

SEATON AVENUE AND CAJALCO ROAD HIGH- CUBE WAREHOUSE

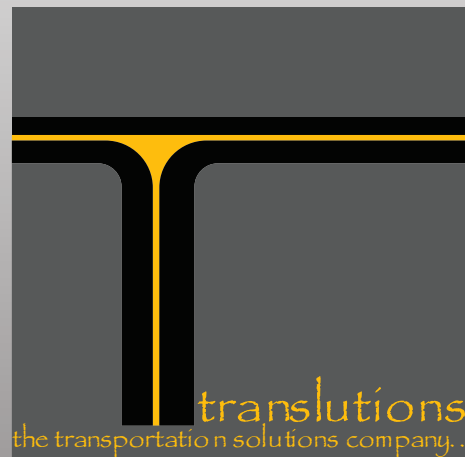
FOCUSED TRAFFIC ANALYSIS

DECEMBER 10, 2021

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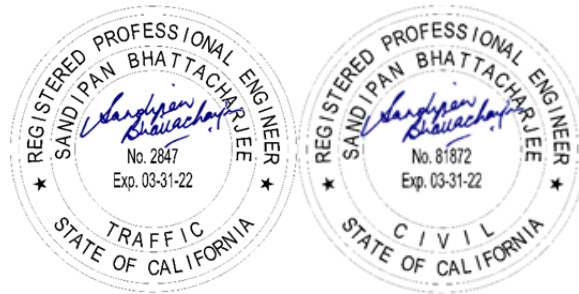


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1.0 INTRODUCTION

This report presents the methodology, findings and conclusions of the focused traffic analysis prepared for the proposed Seaton Avenue and Cajalco Road High-Cube Warehouse development project. The proposed project site is located on the southeast corner of Seaton Avenue and Cajalco Road in the County of Riverside (County).

1.1 Purpose of the Traffic Study and Study Objectives

This report is intended to satisfy the requirements for a focused traffic analysis established by the County of Riverside's *Transportation Analysis Guideline for Level of Service and Vehicles Miles Traveled*, (December 2020), as well as the requirements for the disclosure of potential impacts and mitigation measures per the California Environmental Quality Act (CEQA). The study area, analysis scenarios, and analysis methodologies are based on discussion with County staff and included in the approved Scoping Agreement. Appendix A includes the approved Scoping Agreement.

1.2 Project Location & Study Area

The project is located on the southeast corner of Seaton Avenue and Cajalco Road. The project proposes the construction of 280,385 square feet of high-cube transload and short-term storage and 70,096 square feet of high-cube cold-storage warehouse uses.

Figure 1 shows the regional location of the project. The project opening year is 2023.

Based on the County Guidelines, the Transportation Department, at its discretion may require a traffic analysis be prepared for any development, regardless of size, if there are concerns over safety, operational issues, or if located in an area that has significant traffic related deficiencies. Through the scoping process, the County determined that a focused traffic analysis would be required to evaluate the following intersections for traffic operations:

1. Seaton Avenue and Cajalco Road.
2. Seaton Avenue and Driveway 1.
3. Seaton Avenue and Driveway 2.
4. Driveway 3 and Cajalco Road.

The study area intersections are shown in Figure 2.

This report analyzes weekday a.m. and p.m. peak hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is defined as the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.

1.3 Analysis Scenarios

Based on the County Guidelines, this report analyzes traffic conditions for the following scenarios:

1. Existing Conditions.
2. Project Completion Conditions (Existing plus Ambient Growth plus Project).
3. Cumulative Conditions (Existing plus Ambient Growth plus Project plus Cumulative Projects).

2.0 PROJECT DESCRIPTION

The project proposes the construction of 280,385 square feet of high-cube transload and short-term storage and 70,096 square feet of high-cube cold-storage warehouse uses. Access to the project will be provided by two full access driveways on Seaton Avenue and one right-in/right-out access driveway on Cajalco Road. The south leg of Seaton Avenue and Cajalco Road will also include a northbound left-turn lane and northbound right-turn lane. The site plan for the proposed project is illustrated in Figure 3.

