695	34	0	0	0	35	0	10
Future Vol, veh/h	14	736	0	0	695	34	0	0	0	35	0	10
Conflicting Peds, #/hr	0	0	0	0	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	846	0	0	799	39	0	0	0	40	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	841	0	0	-	-	0	1278	1719	423	1277	1700	422
Stage 1	-	-	-	-	-	-	878	878	-	822	822	-
Stage 2	-	-	-	-	-	-	400	841	-	455	878	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	790	-	-	0	-	-	123	89	579	123	91	580
Stage 1	-	-	-	0	-	-	309	364	-	334	386	-
Stage 2	-	-	-	0	-	-	597	379	-	554	364	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	-	-	-	119	87	579	121	89	578
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	87	-	121	89	-
Stage 1	-	-	-	-	-	-	303	357	-	326	385	-
Stage 2	-	-	-	-	-	-	585	378	-	543	357	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	40.6
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	788	-	-	-	-	121	578
HCM Lane V/C Ratio	-	0.02	-	-	-	-	0.332	0.02
HCM Control Delay (s)	0	9.7	-	-	-	-	48.9	11.4
HCM Lane LOS	A	A	-	-	-	-	E	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	1.3	0.1

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↗			↖	↗
Traffic Vol, veh/h	15	740	0	0	715	56	0	0	0	53	0	7
Future Vol, veh/h	15	740	0	0	715	56	0	0	0	53	0	7
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	771	0	0	745	58	0	0	0	55	0	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	804	0	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	-
Pot Cap-1 Maneuver	816	-	0	-
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	815	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	42.4
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	815	-	-	-	-	140	596
HCM Lane V/C Ratio	-	0.019	-	-	-	-	0.394	0.012
HCM Control Delay (s)	0	9.5	-	-	-	-	46.5	11.1
HCM Lane LOS	A	A	-	-	-	-	E	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	1.7	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Existing + Project Conditions
Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	409	94	184	524	123	94	533	107	121	463	159
Future Volume (veh/h)	314	409	94	184	524	123	94	533	107	121	463	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	320	417	96	188	535	126	96	544	109	123	472	162
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	604	138	216	631	148	120	1404	612	150	1463	640
Arrive On Green	0.11	0.21	0.21	0.12	0.22	0.22	0.07	0.40	0.40	0.08	0.41	0.41
Sat Flow, veh/h	3456	2864	653	1781	2851	668	1781	3554	1549	1781	3554	1555
Grp Volume(v), veh/h	320	257	256	188	333	328	96	544	109	123	472	162
Grp Sat Flow(s),veh/h/ln	1728	1777	1741	1781	1777	1742	1781	1777	1549	1781	1777	1555
Q Serve(g_s), s	10.3	15.2	15.5	11.8	20.4	20.6	6.0	12.4	5.2	7.7	10.3	7.8
Cycle Q Clear(g_c), s	10.3	15.2	15.5	11.8	20.4	20.6	6.0	12.4	5.2	7.7	10.3	7.8
Prop In Lane	1.00		0.38	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	375	367	216	393	386	120	1404	612	150	1463	640
V/C Ratio(X)	0.84	0.69	0.70	0.87	0.85	0.85	0.80	0.39	0.18	0.82	0.32	0.25
Avail Cap(c_a), veh/h	607	375	367	235	393	386	235	1404	612	235	1463	640
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	41.5	41.6	49.2	42.5	42.5	52.3	24.6	22.4	51.3	22.7	22.0
Incr Delay (d2), s/veh	3.0	9.8	10.5	25.0	19.6	20.5	4.5	0.8	0.6	6.4	0.6	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(50%),veh/ln	4.5	7.5	7.6	6.6	10.8	10.8	2.8	5.3	2.0	3.7	4.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	51.3	52.1	74.2	62.0	63.0	56.8	25.4	23.0	57.7	23.3	22.9
LnGrp LOS	D	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h		833			849			749			757	
Approach Delay, s/veh		52.1			65.1			29.1			28.8	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	30.0	12.7	52.4	17.6	31.2	14.6	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	13.8	17.5	8.0	12.3	12.3	22.6	9.7	14.4				
Green Ext Time (p_c), s	0.0	1.6	0.0	5.7	0.3	0.6	0.0	6.1				
Intersection Summary												
HCM 6th Ctrl Delay			44.6									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Opening Year (2025) Conditions

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	342	17	27	414	35	7	5	21	28	0	8
Future Volume (veh/h)	18	342	17	27	414	35	7	5	21	28	0	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	389	19	31	470	40	8	6	24	32	0	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	682	2323	113	747	2236	190	102	46	160	130	0	159
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	890	3444	168	976	3315	281	4	458	1585	7	0	1580
Grp Volume(v), veh/h	20	200	208	31	251	259	14	0	24	32	0	9
Grp Sat Flow(s),veh/h/ln	890	1777	1835	976	1777	1819	462	0	1585	7	0	1580
Q Serve(g_s), s	0.5	2.3	2.3	0.7	3.0	3.0	0.0	0.0	0.8	0.0	0.0	0.3
Cycle Q Clear(g_c), s	3.5	2.3	2.3	3.0	3.0	3.0	5.6	0.0	0.8	5.6	0.0	0.3
Prop In Lane	1.00		0.09	1.00		0.15	0.57		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	682	1199	1238	747	1199	1227	148	0	160	130	0	159
V/C Ratio(X)	0.03	0.17	0.17	0.04	0.21	0.21	0.09	0.00	0.15	0.25	0.00	0.06
Avail Cap(c_a), veh/h	682	1199	1238	747	1199	1227	838	0	855	736	0	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	3.3	3.3	3.9	3.4	3.4	22.8	0.0	22.8	27.8	0.0	22.6
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.4	0.4	0.3	0.0	0.4	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.5	0.1	0.6	0.6	0.2	0.0	0.3	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	3.6	3.6	4.0	3.8	3.8	23.1	0.0	23.3	28.8	0.0	22.8
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		428			541			38				41
Approach Delay, s/veh		3.6			3.8			23.2				27.4
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		11.6		44.0		11.6				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		5.5		7.6		5.0		7.6				
Green Ext Time (p_c), s		3.6		0.1		4.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				5.4								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔			↖	↗
Traffic Vol, veh/h	6	410	0	0	523	9	0	0	0	5	0	3
Future Vol, veh/h	6	410	0	0	523	9	0	0	0	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	461	0	0	588	10	0	0	0	6	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	600	0	0	-	-	0	769	1075	231	840	1070	301
Stage 1	-	-	-	-	-	-	475	475	-	595	595	-
Stage 2	-	-	-	-	-	-	294	600	-	245	475	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	973	-	-	0	-	-	291	218	771	258	220	695
Stage 1	-	-	-	0	-	-	539	556	-	458	491	-
Stage 2	-	-	-	0	-	-	690	488	-	737	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	971	-	-	-	-	-	288	216	771	256	218	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	216	-	256	218	-
Stage 1	-	-	-	-	-	-	535	552	-	454	490	-
Stage 2	-	-	-	-	-	-	687	487	-	732	552	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	16
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	971	-	-	-	-	256	694
HCM Lane V/C Ratio	-	0.007	-	-	-	-	0.022	0.005
HCM Control Delay (s)	0	8.7	-	-	-	-	19.4	10.2
HCM Lane LOS	A	A	-	-	-	-	C	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.1	0

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑			↑↑			↔			↙	↗
Traffic Vol, veh/h	3	402	0	0	525	9	0	0	0	18	0	4
Future Vol, veh/h	3	402	0	0	525	9	0	0	0	18	0	4
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	452	0	0	590	10	0	0	0	20	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	602	0	0	-	-	0	753	1060	226	829	1055	302
Stage 1	-	-	-	-	-	-	458	458	-	597	597	-
Stage 2	-	-	-	-	-	-	295	602	-	232	458	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	971	-	-	0	-	-	298	223	777	263	224	694
Stage 1	-	-	-	0	-	-	552	565	-	456	490	-
Stage 2	-	-	-	0	-	-	689	487	-	750	565	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	969	-	-	-	-	-	295	222	777	262	223	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	222	-	262	223	-
Stage 1	-	-	-	-	-	-	550	563	-	454	489	-
Stage 2	-	-	-	-	-	-	685	486	-	748	563	-

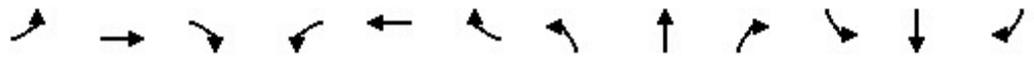
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	18.1
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	969	-	-	-	-	262	693
HCM Lane V/C Ratio	-	0.003	-	-	-	-	0.077	0.006
HCM Control Delay (s)	0	8.7	-	-	-	-	19.9	10.2
HCM Lane LOS	A	A	-	-	-	-	C	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.2	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Opening Year (2025) Conditions

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	214	54	112	316	85	53	358	49	107	380	181
Future Volume (veh/h)	151	214	54	112	316	85	53	358	49	107	380	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	238	60	124	351	94	59	398	54	119	422	201
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	622	154	152	664	175	76	1471	643	146	1612	708
Arrive On Green	0.07	0.22	0.22	0.09	0.24	0.24	0.04	0.41	0.41	0.08	0.45	0.45
Sat Flow, veh/h	3456	2819	695	1781	2777	734	1781	3554	1552	1781	3554	1560
Grp Volume(v), veh/h	168	148	150	124	223	222	59	398	54	119	422	201
Grp Sat Flow(s),veh/h/ln	1728	1777	1737	1781	1777	1734	1781	1777	1552	1781	1777	1560
Q Serve(g_s), s	5.2	7.7	8.0	7.4	11.9	12.2	3.6	8.0	2.3	7.1	8.0	8.8
Cycle Q Clear(g_c), s	5.2	7.7	8.0	7.4	11.9	12.2	3.6	8.0	2.3	7.1	8.0	8.8
Prop In Lane	1.00		0.40	1.00		0.42	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	392	384	152	425	414	76	1471	643	146	1612	708
V/C Ratio(X)	0.73	0.38	0.39	0.82	0.52	0.54	0.78	0.27	0.08	0.81	0.26	0.28
Avail Cap(c_a), veh/h	636	392	384	246	425	414	246	1471	643	246	1612	708
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	36.0	36.1	48.9	36.0	36.1	51.5	21.0	19.3	49.1	18.4	18.6
Incr Delay (d2), s/veh	1.6	2.8	3.0	4.4	4.6	4.9	6.2	0.5	0.3	4.1	0.4	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(50%),veh/ln	2.2	3.6	3.6	3.4	5.5	5.6	1.7	3.4	0.9	3.3	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	38.7	39.1	53.3	40.6	41.0	57.7	21.5	19.6	53.1	18.8	19.6
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	B	B
Approach Vol, veh/h		466			569			511			742	
Approach Delay, s/veh		43.4			43.5			25.4			24.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	30.0	9.6	54.8	12.3	32.0	13.9	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+l1), s	9.4	10.0	5.6	10.8	7.2	14.2	9.1	10.0				
Green Ext Time (p_c), s	0.0	1.3	0.0	5.5	0.1	1.7	0.0	4.2				

Intersection Summary

HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Opening Year (2025) Conditions
Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	649	18	23	671	21	11	0	20	28	2	6
Future Volume (veh/h)	10	649	18	23	671	21	11	0	20	28	2	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	738	20	26	762	24	12	0	23	32	2	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	527	2366	64	541	2355	74	129	0	168	125	4	169
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.11	0.00	0.11	0.11	0.11	0.11
Sat Flow, veh/h	689	3531	96	706	3514	111	5	0	1576	5	40	1585
Grp Volume(v), veh/h	11	371	387	26	385	401	12	0	23	34	0	7
Grp Sat Flow(s),veh/h/ln	689	1777	1850	706	1777	1847	5	0	1576	44	0	1585
Q Serve(g_s), s	0.4	4.9	4.9	0.9	5.1	5.1	0.0	0.0	0.7	0.0	0.0	0.2
Cycle Q Clear(g_c), s	5.5	4.9	4.9	5.8	5.1	5.1	6.0	0.0	0.7	6.0	0.0	0.2
Prop In Lane	1.00		0.05	1.00		0.06	1.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	527	1191	1240	541	1191	1238	129	0	168	130	0	169
V/C Ratio(X)	0.02	0.31	0.31	0.05	0.32	0.32	0.09	0.00	0.14	0.26	0.00	0.04
Avail Cap(c_a), veh/h	527	1191	1240	541	1191	1238	733	0	845	734	0	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.0	3.8	3.8	5.0	3.9	3.9	28.0	0.0	22.7	27.3	0.0	22.4
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.2	0.7	0.7	0.3	0.0	0.4	1.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.1	0.1	1.1	1.2	0.2	0.0	0.3	0.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	4.5	4.5	5.2	4.6	4.6	28.3	0.0	23.0	28.3	0.0	22.5
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		769			812			35				41
Approach Delay, s/veh		4.5			4.6			24.8				27.3
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		12.0		44.0		12.0				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		7.5		8.0		7.8		8.0				
Green Ext Time (p_c), s		7.2		0.1		7.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				5.6								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↗			↖	↗
Traffic Vol, veh/h	4	747	0	0	703	9	0	0	0	7	0	9
Future Vol, veh/h	4	747	0	0	703	9	0	0	0	7	0	9
Conflicting Peds, #/hr	0	0	0	0	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	859	0	0	808	10	0	0	0	8	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	821	0	0	-	-	0	1273	1690	430	1256	1685	412
Stage 1	-	-	-	-	-	-	869	869	-	816	816	-
Stage 2	-	-	-	-	-	-	404	821	-	440	869	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	804	-	-	0	-	-	124	92	573	128	93	589
Stage 1	-	-	-	0	-	-	313	367	-	337	389	-
Stage 2	-	-	-	0	-	-	594	387	-	566	367	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	802	-	-	-	-	-	121	91	573	127	92	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	121	91	-	127	92	-
Stage 1	-	-	-	-	-	-	311	365	-	334	388	-
Stage 2	-	-	-	-	-	-	584	386	-	562	365	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	21.7
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	802	-	-	-	-	127	587
HCM Lane V/C Ratio	-	0.006	-	-	-	-	0.063	0.018
HCM Control Delay (s)	0	9.5	-	-	-	-	35.3	11.2
HCM Lane LOS		A	A	-	-	-	E	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.2	0.1

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗			↔			↖	↗
Traffic Vol, veh/h	4	734	0	0	712	18	0	0	0	24	0	6
Future Vol, veh/h	4	734	0	0	712	18	0	0	0	24	0	6
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	765	0	0	742	19	0	0	0	25	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	762	0	0	-	-	0	1144	1535	383	1144	1526	382
Stage 1	-	-	-	-	-	-	773	773	-	753	753	-
Stage 2	-	-	-	-	-	-	371	762	-	391	773	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	846	-	-	0	-	-	155	115	615	155	117	616
Stage 1	-	-	-	0	-	-	358	407	-	368	416	-
Stage 2	-	-	-	0	-	-	622	412	-	605	407	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	845	-	-	-	-	-	153	114	615	154	116	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	153	114	-	154	116	-
Stage 1	-	-	-	-	-	-	356	405	-	366	416	-
Stage 2	-	-	-	-	-	-	616	412	-	602	405	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	28.5
HCM LOS			A	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	845	-	-	-	-	154	615
HCM Lane V/C Ratio	-	0.005	-	-	-	-	0.162	0.01
HCM Control Delay (s)	0	9.3	-	-	-	-	32.9	10.9
HCM Lane LOS	A	A	-	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.6	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Opening Year (2025) Conditions

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	409	84	190	526	127	83	550	111	125	478	128
Future Volume (veh/h)	290	409	84	190	526	127	83	550	111	125	478	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	417	86	194	537	130	85	561	113	128	488	131
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	358	613	125	221	652	157	108	1394	607	155	1488	651
Arrive On Green	0.10	0.21	0.21	0.12	0.23	0.23	0.06	0.39	0.39	0.09	0.42	0.42
Sat Flow, veh/h	3456	2929	599	1781	2834	683	1781	3554	1549	1781	3554	1555
Grp Volume(v), veh/h	296	251	252	194	336	331	85	561	113	128	488	131
Grp Sat Flow(s),veh/h/ln	1728	1777	1751	1781	1777	1740	1781	1777	1549	1781	1777	1555
Q Serve(g_s), s	9.6	15.0	15.2	12.3	20.6	20.8	5.4	13.1	5.5	8.1	10.6	6.1
Cycle Q Clear(g_c), s	9.6	15.0	15.2	12.3	20.6	20.8	5.4	13.1	5.5	8.1	10.6	6.1
Prop In Lane	1.00		0.34	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	372	366	221	409	400	108	1394	607	155	1488	651
V/C Ratio(X)	0.83	0.68	0.69	0.88	0.82	0.83	0.79	0.40	0.19	0.83	0.33	0.20
Avail Cap(c_a), veh/h	602	372	366	233	409	400	233	1394	607	233	1488	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	41.8	41.9	49.4	41.9	42.0	53.2	25.2	22.9	51.5	22.5	21.2
Incr Delay (d2), s/veh	1.9	9.5	10.1	26.9	16.8	17.6	4.8	0.9	0.7	8.5	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	4.2	7.4	7.4	7.0	10.7	10.6	2.5	5.6	2.1	4.0	4.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	51.3	52.0	76.2	58.8	59.6	58.0	26.0	23.5	60.1	23.1	21.9
LnGrp LOS	D	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h		799			861			759			747	
Approach Delay, s/veh		51.9			63.0			29.2			29.2	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	30.0	11.9	53.5	16.9	32.4	15.0	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	14.3	17.2	7.4	12.6	11.6	22.8	10.1	15.1				
Green Ext Time (p_c), s	0.0	1.6	0.0	5.7	0.2	0.5	0.0	6.3				