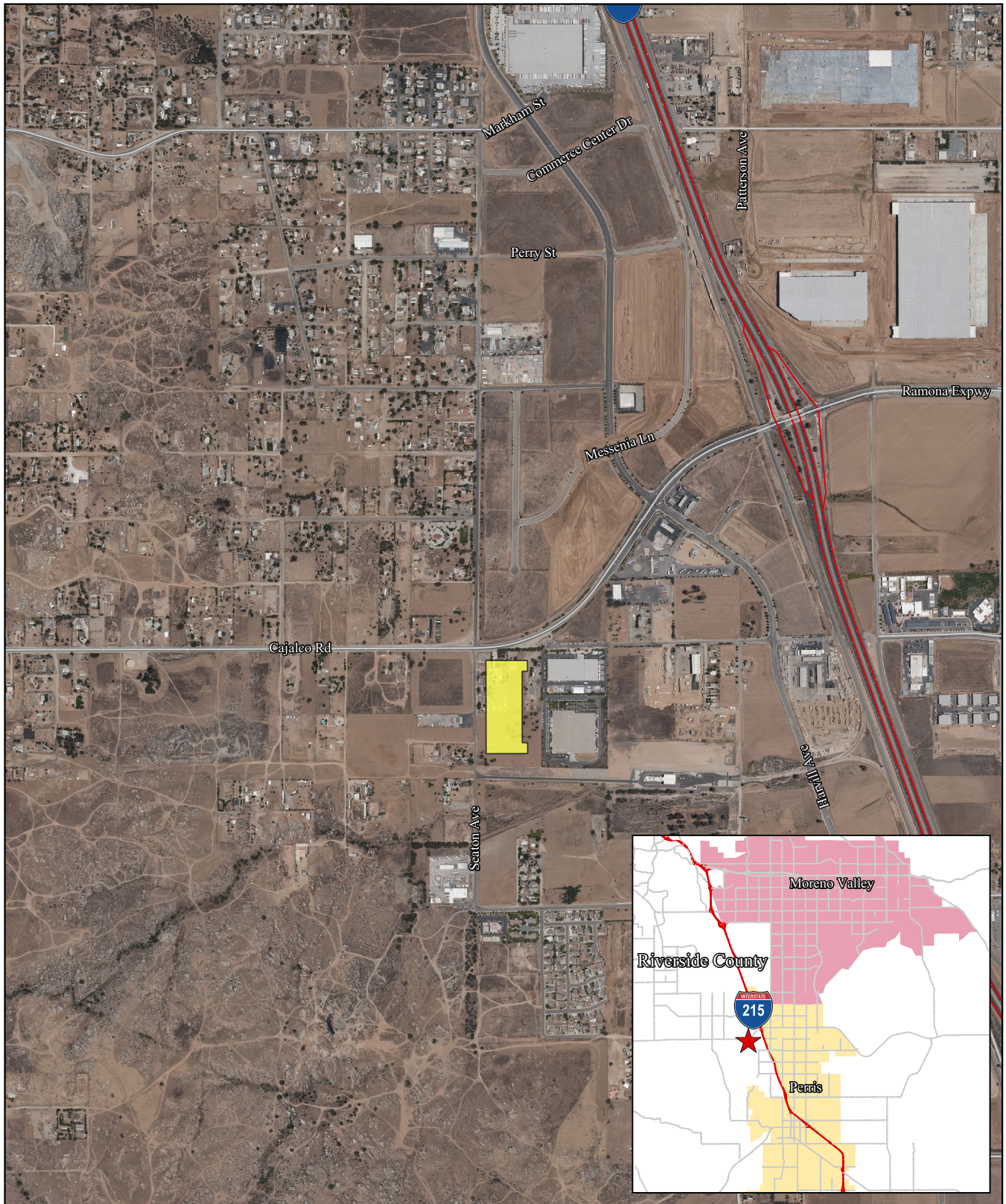


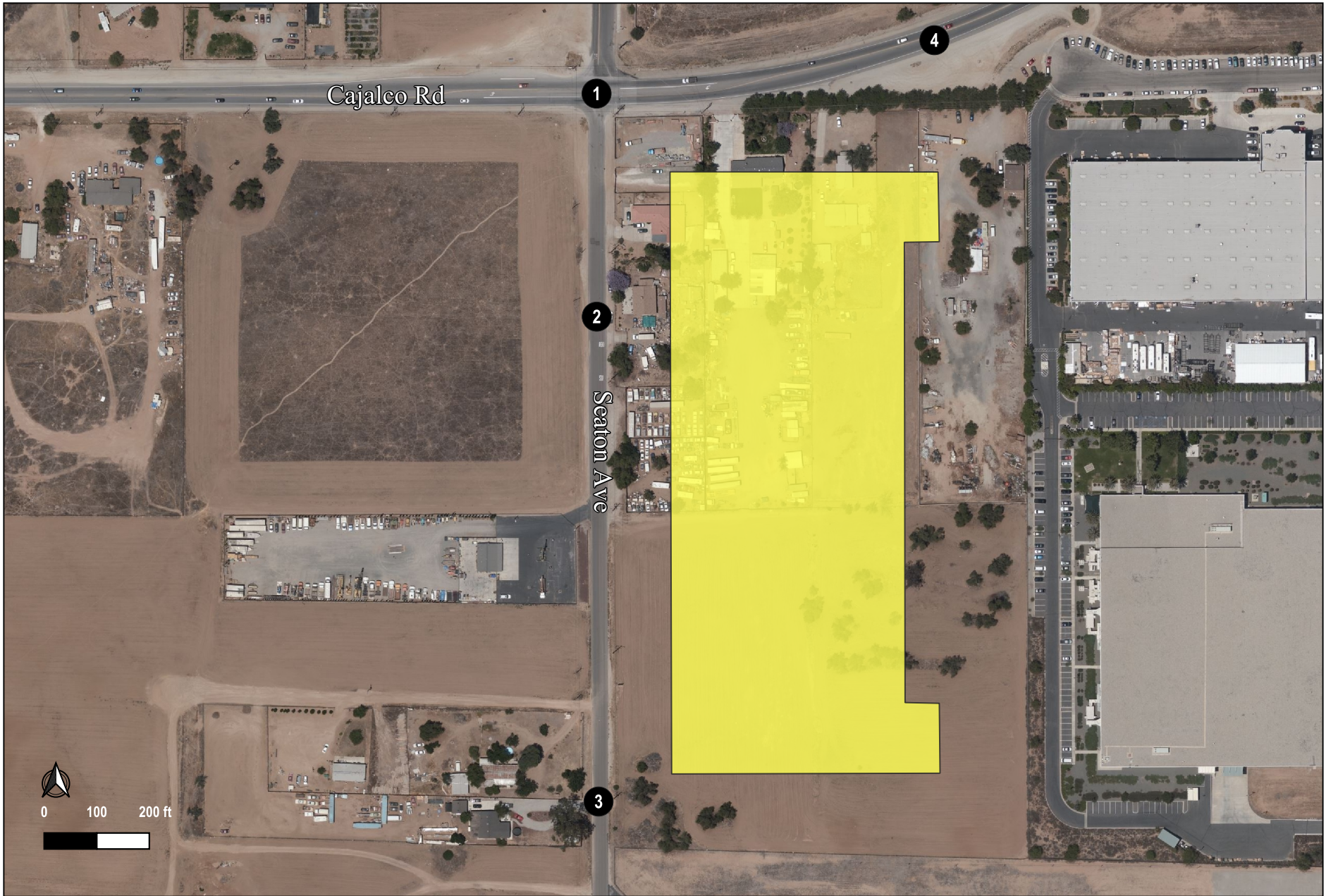
FIGURE 1

Legend

Project Site

Seaton Avenue and Cajalco Road High-Cube Warehouse
Regional Project Location





Legend
 Project Site
 Study Area Intersections



FIGURE 2
Seaton Avenue and Cajalco Road High-Cube Warehouse
Study Area Intersections