Intersection Summary

HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

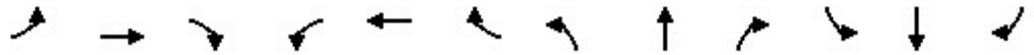
Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Opening Year (2025) + Project Conditions

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Traffic Volume (veh/h)	18	367	17	35	435	37	7	5	31	30	0	8
Future Volume (veh/h)	18	367	17	35	435	37	7	5	31	30	0	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	417	19	40	494	42	8	6	35	34	0	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	640	2257	103	701	2165	184	100	48	205	128	0	205
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.13	0.13	0.13	0.13	0.00	0.13
Sat Flow, veh/h	868	3457	157	951	3315	281	8	367	1585	18	0	1581
Grp Volume(v), veh/h	20	214	222	40	264	272	14	0	35	34	0	9
Grp Sat Flow(s),veh/h/ln	868	1777	1837	951	1777	1820	375	0	1585	18	0	1581
Q Serve(g_s), s	0.6	2.7	2.7	1.0	3.5	3.5	0.1	0.0	1.1	0.1	0.0	0.3
Cycle Q Clear(g_c), s	4.0	2.7	2.7	3.7	3.5	3.5	7.4	0.0	1.1	7.4	0.0	0.3
Prop In Lane	1.00		0.09	1.00		0.15	0.57		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	640	1160	1200	701	1160	1188	147	0	205	128	0	205
V/C Ratio(X)	0.03	0.18	0.19	0.06	0.23	0.23	0.10	0.00	0.17	0.27	0.00	0.04
Avail Cap(c_a), veh/h	640	1160	1200	701	1160	1188	765	0	828	664	0	826
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	3.9	3.9	4.7	4.1	4.1	22.2	0.0	22.3	28.7	0.0	21.9
Incr Delay (d2), s/veh	0.1	0.4	0.3	0.2	0.5	0.4	0.3	0.0	0.4	1.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.7	0.2	0.8	0.9	0.2	0.0	0.4	0.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.0	4.3	4.3	4.8	4.5	4.5	22.5	0.0	22.6	29.8	0.0	22.0
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		456			576			49				43
Approach Delay, s/veh		4.3			4.5			22.6				28.2
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		13.5		44.0		13.5				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		6.0		9.4		5.7		9.4				
Green Ext Time (p_c), s		3.9		0.1		5.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗			↔			↖	↗
Traffic Vol, veh/h	24	428	0	0	538	51	0	0	0	41	0	18
Future Vol, veh/h	24	428	0	0	538	51	0	0	0	41	0	18
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	481	0	0	604	57	0	0	0	46	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	-	-	0	837	1198	241	930	1170	333
Stage 1	-	-	-	-	-	-	535	535	-	635	635	-
Stage 2	-	-	-	-	-	-	302	663	-	295	535	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	922	-	-	0	-	-	259	184	760	222	192	663
Stage 1	-	-	-	0	-	-	497	522	-	433	471	-
Stage 2	-	-	-	0	-	-	682	457	-	689	522	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	920	-	-	-	-	-	246	178	760	217	186	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	246	178	-	217	186	-
Stage 1	-	-	-	-	-	-	483	507	-	420	470	-
Stage 2	-	-	-	-	-	-	661	456	-	669	507	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	21.3
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	920	-	-	-	-	217	662
HCM Lane V/C Ratio	-	0.029	-	-	-	-	0.212	0.031
HCM Control Delay (s)	0	9	-	-	-	-	26	10.6
HCM Lane LOS	A	A	-	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	0.8	0.1

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔			↖	↗
Traffic Vol, veh/h	21	438	0	0	567	51	0	0	0	54	0	19
Future Vol, veh/h	21	438	0	0	567	51	0	0	0	54	0	19
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	492	0	0	637	57	0	0	0	61	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	696	0	0	-	-	0	859	1236	246	962	1208	349
Stage 1	-	-	-	-	-	-	540	540	-	668	668	-
Stage 2	-	-	-	-	-	-	319	696	-	294	540	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	896	-	-	0	-	-	250	175	754	210	182	647
Stage 1	-	-	-	0	-	-	494	519	-	414	455	-
Stage 2	-	-	-	0	-	-	667	441	-	690	519	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	894	-	-	-	-	-	237	170	754	205	177	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	170	-	205	177	-
Stage 1	-	-	-	-	-	-	481	505	-	402	454	-
Stage 2	-	-	-	-	-	-	645	440	-	671	505	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	24.9
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	894	-	-	-	-	205	646
HCM Lane V/C Ratio	-	0.026	-	-	-	-	0.296	0.033
HCM Control Delay (s)	0	9.1	-	-	-	-	29.8	10.8
HCM Lane LOS		A	A	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	1.2	0.1

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Opening Year (2025) + Project Conditions

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖	↖↗		↖	↖↗	↖	↖	↖↗	↖
Traffic Volume (veh/h)	192	230	70	112	334	85	71	358	49	107	380	229
Future Volume (veh/h)	192	230	70	112	334	85	71	358	49	107	380	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	213	256	78	124	371	94	79	398	54	119	422	254
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	595	177	152	634	159	101	1471	643	146	1562	686
Arrive On Green	0.08	0.22	0.22	0.09	0.23	0.23	0.06	0.41	0.41	0.08	0.44	0.44
Sat Flow, veh/h	3456	2693	801	1781	2812	704	1781	3554	1552	1781	3554	1560
Grp Volume(v), veh/h	213	167	167	124	233	232	79	398	54	119	422	254
Grp Sat Flow(s),veh/h/ln	1728	1777	1717	1781	1777	1739	1781	1777	1552	1781	1777	1560
Q Serve(g_s), s	6.6	8.8	9.1	7.4	12.7	13.0	4.8	8.0	2.3	7.1	8.2	11.8
Cycle Q Clear(g_c), s	6.6	8.8	9.1	7.4	12.7	13.0	4.8	8.0	2.3	7.1	8.2	11.8
Prop In Lane	1.00		0.47	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	392	379	152	401	392	101	1471	643	146	1562	686
V/C Ratio(X)	0.77	0.43	0.44	0.82	0.58	0.59	0.78	0.27	0.08	0.81	0.27	0.37
Avail Cap(c_a), veh/h	636	392	379	246	401	392	246	1471	643	246	1562	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	36.4	36.5	48.9	37.5	37.6	50.6	21.0	19.3	49.1	19.4	20.4
Incr Delay (d2), s/veh	1.7	3.4	3.7	4.4	6.0	6.4	4.9	0.5	0.3	4.1	0.4	1.5
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	2.8	4.1	4.1	3.4	6.0	6.1	2.2	3.4	0.9	3.3	3.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	39.8	40.2	53.3	43.5	44.0	55.5	21.5	19.6	53.1	19.8	21.9
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	B	C
Approach Vol, veh/h		547			589			531			795	
Approach Delay, s/veh		44.1			45.8			26.3			25.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	30.0	11.2	53.3	13.7	30.5	13.9	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	9.4	11.1	6.8	13.8	8.6	15.0	9.1	10.0				
Green Ext Time (p_c), s	0.0	1.4	0.0	5.7	0.2	1.7	0.0	4.2				

Intersection Summary

HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

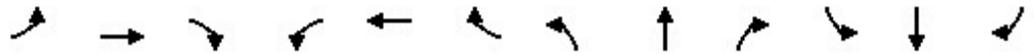
Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Artesia Place Project
1: Roseton Ave & Artesia Blvd

Opening Year (2025) + Project Conditions

Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	↖
Traffic Volume (veh/h)	10	672	18	31	691	23	11	0	29	30	2	6
Future Volume (veh/h)	10	672	18	31	691	23	11	0	29	30	2	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	764	20	35	785	26	12	0	33	34	2	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	494	2295	60	506	2277	75	126	0	212	122	4	213
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.13	0.00	0.13	0.13	0.13	0.13
Sat Flow, veh/h	673	3535	93	689	3507	116	10	0	1578	9	29	1585
Grp Volume(v), veh/h	11	384	400	35	398	413	12	0	33	36	0	7
Grp Sat Flow(s),veh/h/ln	673	1777	1851	689	1777	1846	10	0	1578	38	0	1585
Q Serve(g_s), s	0.4	5.6	5.6	1.4	5.8	5.8	0.1	0.0	1.1	0.1	0.0	0.2
Cycle Q Clear(g_c), s	6.2	5.6	5.6	6.9	5.8	5.8	7.8	0.0	1.1	7.8	0.0	0.2
Prop In Lane	1.00		0.05	1.00		0.06	1.00		1.00	0.94		1.00
Lane Grp Cap(c), veh/h	494	1154	1202	506	1154	1199	126	0	212	126	0	213
V/C Ratio(X)	0.02	0.33	0.33	0.07	0.34	0.34	0.10	0.00	0.16	0.29	0.00	0.03
Avail Cap(c_a), veh/h	494	1154	1202	506	1154	1199	667	0	820	663	0	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	4.5	4.5	6.1	4.6	4.6	28.9	0.0	22.1	28.1	0.0	21.7
Incr Delay (d2), s/veh	0.1	0.8	0.7	0.3	0.8	0.8	0.3	0.0	0.3	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.4	0.2	1.4	1.5	0.2	0.0	0.4	0.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	5.3	5.3	6.3	5.4	5.4	29.2	0.0	22.4	29.3	0.0	21.8
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		795			846			45				43
Approach Delay, s/veh		5.3			5.4			24.2				28.1
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		13.8		44.0		13.8				
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0				
Max Green Setting (Gmax), s		37.5		30.0		37.5		30.0				
Max Q Clear Time (g_c+I1), s		8.2		9.8		8.9		9.8				
Green Ext Time (p_c), s		7.5		0.1		8.1		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				6.4								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↔			↖	↗
Traffic Vol, veh/h	15	770	0	0	731	35	0	0	0	36	0	11
Future Vol, veh/h	15	770	0	0	731	35	0	0	0	36	0	11
Conflicting Peds, #/hr	0	0	0	0	0	3	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	80	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	885	0	0	840	40	0	0	0	41	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	883	0	0	-	-	0	1339	1802	443	1340	1782	443
Stage 1	-	-	-	-	-	-	919	919	-	863	863	-
Stage 2	-	-	-	-	-	-	420	883	-	477	919	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	762	-	-	0	-	-	111	79	562	111	81	562
Stage 1	-	-	-	0	-	-	292	348	-	316	370	-
Stage 2	-	-	-	0	-	-	581	362	-	538	348	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	760	-	-	-	-	-	107	77	562	109	79	560
Mov Cap-2 Maneuver	-	-	-	-	-	-	107	77	-	109	79	-
Stage 1	-	-	-	-	-	-	286	340	-	308	369	-
Stage 2	-	-	-	-	-	-	568	361	-	526	340	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	46.4
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	760	-	-	-	-	109	560
HCM Lane V/C Ratio	-	0.023	-	-	-	-	0.38	0.023
HCM Control Delay (s)	0	9.8	-	-	-	-	57	11.6
HCM Lane LOS	A	A	-	-	-	-	F	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	1.6	0.1

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖			↗			↖	↗
Traffic Vol, veh/h	16	774	0	0	751	57	0	0	0	54	0	8
Future Vol, veh/h	16	774	0	0	751	57	0	0	0	54	0	8
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	-	-	-	-	-	-	-	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	806	0	0	782	59	0	0	0	56	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	842	0	0	-	-	0	1231	1682	403	1250	1653	422
Stage 1	-	-	-	-	-	-	840	840	-	813	813	-
Stage 2	-	-	-	-	-	-	391	842	-	437	840	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	789	-	-	0	-	-	134	94	597	129	97	580
Stage 1	-	-	-	0	-	-	326	379	-	339	390	-
Stage 2	-	-	-	0	-	-	605	378	-	568	379	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	-	-	-	130	92	597	127	95	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	92	-	127	95	-
Stage 1	-	-	-	-	-	-	319	371	-	331	390	-
Stage 2	-	-	-	-	-	-	596	378	-	556	371	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	48.7
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	788	-	-	-	-	127	579
HCM Lane V/C Ratio	-	0.021	-	-	-	-	0.443	0.014
HCM Control Delay (s)	0	9.7	-	-	-	-	54.2	11.3
HCM Lane LOS	A	A	-	-	-	-	F	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	2	0

Artesia Place Project
4: Pioneer Blvd & Artesia Blvd

Opening Year (2025) + Project Conditions

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	424	99	190	543	127	100	550	111	125	478	172
Future Volume (veh/h)	330	424	99	190	543	127	100	550	111	125	478	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	337	433	101	194	554	130	102	561	113	128	488	176
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	597	138	221	622	145	127	1394	607	155	1449	634
Arrive On Green	0.12	0.21	0.21	0.12	0.22	0.22	0.07	0.39	0.39	0.09	0.41	0.41
Sat Flow, veh/h	3456	2856	660	1781	2853	667	1781	3554	1549	1781	3554	1555
Grp Volume(v), veh/h	337	268	266	194	344	340	102	561	113	128	488	176
Grp Sat Flow(s),veh/h/ln	1728	1777	1739	1781	1777	1743	1781	1777	1549	1781	1777	1555
Q Serve(g_s), s	11.0	16.1	16.4	12.3	21.6	21.7	6.5	13.1	5.5	8.1	10.8	8.7
Cycle Q Clear(g_c), s	11.0	16.1	16.4	12.3	21.6	21.7	6.5	13.1	5.5	8.1	10.8	8.7
Prop In Lane	1.00		0.38	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	372	364	221	388	380	127	1394	607	155	1449	634
V/C Ratio(X)	0.85	0.72	0.73	0.88	0.89	0.89	0.80	0.40	0.19	0.83	0.34	0.28
Avail Cap(c_a), veh/h	602	372	364	233	388	380	233	1394	607	233	1449	634
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	42.3	42.4	49.4	43.5	43.6	52.5	25.2	22.9	51.5	23.3	22.7
Incr Delay (d2), s/veh	4.4	11.5	12.2	26.9	24.7	25.8	4.4	0.9	0.7	8.5	0.6	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(50%),veh/ln	4.9	8.1	8.1	7.0	11.9	11.8	3.0	5.6	2.1	4.0	4.6	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	53.7	54.6	76.2	68.2	69.4	56.9	26.0	23.5	60.1	23.9	23.8
LnGrp LOS	D	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h		871			878			776			792	
Approach Delay, s/veh		54.2			70.4			29.7			29.7	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	30.0	13.2	52.3	18.2	31.0	15.0	50.5				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	* 5.5				
Max Green Setting (Gmax), s	15.0	24.0	15.0	44.5	20.0	24.0	15.0	* 45				
Max Q Clear Time (g_c+I1), s	14.3	18.4	8.5	12.8	13.0	23.7	10.1	15.1				
Green Ext Time (p_c), s	0.0	1.5	0.0	6.0	0.3	0.1	0.0	6.3				

Intersection Summary

HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 2: Dwy/Flallon Ave & Artesia Blvd

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	38	7	73	46
Average Queue (ft)	4	0	24	16
95th Queue (ft)	20	4	54	48
Link Distance (ft)		210	659	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	80			25
Storage Blk Time (%)			14	2
Queuing Penalty (veh)			2	1

Intersection: 3: Dwy/Alburtis Ave & Artesia Blvd

Movement	EB	SB	SB
Directions Served	L	LT	R
Maximum Queue (ft)	39	109	44
Average Queue (ft)	4	37	8
95th Queue (ft)	19	76	35
Link Distance (ft)		620	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		50
Storage Blk Time (%)		8	0
Queuing Penalty (veh)		1	0

Zone Summary

Zone wide Queuing Penalty: 3

Intersection: 2: Dwy/Flallon Ave & Artesia Blvd

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	23	9	81	50
Average Queue (ft)	3	0	31	14
95th Queue (ft)	14	5	65	46
Link Distance (ft)		210	659	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	80			25
Storage Blk Time (%)			19	2
Queuing Penalty (veh)			2	1

Intersection: 3: Dwy/Alburtis Ave & Artesia Blvd

Movement	EB	WB	SB	SB
Directions Served	L	TR	LT	R
Maximum Queue (ft)	24	18	73	43
Average Queue (ft)	4	1	33	7
95th Queue (ft)	19	9	69	29
Link Distance (ft)		432	620	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			50
Storage Blk Time (%)			7	0
Queuing Penalty (veh)			1	0

Zone Summary

Zone wide Queuing Penalty: 3

APPENDIX D

TRIP GENERATION EXERPTS

Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is $\frac{1}{2}$ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

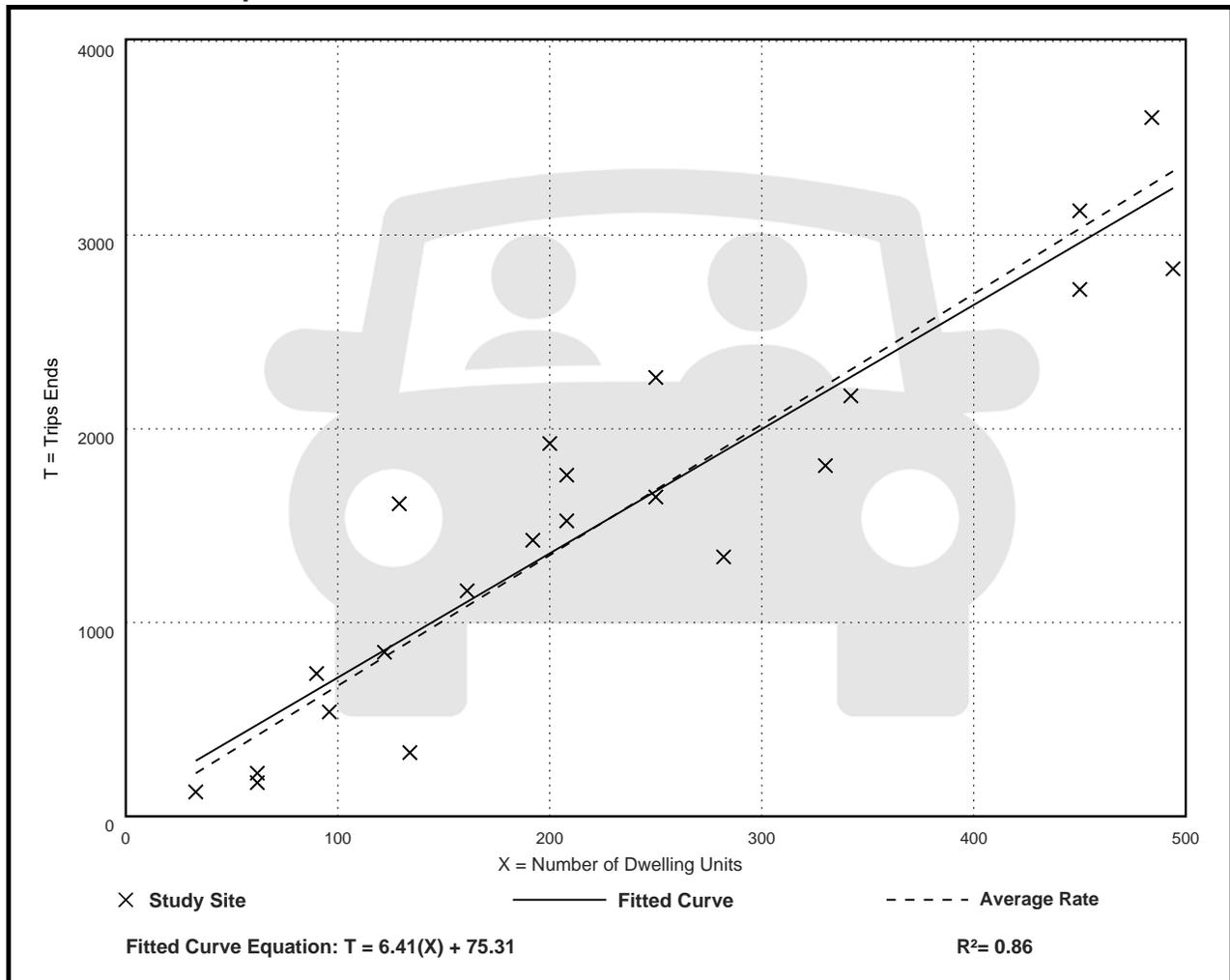
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

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: 49

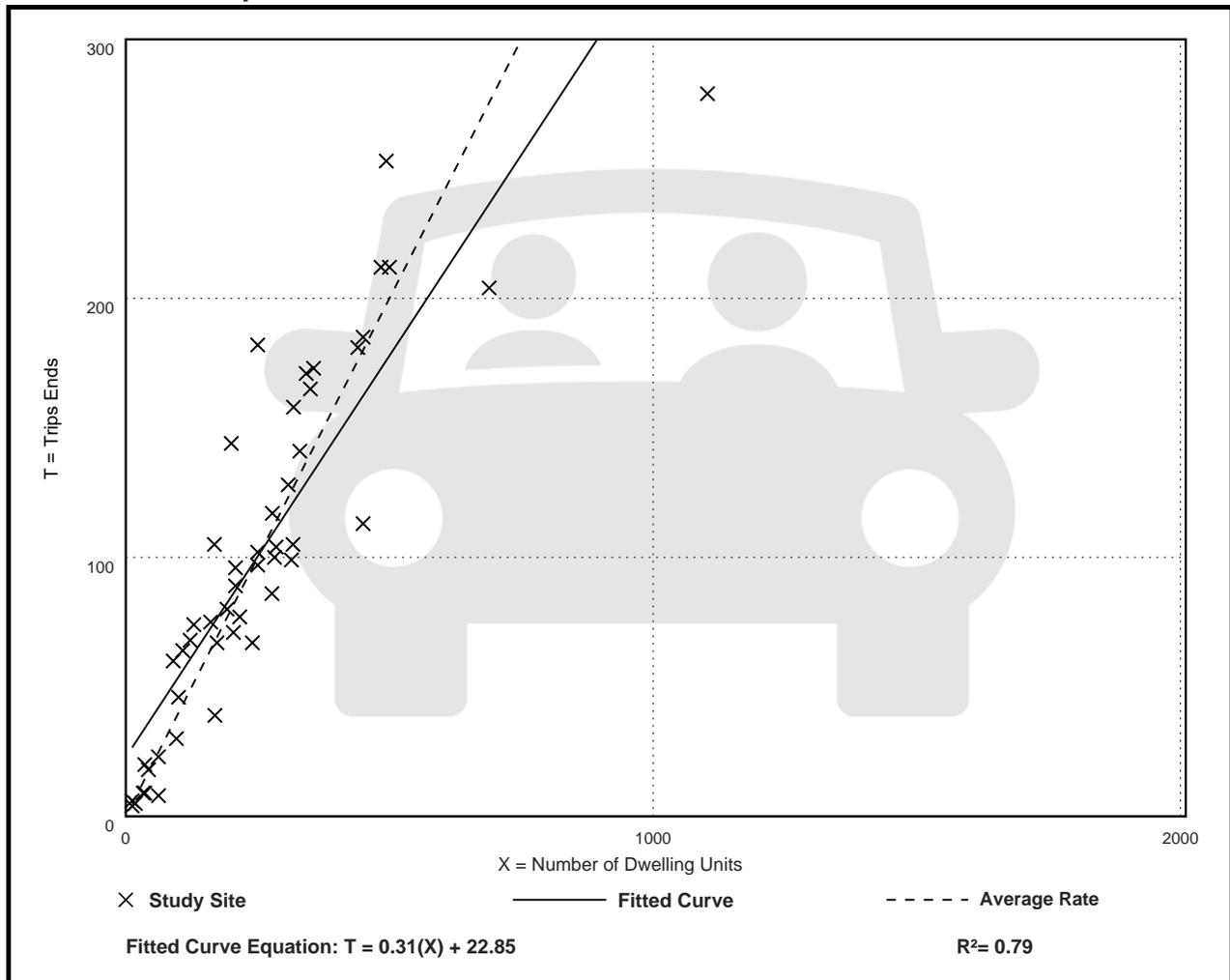
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

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: 59

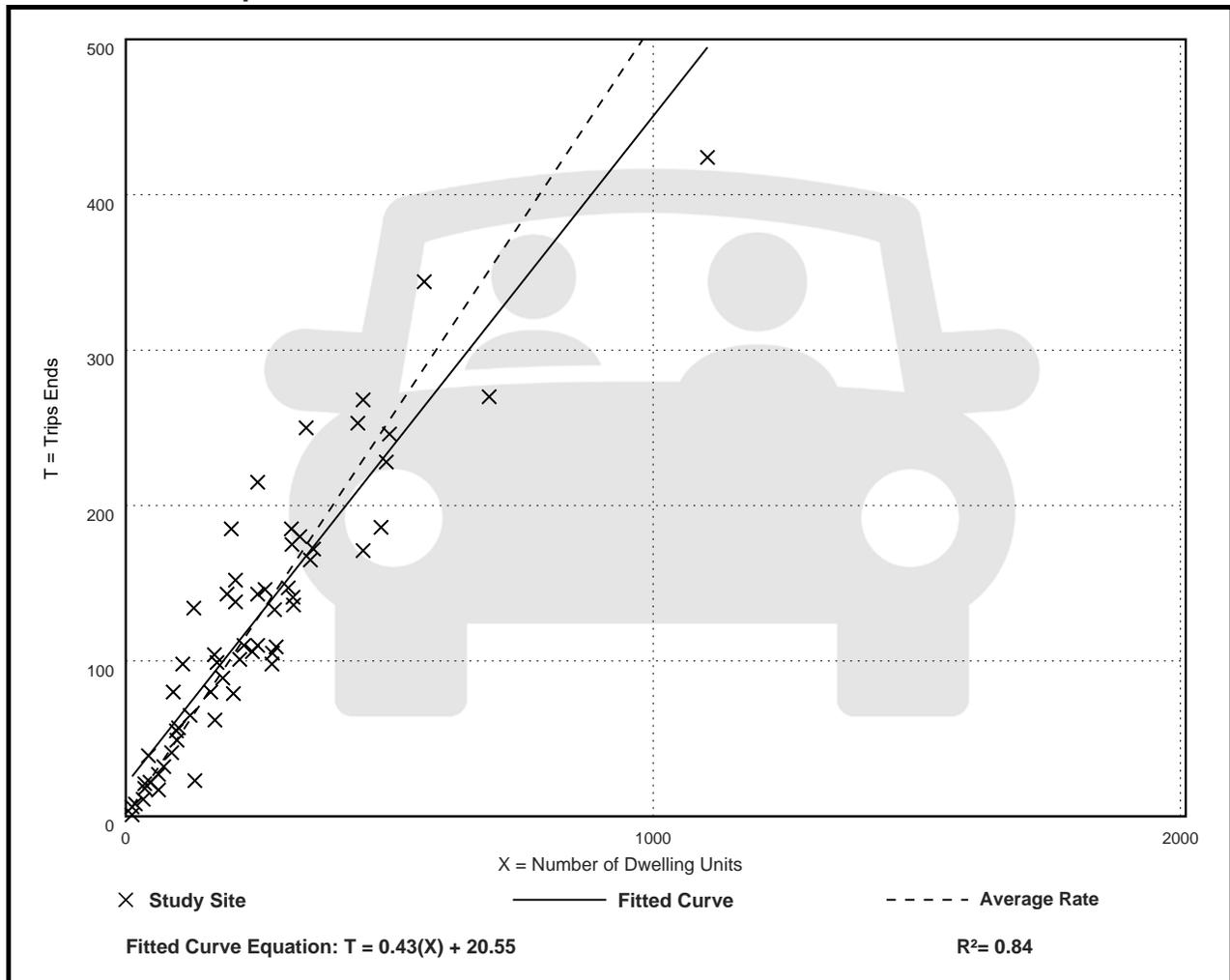
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Land Use: 712

Small Office Building

Description

A small office building is the same as a general office building (Land Use 710) but with less than or equal to 10,000 square feet of gross floor area. The building typically houses a single tenant. It is a location where affairs of a business, commercial or industrial organization, or professional person or firm are conducted. General office building (Land Use 710) is a related use.

Additional Data

Attorney office, mortgage company, financial advisor, insurance agency, home health care provider, and real estate company are examples of tenants included in the small office building database. The diversity of employer types results in a wide range in employee density in the database. Densities range from a high of 1,300 to a low of 240 square feet per employee with an overall average of nearly 600 square feet per employee (a value much larger than the average observed in a general office building study sites).

In addition to the significant difference in employee density, small office buildings tend to be dominated by a single tenant (or very few) that are more service-oriented than a typical general office building. The result is more frequent and regular visitors and higher trip generation rates.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s and the 2010s in Alberta (CAN), California, Texas, and Wisconsin.

Source Numbers

418, 890, 891, 959, 976

Small Office Building (712)

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

Setting/Location: General Urban/Suburban

Number of Studies: 21

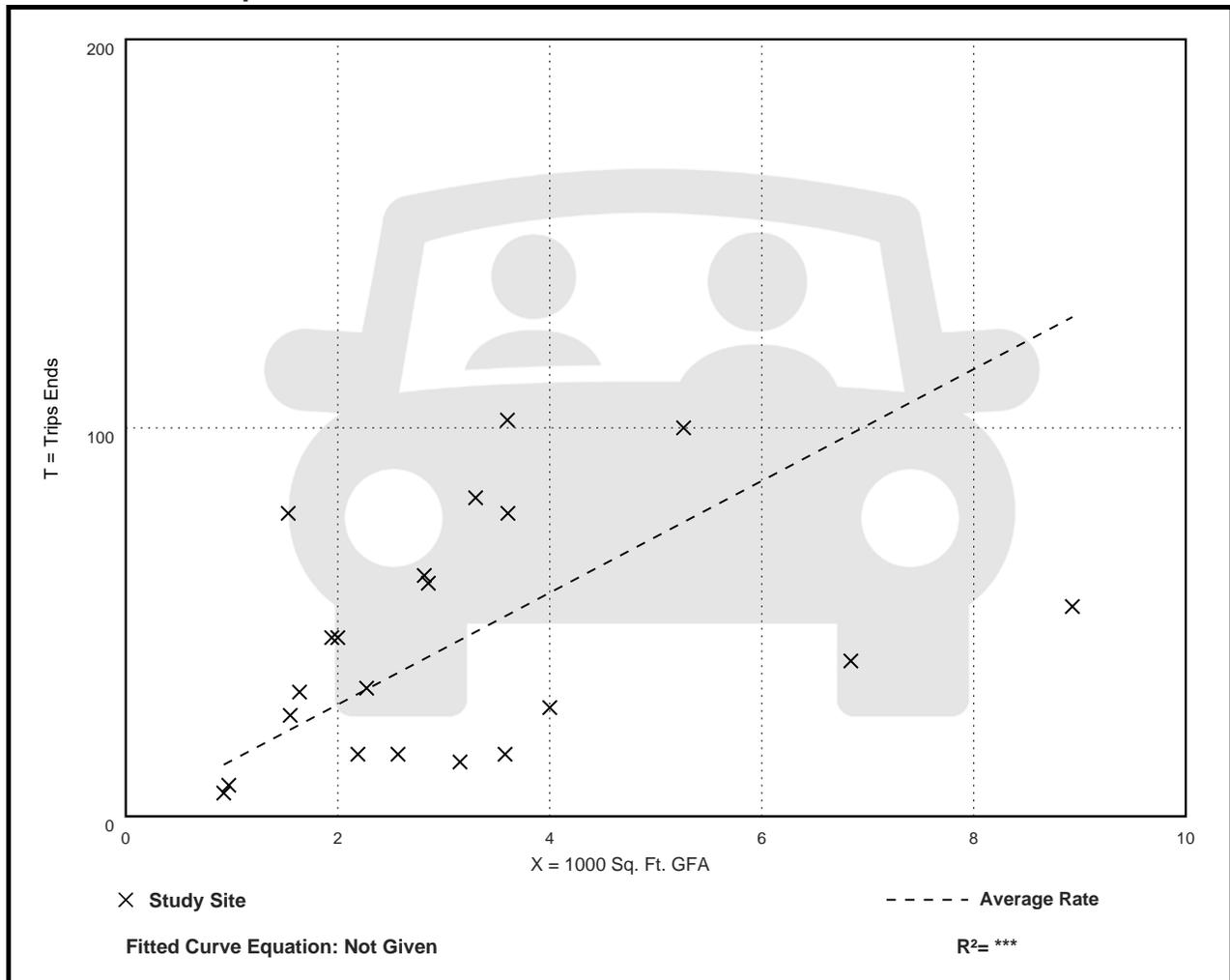
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
14.39	4.44 - 50.91	10.16

Data Plot and Equation



Small Office Building (712)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 21