2.1 Project Trip Generation

Trip generation for the project is based on trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation (10th Edition) and are based on Land Use 154 "High-Cube Transload and Short-Term Storage Warehouse" and Land Use 157 High-Cube Cold Storage Warehouse". Truck percentages are from the ITE 10th Edition Supplement. Further, the County Guidelines require projects that anticipate the generation of significant truck traffic convert all truck trips into passenger car equivalents (PCE). The truck trips were converted to PCEs using the conversion rates of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks and 3.0 for 4+ axle trucks. Table A shows a summary of the total project trip generation for both the high-cube transload, and short-term storage and high-cube cold storage uses. As shown in Table A, the total project is anticipated to generate 29 total trips during the a.m. peak hour, 35 total trips during the p.m. peak hour, and 541 total daily trips. After converting to PCEs, the total project is anticipated to generate 39 PCE trips during the a.m. peak hour, 42 PCE trips during the p.m. peak hour, and 715 daily PCE trips. Table B shows the breakdown of the trip generation for the high-cube transload and short-term storage use. Table C shows the breakdown of the trip generation for the high-cube cold-storage use.

2.2 Project Trip Distribution & Assignment

Project trip distribution patterns for the proposed project were developed separately for autos and trucks based on location of local/regional destinations and in consultation with County staff. The project trip generation was applied to the trip distribution patterns for the project to develop trip assignments for project trips. Figure 4 shows the trip distribution for passenger vehicles and Figure 5 shows the trip distribution for trucks. Figure 6 shows the trip assignment for passenger vehicles and Figure 7 shows the trip assignment for trucks. The total project trip assignment is shown in Figure 8.

3.0 LOS DEFINITIONS, PROCEDURES, AND THRESHOLDS

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream, and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. Consistent with City guidelines, the Highway Capacity Manual (HCM) procedures have been used to evaluate levels of service. This section discusses the LOS definitions, procedures, and thresholds used in this report.

3.1 Levels of Service

The analysis of traffic operations at intersections was conducted according to the Highway Capacity Manual 6th Edition (HCM) delay methodologies using Synchro 11 software, which is described in the Highway Capacity Manual (Transportation Research Board, Washington, D.C., November 2016). Under the HCM methodology, LOS for signalized intersections is based on the average delay experienced by vehicles traveling through an intersection, whereas for un-signalized intersections, the LOS is based on the worst approach where the minor leg has a shared lane and on the worst movement where the minor leg has dedicated turn lanes. Table D presents a brief description of each level of service letter grade, as well as the range of delays associated with each grade.

3.2 Levels of Service Standards

The County General Plan has established minimum target Levels of Services for the review of development proposals in unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or area intended to be accepted into the County maintained roadway system:

- LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern

Table A: Total Project Trip Generation

Land Use	Units	Peak Hour						Daily	
		AM Peak Hour			PM Peak Hour				
		In	Out	Total	In	Out	Total		
Total Project Trip Generation (Trips, By Vehicle Type)									
Warehouse	280.385	TSF							
Passenger Cars			15	2	17	6	19	25	331
2-Axle Trucks			1	0	1	0	0	0	10
3-Axle Trucks			0	1	1	1	0	1	14
4+ Axle Trucks			1	2	3	1	1	2	37
All Trucks			2	3	5	2	1	3	61
Total Vehicles			17	5	22	8	20	28	392
Cold Storage Warehouse	70.096	TSF							
Passenger Cars			6	0	6	2	4	6	96
2-Axle Trucks			0	0	0	0	0	0	9
3-Axle Trucks			0	0	0	0	0	0	12
4+ Axle Trucks			0	1	1	0	1	1	32
All Trucks			0	1	1	0	1	1	53
Total Vehicles			6	1	7	2	5	7	149
Entire Project	350.481	TSF							
Passenger Cars			21	2	23	8	23	31	427
2-Axle Trucks			1	0	1	0	0	0	19
3-Axle Trucks			0	1	1	1	0	1	26
4+ Axle Trucks			1	3	4	1	2	3	69
All Trucks			2	4	6	2	2	4	114
Total Vehicles			23	6	29	10	25	35	541
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)									
Passenger Cars			21	2	23	8	23	31	427
Truck PCE									
2-Axle Trucks			2	0	2	0	0	0	29
3-Axle Trucks			0	2	2	2	0	2	52
4+ Axle Trucks			3	9	12	3	6	9	207
Total Truck PCE			5	11	16	5	6	11	288
Total PCE			26	13	39	13	29	42	715