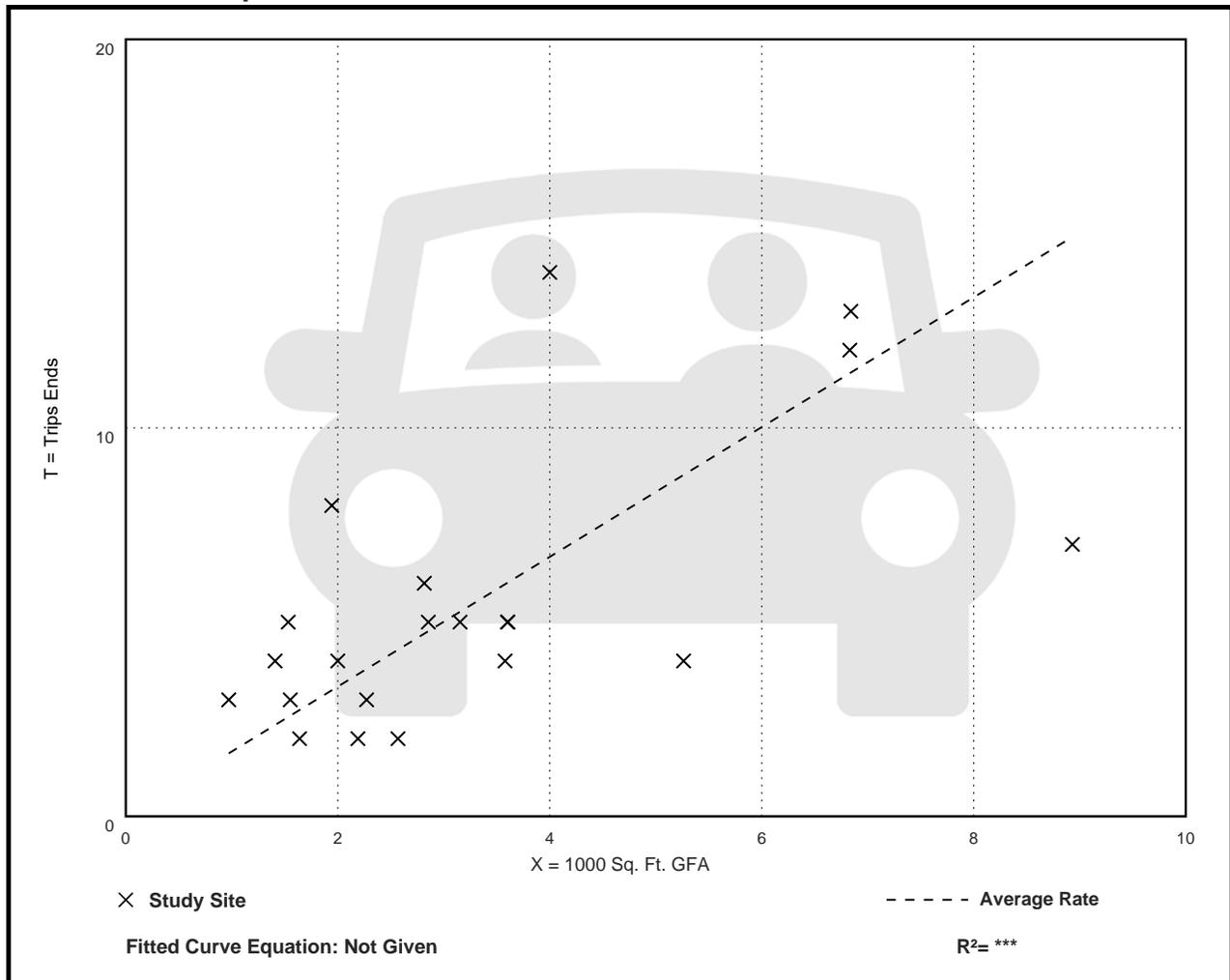
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



Small Office Building (712)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 21

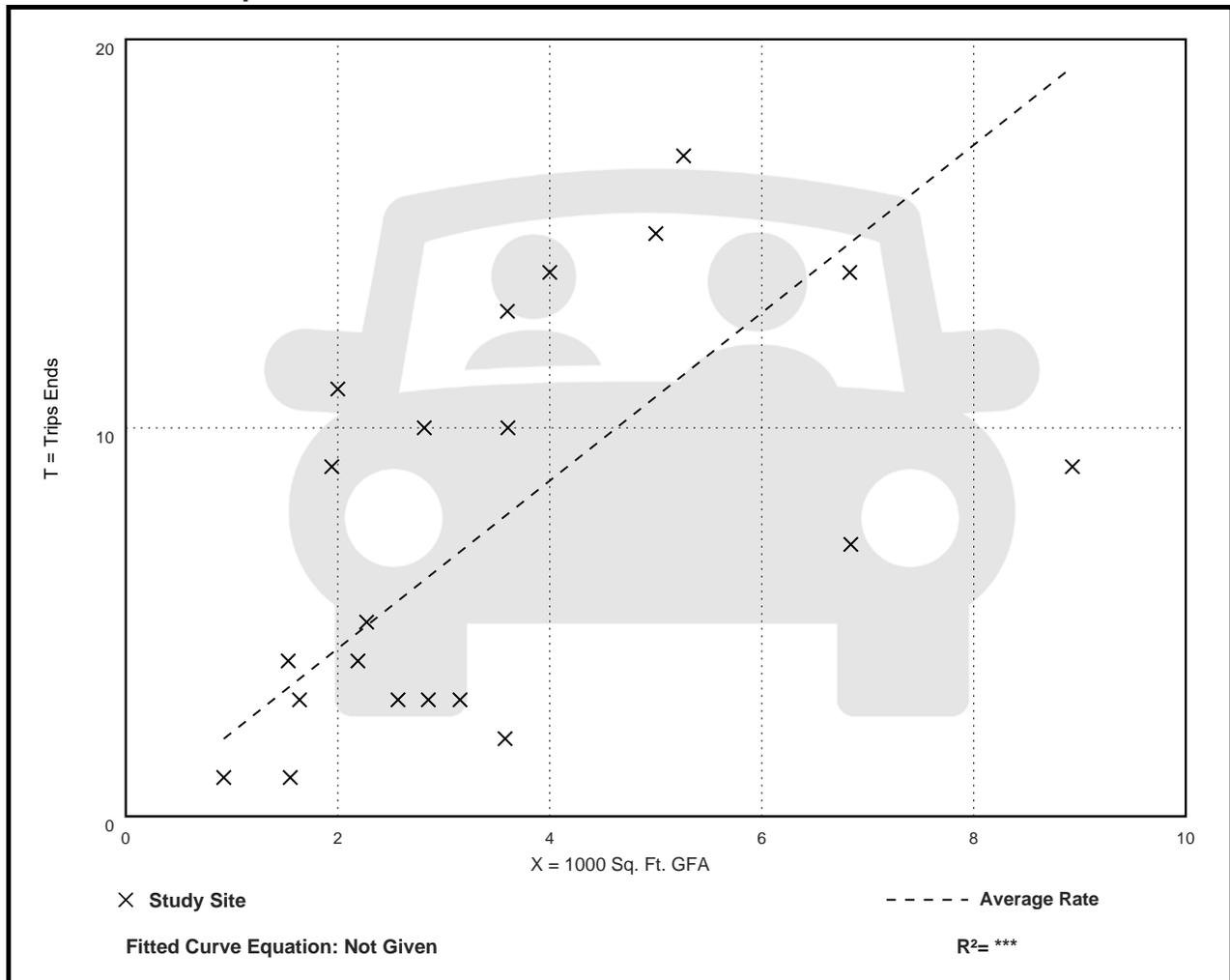
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



Land Use: 822

Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

Source Numbers

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

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

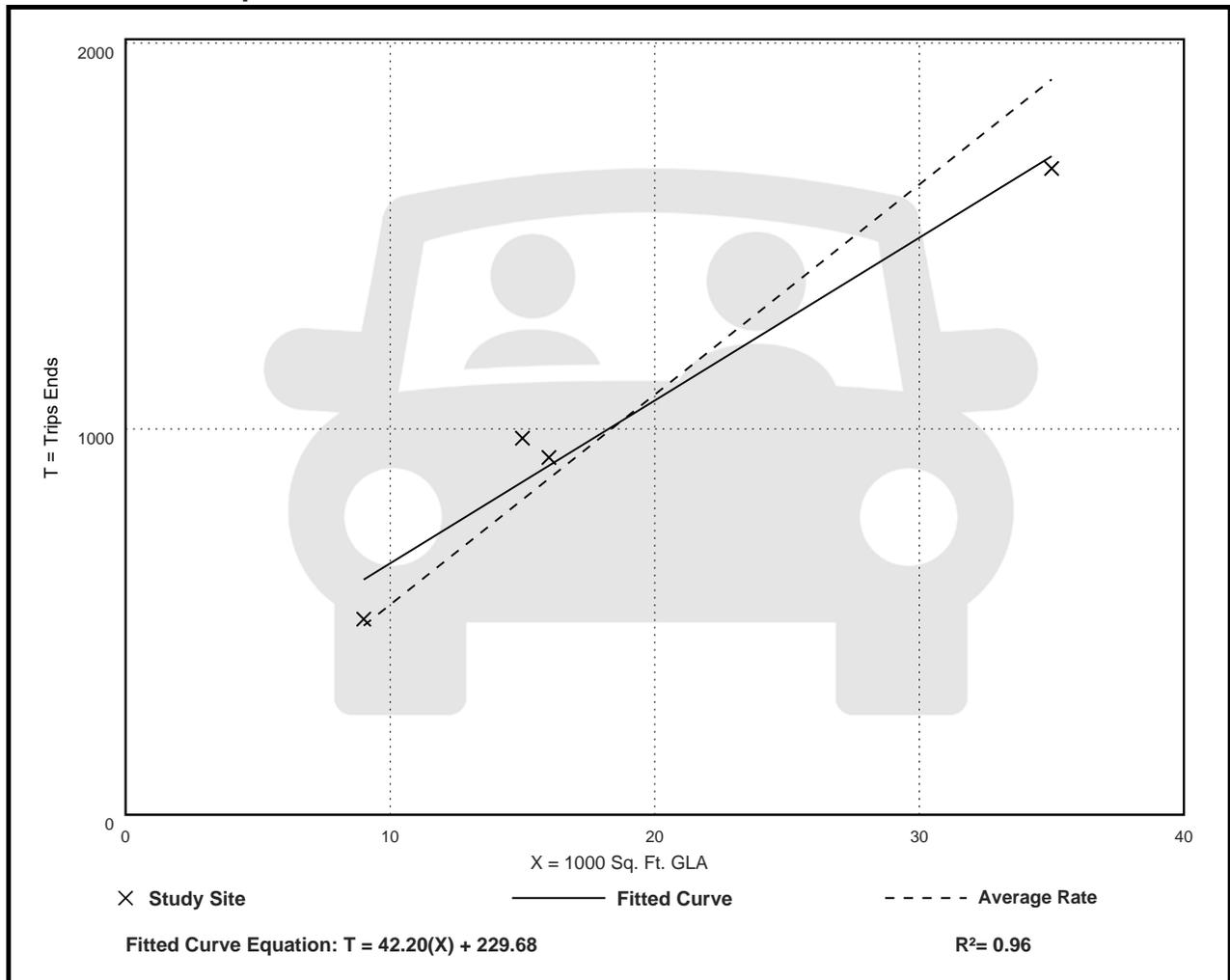
Avg. 1000 Sq. Ft. GLA: 19

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



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

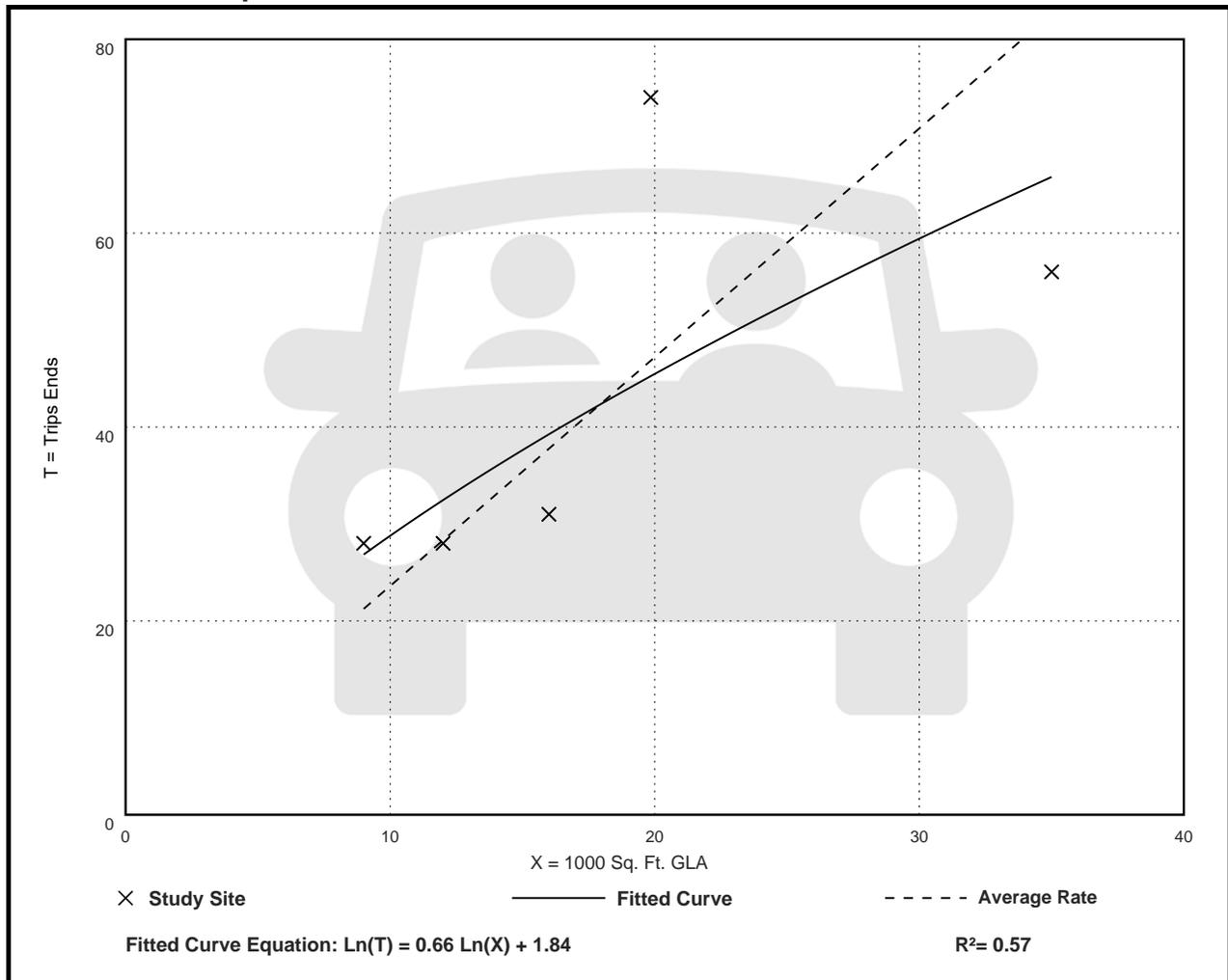
Avg. 1000 Sq. Ft. GLA: 18

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



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

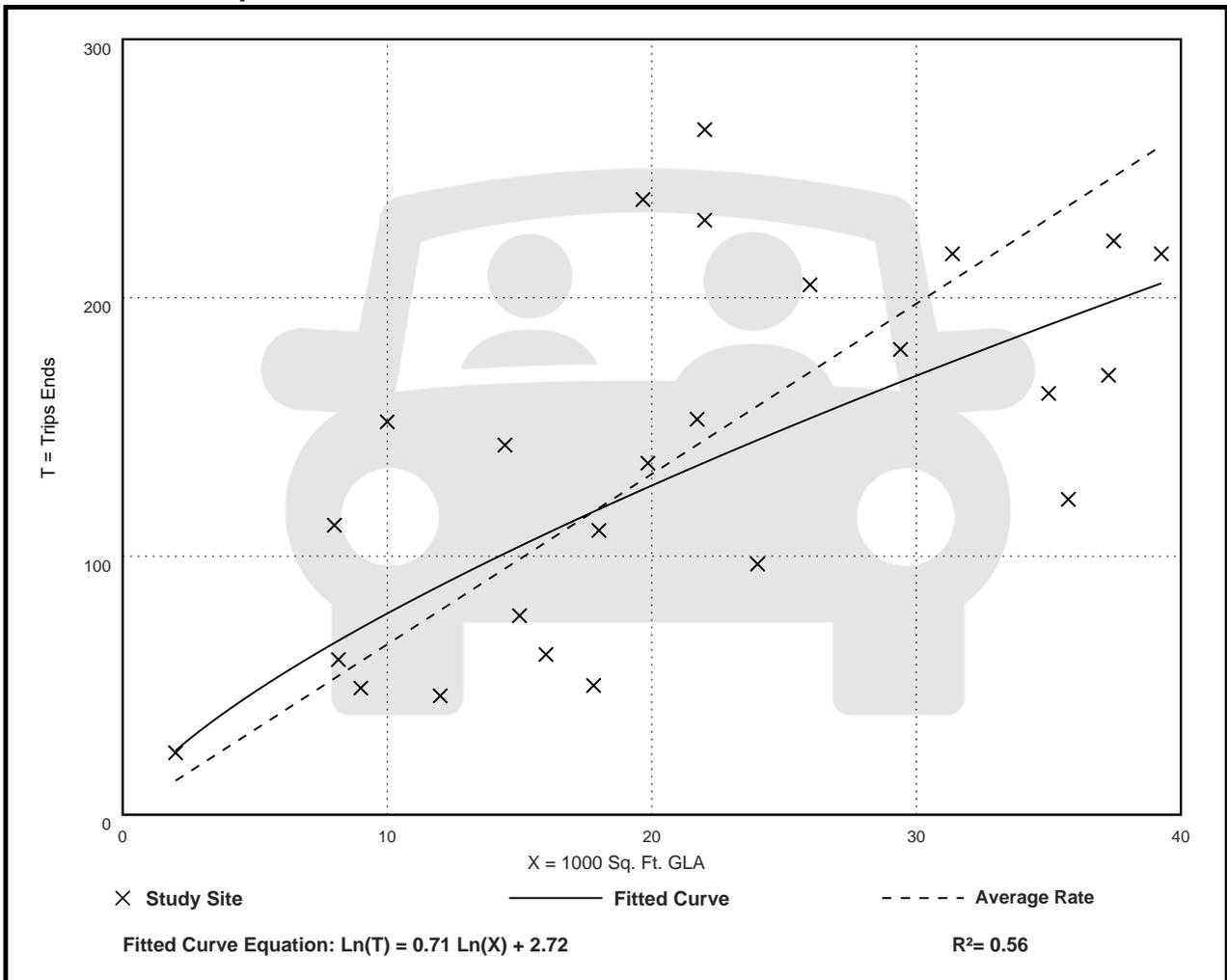
Avg. 1000 Sq. Ft. GLA: 21

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



Land Use: 933

Fast-Food Restaurant without Drive-Through Window

Description

This land use includes any fast-food restaurant without a drive-through window. This type of restaurant is characterized by a large carry-out clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. A patron generally orders from a menu board and pays before receiving the meal. A typical duration of stay for an eat-in customer is less than 30 minutes. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Maryland, Montana, Pennsylvania, and Texas.

Source Numbers

163, 247, 278, 319, 342, 885, 977, 1020

Fast-Food Restaurant without Drive-Through Window (933)

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

Setting/Location: General Urban/Suburban

Number of Studies: 6

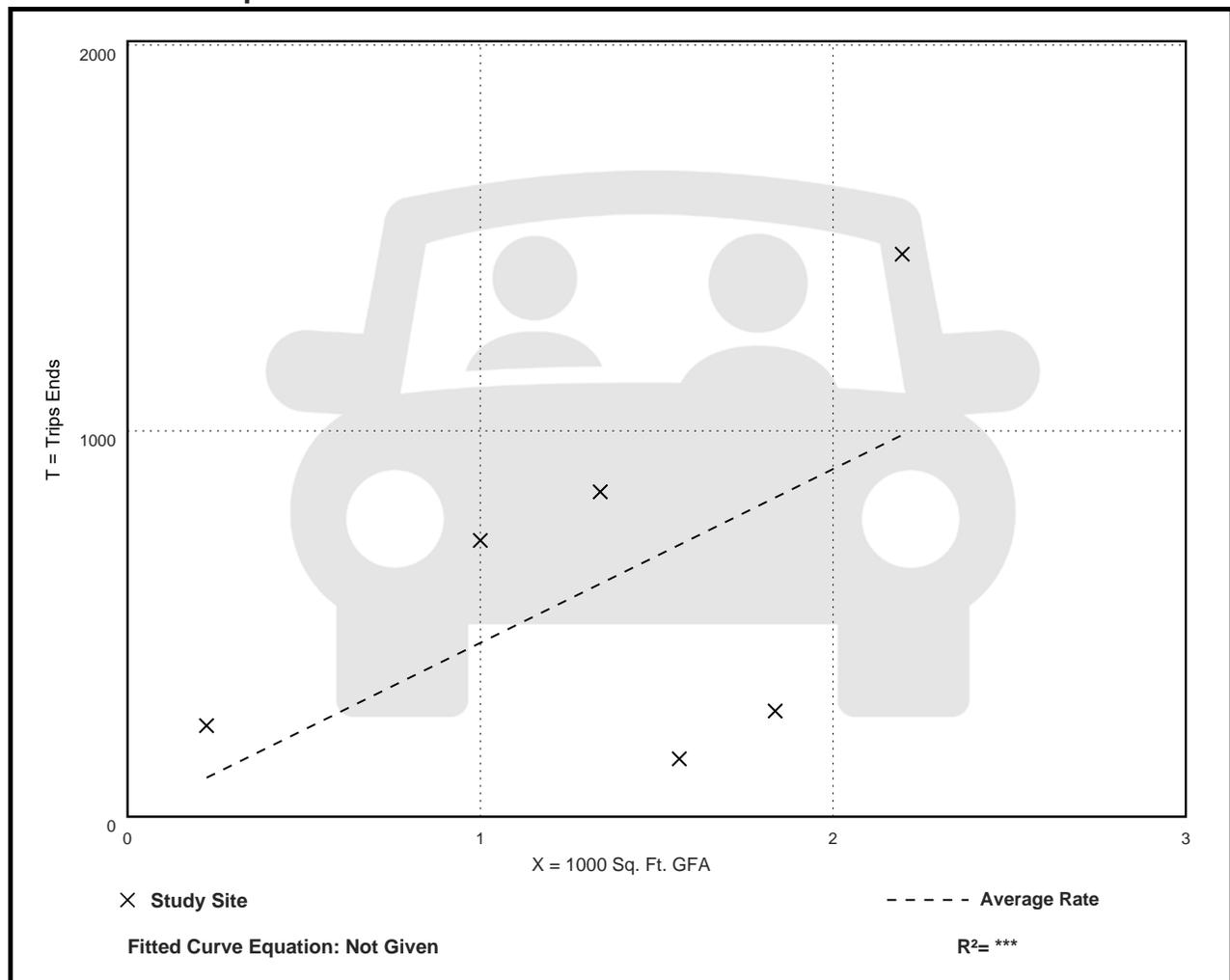
Avg. 1000 Sq. Ft. GFA: 1

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
450.49	95.91 - 1053.57	310.99

Data Plot and Equation



Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 3

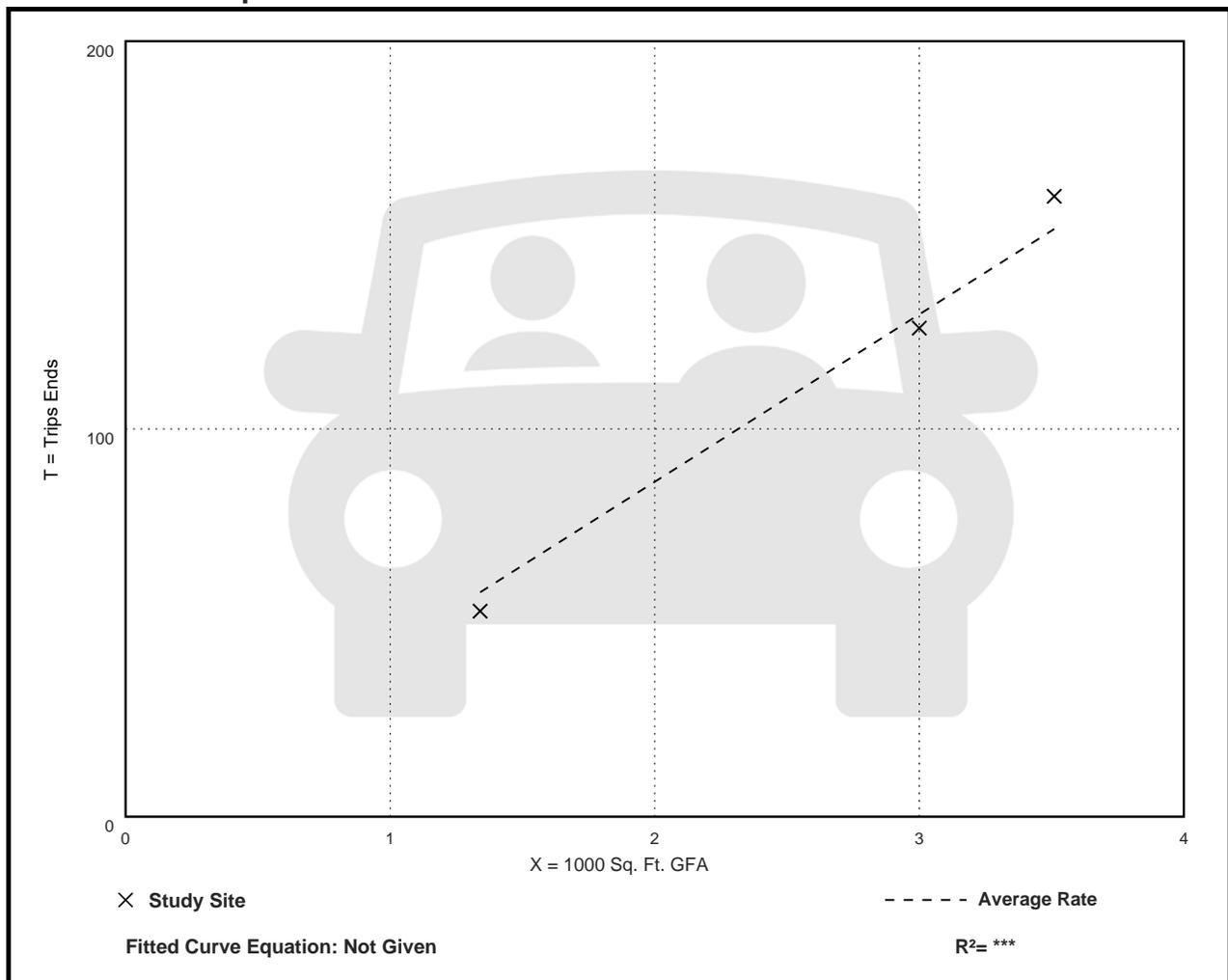
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
43.18	39.55 - 45.58	2.84

Data Plot and Equation



Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 8

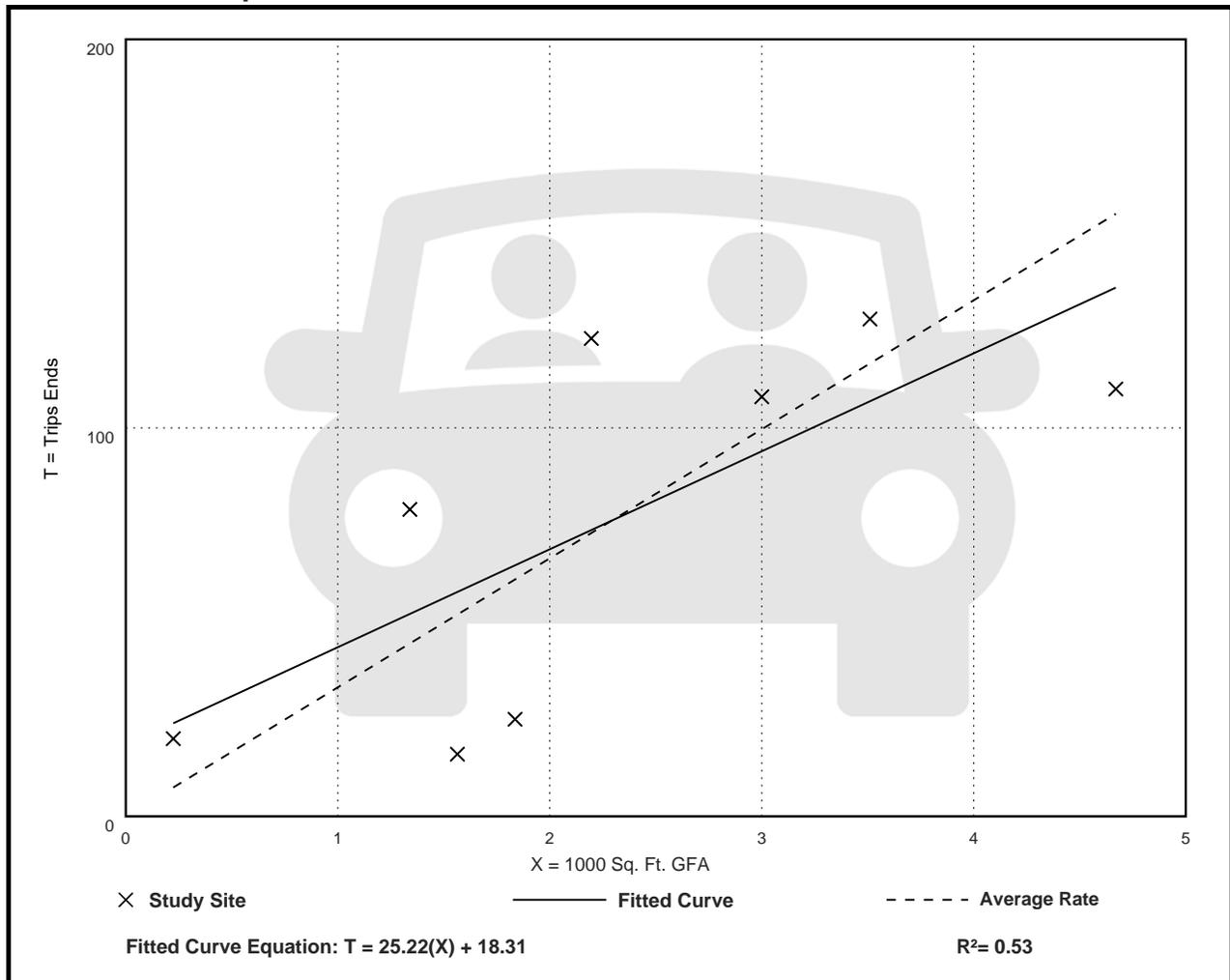
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.21	10.23 - 89.29	17.22

Data Plot and Equation



Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	820								
Land Use	Shopping Center (> 150k)								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	8 Sites with GLA between 150 and 300k				16 Sites with GLA between 300 and 900k				
Average Pass-By Rate	29% for Sites with GLA between 150 and 300k				19% for Sites with GLA between 300 and 900k				
	Pass-By Characteristics for Individual Sites								
					Non-Pass-By Trips			Adj Street Peak	
GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
213	Florida	1990	312	28	31	41	72	—	33
225	Illinois	1994	264	35	32	33	65	1970	24
227.9	Kentucky	1993	—	34	35	31	66	—	34
235	Kentucky	1993	211	35	29	36	65	2593	2
255	Iowa	1994	222	23	38	39	77	3706	24
256	Connecticut	1994	208	27	51	22	73	3422	24
293	Illinois	1994	282	24	70	6	76	4606	13
294	Pennsylvania	1994	213	24	48	18	76	4055	24
350	Massachusetts	1994	224	18	45	37	82	2112	24
361	Virginia	1994	315	17	54	29	83	2034	24
375	North Carolina	1994	214	29	48	23	71	2053	24
413	Texas	1994	228	28	51	21	72	589	24
418	Maryland	1994	281	20	50	30	80	5610	24
450	California	1994	321	23	49	28	77	2787	24
476	Washington	1994	234	25	53	22	75	3427	24
488	Texas	1994	257	12	75	13	88	1094	13
560	Virginia	1994	437	19	49	32	81	3051	24
581	Colorado	1994	296	18	53	29	82	2939	24
598	Colorado	1994	205	17	55	28	83	3840	24
633	Texas	1994	257	10	64	26	90	—	24

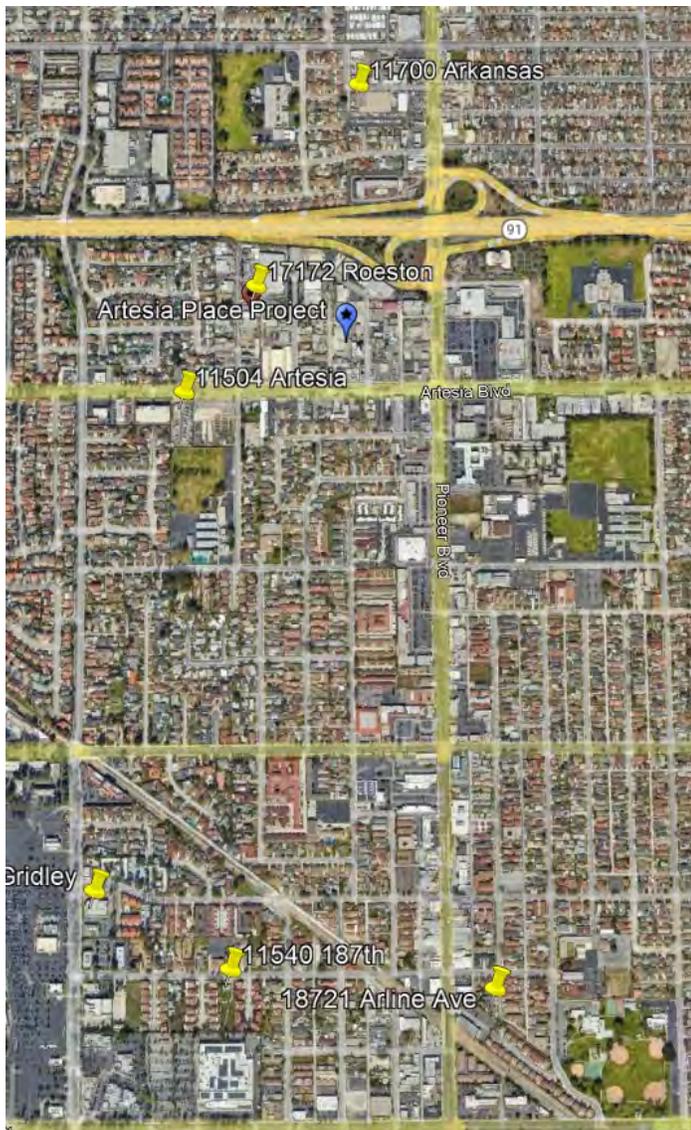
APPENDIX E

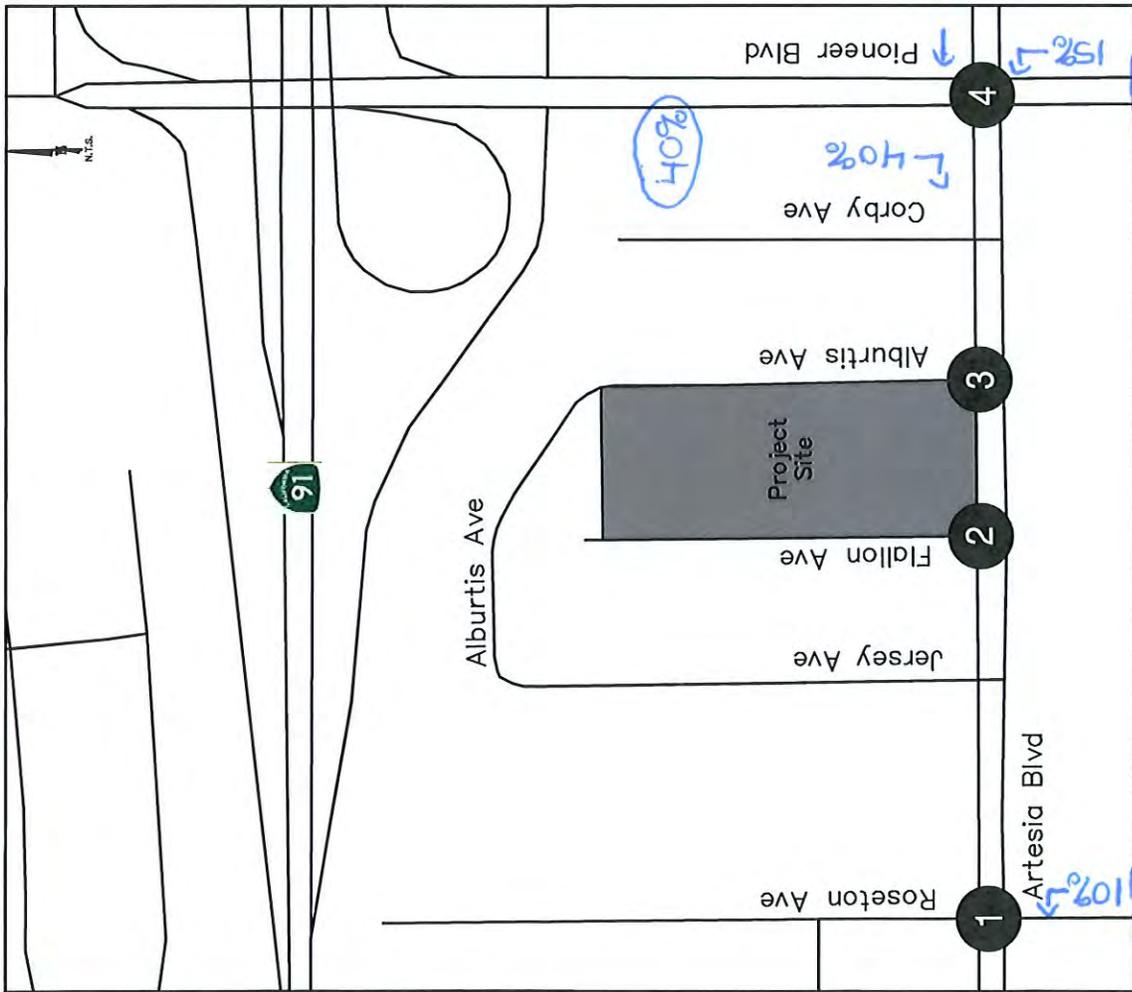
CUMULATIVE PROJECT INFORMATION

List of Cumulative Projects as of 9/22/22			
Address	Project Description	Status	Notes
18721 Arline	4-unit apartment	Approved By PC 9/20/22	Excluded due to insignificant trip generation expected and too far from Project site.
11504 Artesia	30-unit residential townhouse development (Brandywine Homes)	Plan Check	Included as Cumulative Project
18600 Gridley	one-story, 3,267 square foot restaurant with a 1,402 square foot outdoor patio (Raising Cane's)	Plan Check	Excluded since too far from Project site.
11700 Arkansas	4,544 square feet of commercial space facing Arkansas Street. It will also include fifty-nine (59) townhomes (City Ventures)	NOI	Excluded since this growth is assumed to be included in 1% annual background growth rate.
11540 187 th	Parcel map for 4 new detached homes	Plan Check	Excluded due to insignificant trip generation expected and too far from Project site.
17172 Roeston	New 2-story, 4,758 square foot office/warehouse	Plan Check	Included as Cumulative Project

By: Mel Lee

Cumulative Project Map





<p>①</p> <p>000 0/05 000 0/05 000 0/05</p> <p>18(10) → 348(683) → 15(17) →</p> <p>← 5(2) ← 28(27) ← 35(31)</p> <p>← 33(19) ← 423(676) ← 35(31)</p> <p>← 31(35) ← 528(716)</p> <p>0/15</p>	<p>②</p> <p>0/05 0/05 0/05</p> <p>18(11) → 41(38) → 24(15) →</p> <p>← 405(758)</p> <p>← 18(11) ← 41(38)</p> <p>0/15</p>
<p>③</p> <p>0/05 0/05 0/05</p> <p>18(9) → 54(54) → 21(16) →</p> <p>← 54(57) ← 557(736)</p> <p>← 181(323) ← 225(421) ← 66(97)</p> <p>← 89(97) ← 358(550) ← 49(11)</p> <p>0/15</p>	<p>④</p> <p>0/05 0/05 0/05</p> <p>18(129) → 380(478) → 107(129) →</p> <p>← 107(129) ← 380(478) ← 112(180)</p> <p>← 181(323) ← 225(421) ← 66(97)</p> <p>← 89(97) ← 358(550) ← 49(11)</p> <p>0/15</p>

TRIP GEN*

AM	PM
8 18	21 18
24 08	12 08

15% (15%)

*FITTED CURVE IIE RATE FOR LM 230

LEGEND

- # Intersection ID
- Project Site
- ←-X(X) AM/PM Peak Hour Traffic Volumes

FIGURE 8 -- Opening Year Plus Project-Intersection-Traffic-Volumes 11504 ARTESIA RESIDENTIAL Artesia Place Project



Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

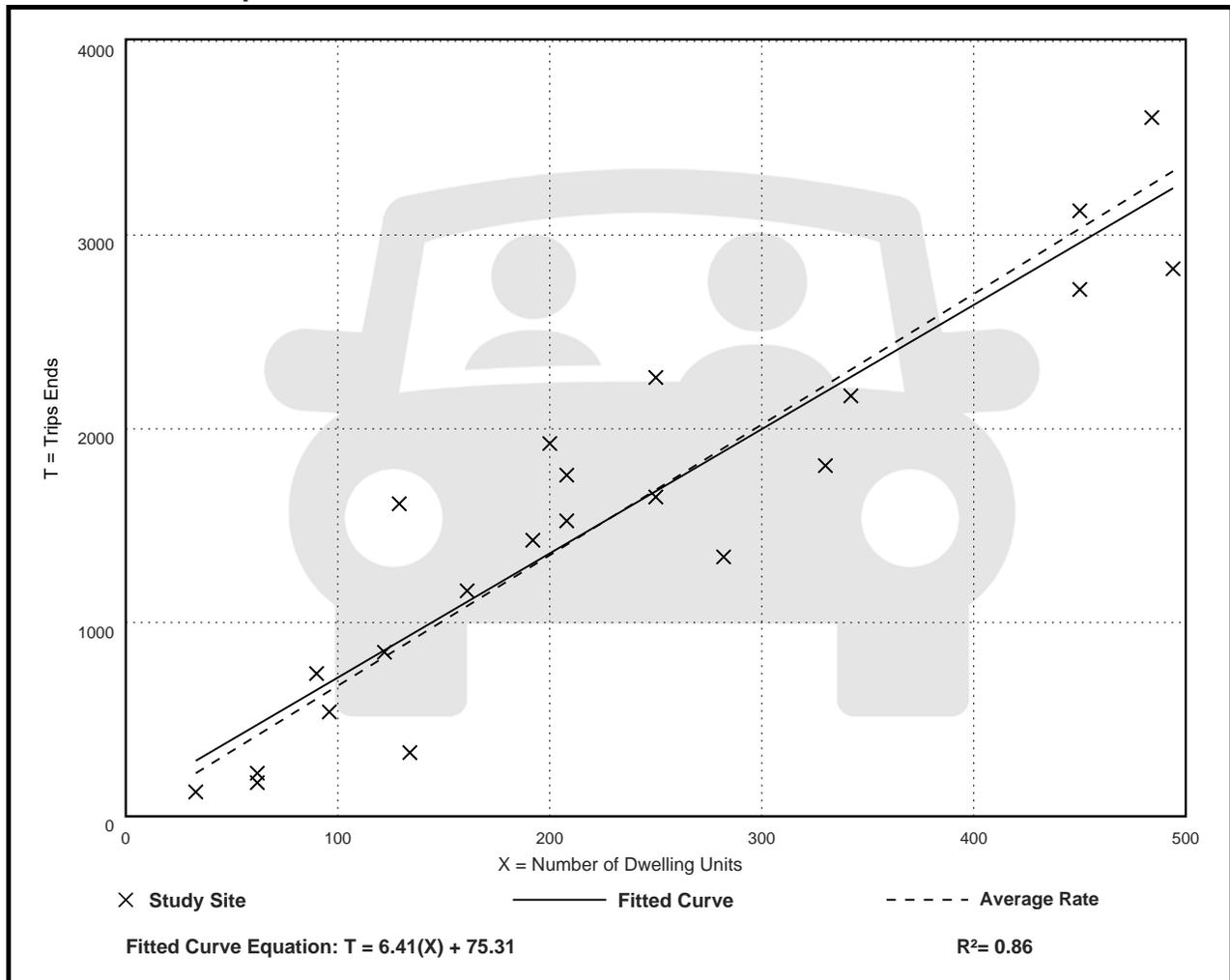
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

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: 49

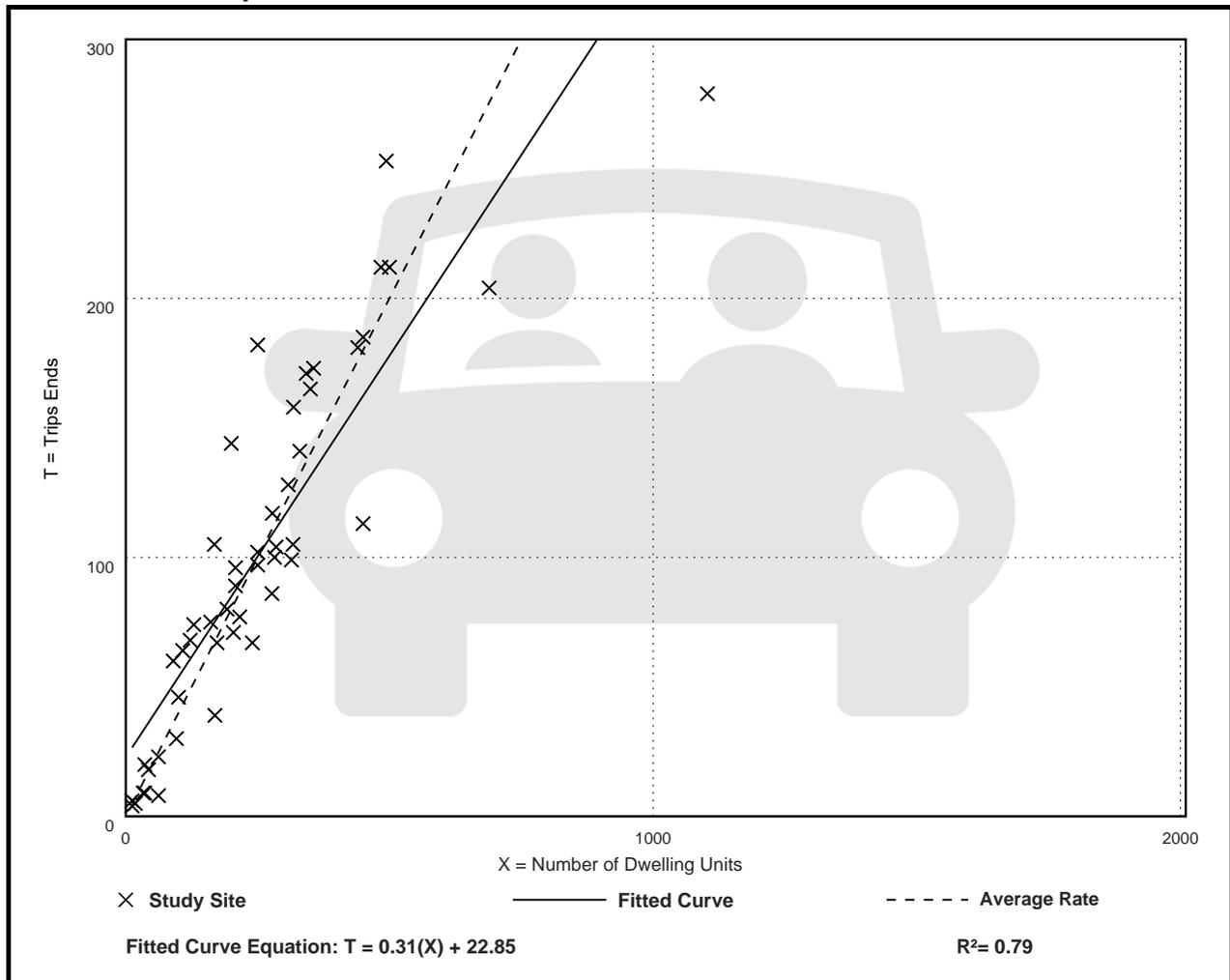
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

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: 59

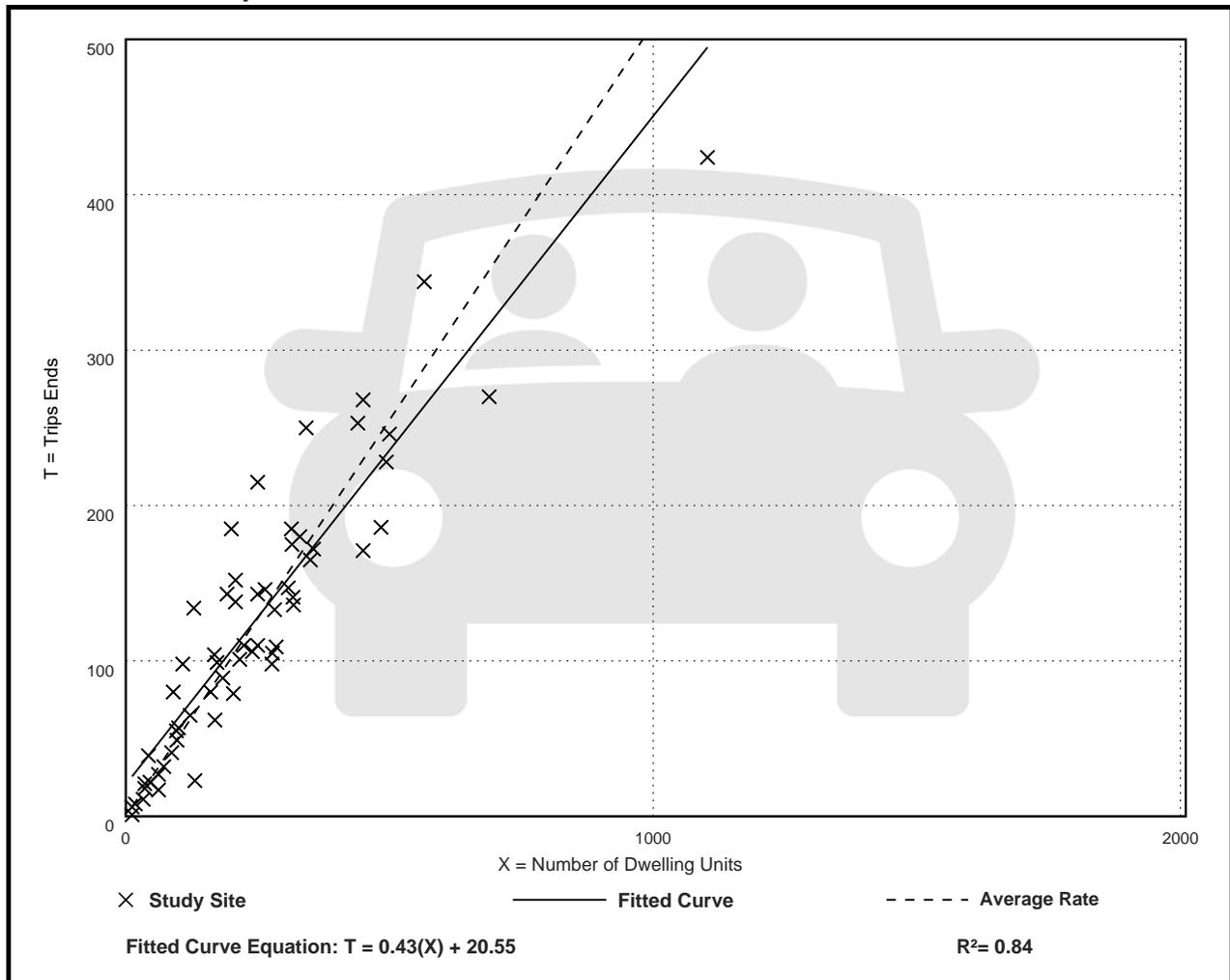
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Land Use: 110

General Light Industrial

Description

A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment. Industrial park (Land Use 130) and manufacturing (Land Use 140) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 2000s, and the 2010s in Colorado, Connecticut, Indiana, New Jersey, New York, Oregon, Pennsylvania, and Texas.

Source Numbers

106, 157, 174, 177, 179, 184, 191, 251, 253, 286, 300, 611, 874, 875, 912

General Light Industrial (110)

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

Setting/Location: General Urban/Suburban

Number of Studies: 37

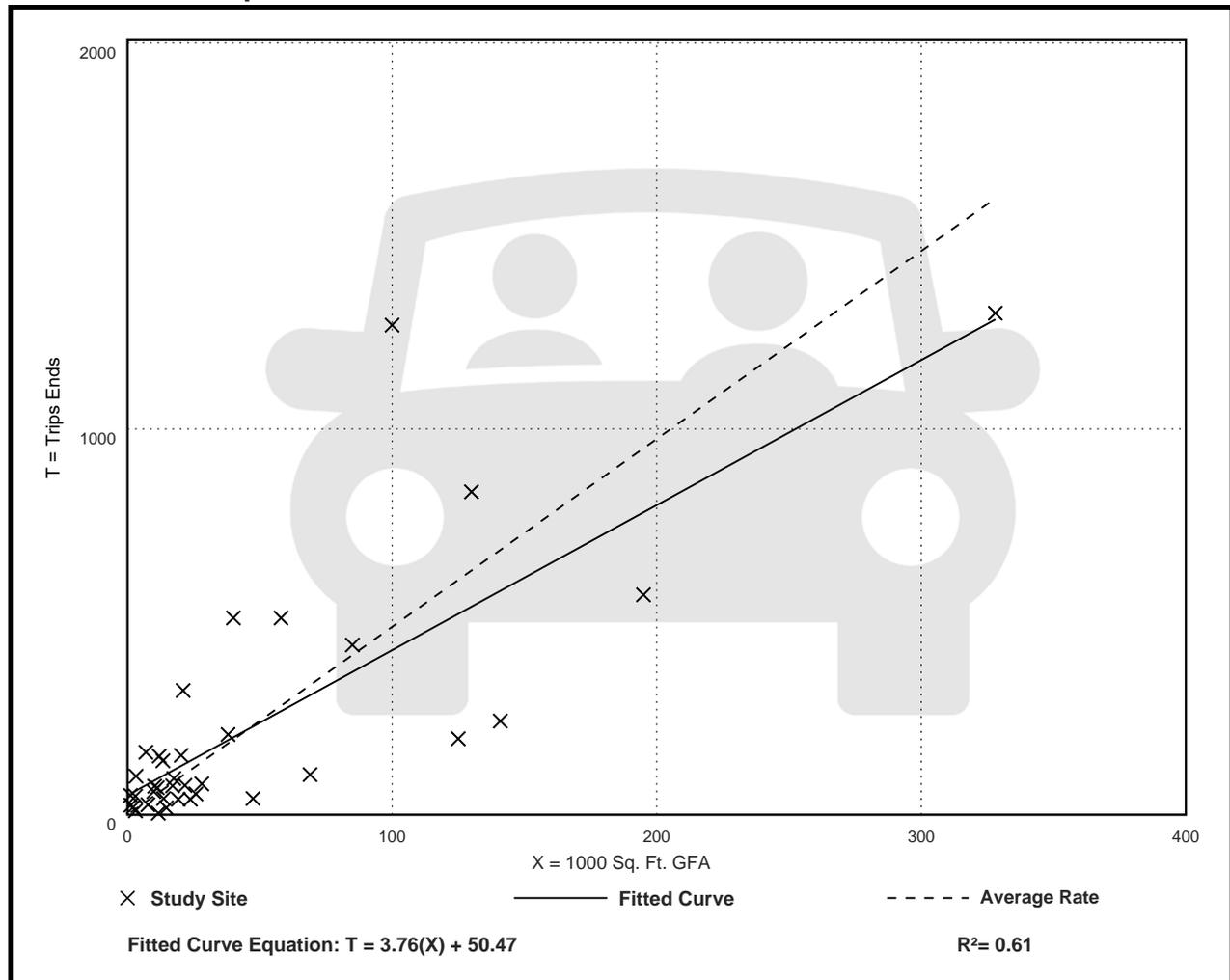
Avg. 1000 Sq. Ft. GFA: 45

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.87	0.34 - 43.86	4.08

Data Plot and Equation



General Light Industrial (110)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 41

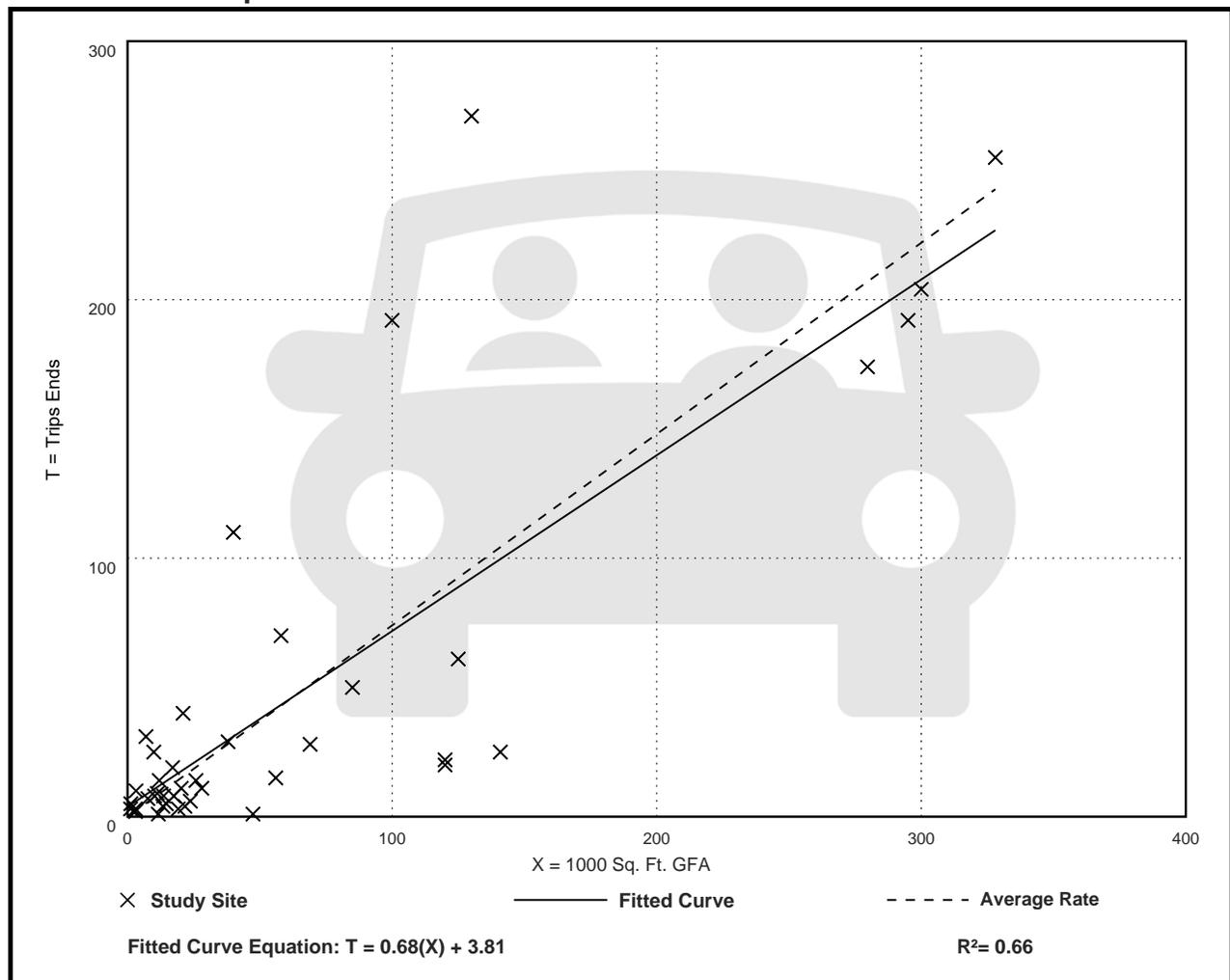
Avg. 1000 Sq. Ft. GFA: 65

Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.74	0.02 - 4.46	0.61

Data Plot and Equation



General Light Industrial (110)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 40

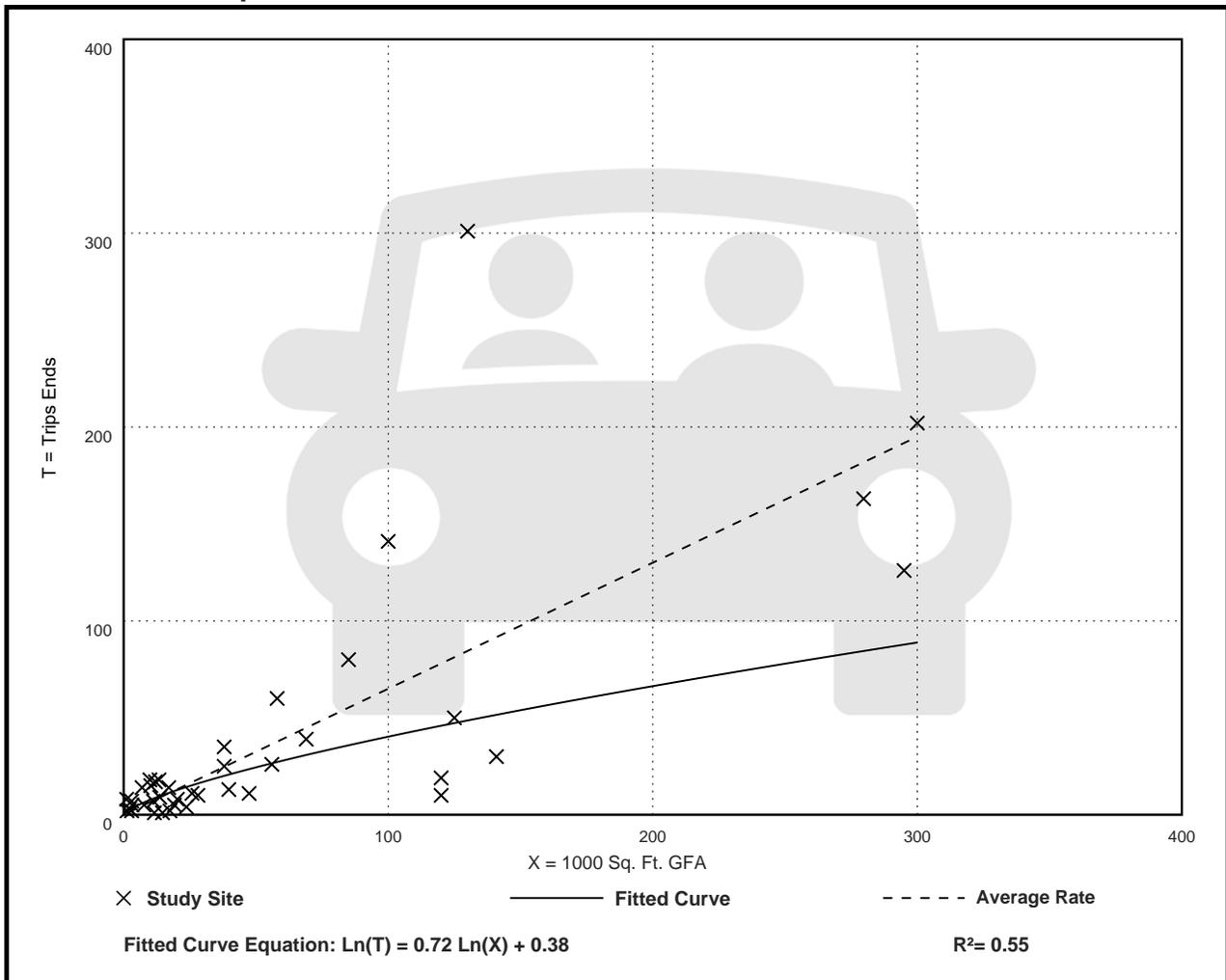
Avg. 1000 Sq. Ft. GFA: 58

Directional Distribution: 14% entering, 86% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.65	0.07 - 7.02	0.56

Data Plot and Equation



APPENDIX F

SIGNAL WARRANT ANALYSIS WORKSHEETS

Warrant	Title			Standard
1	Eight-Hour Volume			The need for a traffic control signal shall be considered if an engineering study finds that 1 of the following conditions exist for each of any 8 hours of an average day. In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.
-	Condition A	Part 1	Part 2	A. The vehicles per hour given in both of the 100%/80% columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection, or
-	Condition B	Part 1	Part 2	A. The vehicles per hour given in both of the 100%/80% columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.
2	Four-Hour Volume			See Figure 4C-1 or 4C-2 in MUTCD.
3	Peak Hour Volume			<p>This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following 2 categories are met:</p> <p>A. If all 3 of the following conditions exist for the same 1 hour of an average day:</p> <ol style="list-style-type: none"> 1. The total stopped time delay experience by the traffic on 1 minor-street approach (1 direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a 1-lane approach; or 5 vehicle-hours for a 2-lane approach, and 2. The volume on the same minor-street approach (1 direction only) equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes, and 3. The total entering volume serviced during the hour equals or exceeds 650 vph for intersections with 3 approaches or 800 vph for intersections with 4 or more approaches. <p>B. See Figure 4C-3 or 4C-4 in MUTCD.</p>
4	Pedestrian Volume			See Page 4C-5 in MUTCD
5	School Crossing			See Page 4C-5 in MUTCD
6	Coordinated Signal System			See Page 4C-6 in MUTCD
7	Crash Experience			<p>The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:</p> <p>A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and</p> <p>B. 5 or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and</p> <p>C. For each of any 8 hours of an average day, the vph given in both the 80% columns of Condition A in Table 4C-1, or the vph in both of the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.</p>
8	Roadway Network			See page 4C-7 in MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2014 MUTCD, REV. 6)

MAJOR STREET: Artesia Boulevard EB WB # OF APPROACH LANES: 2

MINOR STREET: Flallon Avenue NB SB # OF APPROACH LANES: 1

CITY, STATE: Artesia, CA

COMMENTS: Opening Year Plus Project Traffic Conditions

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): n

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	Ped Count CROSSING MAJOR ST	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour	WARRANT 4	
				MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET			Ped Volume (Four-hour)	Ped Volume (Peak-hour)
THRESHOLD VALUES				600	150		900	75		480	120		720	60		60	75	100	190
06:00 AM TO 07:00 AM	490	22																	
07:00 AM TO 08:00 AM	705	30		Y					Y										
08:00 AM TO 09:00 AM	942	30		Y			Y		Y				Y						
09:00 AM TO 10:00 AM	970	36		Y			Y		Y				Y						
10:00 AM TO 11:00 AM	1,049	41		Y			Y		Y				Y						
11:00 AM TO 12:00 PM	1,285	71		Y			Y		Y				Y	Y	Y				
12:00 PM TO 01:00 PM	1,434	93		Y			Y	Y	Y				Y	Y	Y	Y			
01:00 PM TO 02:00 PM	1,359	78		Y			Y	Y	Y				Y	Y	Y				
02:00 PM TO 03:00 PM	1,394	69		Y			Y		Y				Y	Y	Y				
03:00 PM TO 04:00 PM	1,479	78		Y			Y	Y	Y				Y	Y	Y				
04:00 PM TO 05:00 PM	1,644	67		Y			Y		Y				Y	Y	Y				
05:00 PM TO 06:00 PM	1,654	64		Y			Y		Y				Y	Y	Y				
06:00 PM TO 07:00 PM																			
07:00 PM TO 08:00 PM																			
08:00 PM TO 09:00 PM																			
09:00 PM TO 10:00 PM																			
	14,405	679		11	0	0	10	3	3	12	0	0	10	7	7	1	0	0	0
				8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED	4 HRS NEEDED	1 HR NEEDED
				NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	NOT SATISFIED	NOT SATISFIED	NOT SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2014 MUTCD, REV. 6)

MAJOR STREET: Artesia Boulevard EB WB # OF APPROACH LANES: 2

MINOR STREET: Roseton Avenue NB SB # OF APPROACH LANES: 1

CITY, STATE: Artesia, CA

COMMENTS: Opening Year Plus Project Traffic Conditions

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): n

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	Ped Count CROSSING MAJOR ST	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour	WARRANT 4	
				MAIN LINE 600	SIDE STREET 150	BOTH MET	MAIN LINE 900	SIDE STREET 75	BOTH MET	MAIN LINE 480	SIDE STREET 120	BOTH MET	MAIN LINE 720	SIDE STREET 60	BOTH MET			Ped Volume (Four-hour) 100	Ped Volume (Peak-hour) 190
THRESHOLD VALUES																			
06:00 AM TO 07:00 AM	492	38																	
07:00 AM TO 08:00 AM	704	43		Y					Y										
08:00 AM TO 09:00 AM	943	44		Y			Y		Y				Y						
09:00 AM TO 10:00 AM	975	48		Y			Y		Y				Y						
10:00 AM TO 11:00 AM	1,058	53		Y			Y		Y				Y						
11:00 AM TO 12:00 PM	1,290	85		Y			Y	Y	Y				Y	Y					
12:00 PM TO 01:00 PM	1,456	104		Y			Y	Y	Y				Y	Y	Y				
01:00 PM TO 02:00 PM	1,354	81		Y			Y	Y	Y				Y	Y	Y				
02:00 PM TO 03:00 PM	1,404	85		Y			Y	Y	Y				Y	Y	Y				
03:00 PM TO 04:00 PM	1,479	77		Y			Y	Y	Y				Y	Y	Y				
04:00 PM TO 05:00 PM	1,664	74		Y			Y	Y	Y				Y	Y	Y				
05:00 PM TO 06:00 PM	1,663	70		Y			Y		Y				Y	Y	Y				
06:00 PM TO 07:00 PM																			
07:00 PM TO 08:00 PM																			
08:00 PM TO 09:00 PM																			
09:00 PM TO 10:00 PM																			
	14,482	802		11	0	0	10	5	5	12	0	0	10	7	7	2	0	0	0
				8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED	4 HRS NEEDED	1 HR NEEDED
				NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	NOT SATISFIED	NOT SATISFIED	NOT SATISFIED

			Entering		Exiting		Total		
			% Daily	Trips	% Daily	Trip	% Daily	Trip	
6:00	to	7:00	1.32%	17	1.87%	25	1.59%	42	
7:00	to	8:00	2.04%	27	3.55%	47	2.76%	73	
8:00	to	9:00	2.52%	34	3.69%	49	3.01%	80	
9:00	to	10:00	3.16%	42	3.30%	44	3.11%	83	
10:00	to	11:00	4.19%	56	4.26%	57	4.14%	110	
11:00	to	12:00	10.10%	134	8.43%	112	9.23%	245	
12:00	to	13:00	11.61%	154	11.52%	153	11.54%	307	
13:00	to	14:00	8.89%	118	8.78%	117	8.85%	235	
14:00	to	15:00	7.33%	98	7.27%	97	7.33%	195	
15:00	to	16:00	8.92%	119	8.23%	109	8.59%	228	
16:00	to	17:00	7.30%	97	6.33%	84	6.82%	181	
17:00	to	18:00	6.92%	92	7.17%	95	7.04%	187	

#3 Flallon Avenue & Artesia Boulevard

Existing (Unadjusted) Intersection Counts

			EB	WB	NB	SB	Major Total	Minor Total	Total
6:00	to	7:00	193	226	0	8	419	8	427
7:00	to	8:00	232	370	0	5	602	5	607
8:00	to	9:00	348	458	0	4	806	4	810
9:00	to	10:00	394	431	0	12	825	12	837
10:00	to	11:00	455	429	0	11	884	11	895
11:00	to	12:00	501	532	0	13	1033	13	1046
12:00	to	13:00	573	577	0	14	1150	14	1164
13:00	to	14:00	520	590	0	17	1110	17	1127
14:00	to	15:00	546	610	0	18	1156	18	1174
15:00	to	16:00	603	613	0	20	1216	20	1236
16:00	to	17:00	697	680	0	22	1377	22	1399
17:00	to	18:00	716	675	0	14	1391	14	1405

Project Trip Assignment

			EB	WB	NB	SB	Major Total	Minor Total	Total
			15%	70%	0%	50%			
6:00	to	7:00	3	12	0	13	15	13	28
7:00	to	8:00	4	19	0	24	23	24	47
8:00	to	9:00	5	24	0	25	29	25	54
9:00	to	10:00	6	29	0	22	35	22	57
10:00	to	11:00	8	39	0	29	47	29	76
11:00	to	12:00	20	94	0	56	114	56	170
12:00	to	13:00	23	108	0	77	131	77	208
13:00	to	14:00	18	83	0	59	101	59	160
14:00	to	15:00	15	69	0	49	84	49	133
15:00	to	16:00	18	83	0	55	101	55	156
16:00	to	17:00	15	68	0	42	83	42	125
17:00	to	18:00	14	64	0	48	78	48	126

Total Intersection Volumes

			EB	WB	NB	SB	Major Total	Minor Total	Total
6:00	to	7:00	222	268	0	22	490	22	512
7:00	to	8:00	267	438	0	30	705	30	735
8:00	to	9:00	399	543	0	30	942	30	972
9:00	to	10:00	453	517	0	36	970	36	1006
10:00	to	11:00	524	525	0	41	1049	41	1090
11:00	to	12:00	588	697	0	71	1285	71	1356
12:00	to	13:00	672	762	0	93	1434	93	1527
13:00	to	14:00	607	752	0	78	1359	78	1437
14:00	to	15:00	634	760	0	69	1394	69	1463
15:00	to	16:00	701	778	0	78	1479	78	1557
16:00	to	17:00	805	839	0	67	1644	67	1711
17:00	to	18:00	825	829	0	64	1654	64	1718

Ex Count Adj Growth = 110.00%
3.03%

			Entering		Exiting		Total		
			% Daily	Trips	% Daily	Trip	% Daily	Trip	
6:00	to	7:00	1.32%	17	1.87%	25	1.59%	42	
7:00	to	8:00	2.04%	27	3.55%	47	2.76%	73	
8:00	to	9:00	2.52%	34	3.69%	49	3.01%	80	
9:00	to	10:00	3.16%	42	3.30%	44	3.11%	83	
10:00	to	11:00	4.19%	56	4.26%	57	4.14%	110	
11:00	to	12:00	10.10%	134	8.43%	112	9.23%	245	
12:00	to	13:00	11.61%	154	11.52%	153	11.54%	307	
13:00	to	14:00	8.89%	118	8.78%	117	8.85%	235	
14:00	to	15:00	7.33%	98	7.27%	97	7.33%	195	
15:00	to	16:00	8.92%	119	8.23%	109	8.59%	228	
16:00	to	17:00	7.30%	97	6.33%	84	6.82%	181	
17:00	to	18:00	6.92%	92	7.17%	95	7.04%	187	

#3 Alburdis Avenue & Artesia Boulevard

Existing (Unadjusted) Intersection Counts

			EB	WB	NB	SB	Major Total	Minor Total	Total
6:00	to	7:00	200	221	0	22	421	22	443
7:00	to	8:00	236	365	0	17	601	17	618
8:00	to	9:00	347	460	0	17	807	17	824
9:00	to	10:00	400	430	0	23	830	23	853
10:00	to	11:00	457	435	0	21	892	21	913
11:00	to	12:00	503	535	0	26	1038	26	1064
12:00	to	13:00	574	595	0	24	1169	24	1193
13:00	to	14:00	523	582	0	19	1105	19	1124
14:00	to	15:00	558	607	0	32	1165	32	1197
15:00	to	16:00	608	608	0	19	1216	19	1235
16:00	to	17:00	702	693	0	28	1395	28	1423
17:00	to	18:00	719	679	0	19	1398	19	1417

Project Trip Assignment

			EB	WB	NB	SB	Major Total	Minor Total	Total
			15%	70%	0%	50%			
6:00	to	7:00	3	12	0	13	15	13	28
7:00	to	8:00	4	19	0	24	23	24	47
8:00	to	9:00	5	24	0	25	29	25	54
9:00	to	10:00	6	29	0	22	35	22	57
10:00	to	11:00	8	39	0	29	47	29	76
11:00	to	12:00	20	94	0	56	114	56	170
12:00	to	13:00	23	108	0	77	131	77	208
13:00	to	14:00	18	83	0	59	101	59	160
14:00	to	15:00	15	69	0	49	84	49	133
15:00	to	16:00	18	83	0	55	101	55	156
16:00	to	17:00	15	68	0	42	83	42	125
17:00	to	18:00	14	64	0	48	78	48	126

Total Intersection Volumes

			EB	WB	NB	SB	Major Total	Minor Total	Total
6:00	to	7:00	230	262	0	38	492	38	530
7:00	to	8:00	271	433	0	43	704	43	747
8:00	to	9:00	398	545	0	44	943	44	987
9:00	to	10:00	459	516	0	48	975	48	1023
10:00	to	11:00	526	532	0	53	1058	53	1111
11:00	to	12:00	590	700	0	85	1290	85	1375
12:00	to	13:00	674	782	0	104	1456	104	1560
13:00	to	14:00	611	743	0	81	1354	81	1435
14:00	to	15:00	647	757	0	85	1404	85	1489
15:00	to	16:00	707	772	0	77	1479	77	1556
16:00	to	17:00	811	853	0	74	1664	74	1738
17:00	to	18:00	829	834	0	70	1663	70	1733

Ex Count Adj Growth = 110.00%
3.03%

This is a modified Time of Day Distribution based on a weighted average (trip gen ADT)

LU 220	512	19.26%	
LU 712	33	1.25%	
LU 872	228	8.57%	
LU 933	1,886	70.92%	
	2,659		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.63%	0.58%	0.69%
1:00 - 2:00 AM	0.55%	0.30%	0.80%
2:00 - 3:00 AM	0.09%	0.08%	0.11%
3:00 - 4:00 AM	0.07%	0.08%	0.06%
4:00 - 5:00 AM	0.17%	0.06%	0.28%
5:00 - 6:00 AM	0.42%	0.22%	0.62%
6:00 - 7:00 AM	1.59%	1.32%	1.87%
7:00 - 8:00 AM	2.76%	2.04%	3.55%
8:00 - 9:00 AM	3.01%	2.52%	3.69%
9:00 - 10:00 AM	3.11%	3.16%	3.30%
10:00 - 11:00 AM	4.14%	4.19%	4.26%
11:00 - 12:00 PM	9.23%	10.10%	8.43%
12:00 - 1:00 PM	11.54%	11.61%	11.52%
1:00 - 2:00 PM	8.85%	8.89%	8.78%
2:00 - 3:00 PM	7.33%	7.33%	7.27%
3:00 - 4:00 PM	8.59%	8.92%	8.23%
4:00 - 5:00 PM	6.82%	7.30%	6.33%
5:00 - 6:00 PM	7.04%	6.92%	7.17%
6:00 - 7:00 PM	6.71%	6.74%	6.67%
7:00 - 8:00 PM	4.75%	4.83%	4.63%
8:00 - 9:00 PM	5.02%	5.27%	4.51%
9:00 - 10:00 PM	4.15%	4.17%	3.75%
10:00 - 11:00 PM	2.34%	2.11%	2.58%
11:00 - 12:00 AM	1.10%	1.20%	1.00%

100.00% 99.94% 100.10%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE Trip Generation Manual, 11th Edition

Land Use Code	220			220		
Land Use	Multifamily Housing (Low-Rise)			Multifamily Housing (Low-Rise)		
Subcategory	Not Close to Rail Transit			Close to Rail Transit		
Setting	General Urban/Suburban			General Urban/Suburban		
Time Period	Weekday			Weekday		
# Data Sites	6			1		
	% of 24-Hour Vehicle Trips			% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting	Total	Entering	Exiting
12:00 - 1:00 AM	0.7%	0.9%	0.4%	0.4%	0.4%	0.3%
1:00 - 2:00 AM	0.4%	0.5%	0.3%	0.2%	0.1%	0.2%
2:00 - 3:00 AM	0.4%	0.4%	0.4%	0.1%	0.2%	0.0%
3:00 - 4:00 AM	0.4%	0.4%	0.3%	0.2%	0.1%	0.2%
4:00 - 5:00 AM	0.9%	0.3%	1.4%	0.2%	0.2%	0.1%
5:00 - 6:00 AM	1.6%	0.5%	2.6%	2.4%	0.9%	4.0%
6:00 - 7:00 AM	4.2%	1.4%	6.9%	4.4%	2.0%	6.7%
7:00 - 8:00 AM	6.5%	2.0%	10.8%	7.2%	4.2%	10.3%
8:00 - 9:00 AM	5.8%	3.1%	8.5%	5.2%	3.4%	6.9%
9:00 - 10:00 AM	3.9%	2.9%	4.9%	4.4%	3.1%	5.7%
10:00 - 11:00 AM	3.6%	2.4%	4.8%	3.9%	3.4%	4.4%
11:00 - 12:00 PM	4.3%	3.8%	4.7%	5.4%	6.4%	4.4%
12:00 - 1:00 PM	4.3%	4.5%	4.1%	6.1%	5.8%	6.5%
1:00 - 2:00 PM	4.2%	4.0%	4.4%	4.7%	4.1%	5.4%
2:00 - 3:00 PM	5.2%	5.6%	4.9%	6.8%	7.5%	6.1%
3:00 - 4:00 PM	6.1%	6.9%	5.3%	6.5%	7.6%	5.4%
4:00 - 5:00 PM	7.9%	10.1%	5.6%	9.5%	11.6%	7.5%
5:00 - 6:00 PM	9.5%	11.4%	7.6%	11.2%	13.5%	8.9%
6:00 - 7:00 PM	8.2%	9.7%	6.7%	7.2%	7.7%	6.6%
7:00 - 8:00 PM	6.4%	8.1%	4.7%	6.1%	7.5%	4.7%
8:00 - 9:00 PM	5.9%	7.7%	4.2%	3.2%	4.2%	2.2%
9:00 - 10:00 PM	4.4%	6.0%	2.7%	2.4%	3.3%	1.5%
10:00 - 11:00 PM	3.5%	4.7%	2.4%	1.3%	1.5%	1.0%
11:00 - 12:00 AM	1.9%	2.5%	1.4%	1.1%	1.2%	1.0%

100.00% 100.00% 100.00% 100.00% 100.00% 100.00%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE Trip Generation Manual, 11th Edition

Land Use Code	933		
Land Use	Restaurant without Drive-Through		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	7		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.7%	0.6%	0.9%
1:00 - 2:00 AM	0.7%	0.3%	1.0%
2:00 - 3:00 AM	0.0%	0.0%	0.1%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.0%	0.0%	0.0%
5:00 - 6:00 AM	0.2%	0.2%	0.2%
6:00 - 7:00 AM	1.1%	1.4%	0.7%
7:00 - 8:00 AM	1.8%	1.9%	1.7%
8:00 - 9:00 AM	1.9%	1.8%	2.1%
9:00 - 10:00 AM	2.5%	2.7%	2.4%
10:00 - 11:00 AM	3.9%	4.2%	3.7%
11:00 - 12:00 PM	10.9%	12.2%	9.6%
12:00 - 1:00 PM	14.1%	14.2%	14.1%
1:00 - 2:00 PM	10.4%	10.5%	10.2%
2:00 - 3:00 PM	8.0%	7.9%	8.1%
3:00 - 4:00 PM	9.4%	9.6%	9.1%
4:00 - 5:00 PM	6.4%	6.5%	6.3%
5:00 - 6:00 PM	6.2%	5.6%	6.8%
6:00 - 7:00 PM	6.2%	5.9%	6.6%
7:00 - 8:00 PM	3.9%	3.6%	4.3%
8:00 - 9:00 PM	4.5%	4.5%	4.4%
9:00 - 10:00 PM	3.9%	3.7%	4.0%
10:00 - 11:00 PM	2.3%	1.7%	3.0%
11:00 - 12:00 AM	1.0%	1.0%	1.0%

0.00% 0.00% 100.00% 100.00% 100.00%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE Trip Generation Manual, 11th Edition

Land Use Code	712		
Land Use	Small Office Building		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	22		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.0%	0.0%	0.0%
1:00 - 2:00 AM	0.0%	0.0%	0.0%
2:00 - 3:00 AM	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.0%	0.0%	0.0%
5:00 - 6:00 AM	0.0%	0.0%	0.0%
6:00 - 7:00 AM	0.0%	0.0%	0.0%
7:00 - 8:00 AM	3.6%	6.8%	0.4%
8:00 - 9:00 AM	9.5%	15.0%	3.9%
9:00 - 10:00 AM	6.9%	9.5%	4.3%
10:00 - 11:00 AM	7.4%	8.4%	6.4%
11:00 - 12:00 PM	10.5%	8.2%	12.8%
12:00 - 1:00 PM	12.6%	10.9%	14.2%
1:00 - 2:00 PM	7.6%	8.6%	6.6%
2:00 - 3:00 PM	9.6%	9.7%	9.5%
3:00 - 4:00 PM	10.8%	10.3%	11.3%
4:00 - 5:00 PM	8.1%	7.2%	9.1%
5:00 - 6:00 PM	11.2%	4.7%	17.7%
6:00 - 7:00 PM	2.2%	0.6%	3.7%
7:00 - 8:00 PM	0.0%	0.0%	0.0%
8:00 - 9:00 PM	0.0%	0.0%	0.0%
9:00 - 10:00 PM	0.0%	0.0%	0.0%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

0.00% 0.00% 100.00% 100.00% 100.00%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE Trip Generation Manual, 11th Edition

Land Use Code	822		
Land Use	Strip Retail Plaza		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	2		
	% of 16-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.0%	0.0%	0.0%
1:00 - 2:00 AM	0.0%	0.0%	0.0%
2:00 - 3:00 AM	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.0%	0.0%	0.0%
5:00 - 6:00 AM	0.0%	0.0%	0.0%
6:00 - 7:00 AM	0.5%	0.6%	0.6%
7:00 - 8:00 AM	2.2%	2.7%	2.8%
8:00 - 9:00 AM	4.5%	5.6%	5.9%
9:00 - 10:00 AM	5.8%	7.1%	7.4%
10:00 - 11:00 AM	6.5%	7.5%	7.6%
11:00 - 12:00 PM	6.3%	6.8%	6.8%
12:00 - 1:00 PM	6.1%	6.4%	6.4%
1:00 - 2:00 PM	6.9%	6.8%	6.8%
2:00 - 3:00 PM	6.1%	5.8%	5.9%
3:00 - 4:00 PM	7.4%	7.2%	7.2%
4:00 - 5:00 PM	8.0%	7.9%	7.9%
5:00 - 6:00 PM	8.0%	7.9%	7.9%
6:00 - 7:00 PM	8.0%	7.9%	7.9%
7:00 - 8:00 PM	8.5%	8.2%	8.2%
8:00 - 9:00 PM	8.5%	6.8%	7.1%
9:00 - 10:00 PM	6.7%	4.1%	4.7%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

0.00% 0.00% 100.00% 99.3% 101.2%