¹ Rates based on Land Use 154 & 157 - from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table B: Project Trip Generation (High-Cube Transload and Short-Term Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
PCE Inbound/Outbound Splits		69%	31%	100%	31%	69%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		84.09%	44.57%	75.00%	83.21%	92.64%	90.00%	84.29%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks								
Recommended Mix (%) ²		2.69%	9.39%	4.23%	2.84%	1.25%	1.69%	2.66%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.002	0.003	0.005	0.001	0.001	0.003	0.056
3-Axle Trucks								
Recommended Mix (%) ²		3.61%	12.59%	5.68%	3.81%	1.67%	2.27%	3.57%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.004	0.005	0.009	0.002	0.002	0.005	0.100
4-Axle Trucks								
Recommended Mix (%) ²		9.60%	33.46%	15.09%	10.13%	4.44%	6.04%	9.48%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.018	0.018	0.036	0.009	0.010	0.018	0.398
Warehouse Net PCE Rate		0.076	0.034	0.110	0.035	0.080	0.115	1.734
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	280.385 TSF							
Passenger Cars		15	2	17	6	19	25	331
2-Axle Trucks		1	0	1	0	0	0	10
3-Axle Trucks		0	1	1	1	0	1	14
4+ Axle Trucks		1	2	3	1	1	2	37
All Trucks		2	3	5	2	1	3	61
Total Vehicles		17	5	22	8	20	28	392
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars		15	2	17	6	19	25	331
Truck PCE								
2-Axle Trucks		2	0	2	0	0	0	15
3-Axle Trucks		0	2	2	2	0	2	28
4+ Axle Trucks		3	6	9	3	3	6	111
Total Truck PCE		5	8	13	5	3	8	154
Total PCE		20	10	30	11	22	33	485

¹ Rates based on Land Use 154 - "High-Cube Transload and Short-Term Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table C: Project Trip Generation (High-Cube Cold Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.089	0.021	0.110	0.047	0.073	0.120	2.120
PCE Inbound/Outbound Splits		72%	28%	100%	41%	59%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		83.16%	28.23%	72.73%	70.51%	77.87%	75.00%	64.62%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.074	0.006	0.080	0.033	0.057	0.090	1.370
2-Axle Trucks								
Recommended Mix (%) ²		2.85%	12.15%	4.62%	4.99%	3.75%	4.23%	5.99%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.004	0.004	0.008	0.004	0.004	0.008	0.191
3-Axle Trucks								
Recommended Mix (%) ²		3.82%	16.30%	6.19%	6.70%	5.03%	5.68%	8.03%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.007	0.007	0.014	0.006	0.007	0.014	0.341
4-Axle Trucks								
Recommended Mix (%) ²		10.16%	43.32%	16.46%	17.80%	13.36%	15.09%	21.35%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.027	0.027	0.054	0.025	0.029	0.054	1.358
Warehouse Net PCE Rate		0.112	0.044	0.156	0.068	0.098	0.166	3.259
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	70.096	TSF						
Passenger Cars			6	0	6	2	4	6
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	1	1	0	1	1
All Trucks			0	1	1	0	1	1
Total Vehicles			6	1	7	2	5	7
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars			6	0	6	2	4	6
Truck PCE								
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	3	3	0	3	3
Total Truck PCE			0	3	3	0	3	3
Total PCE			6	3	9	2	7	9

¹ Rates based on Land Use 157 - "High-Cube Cold Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

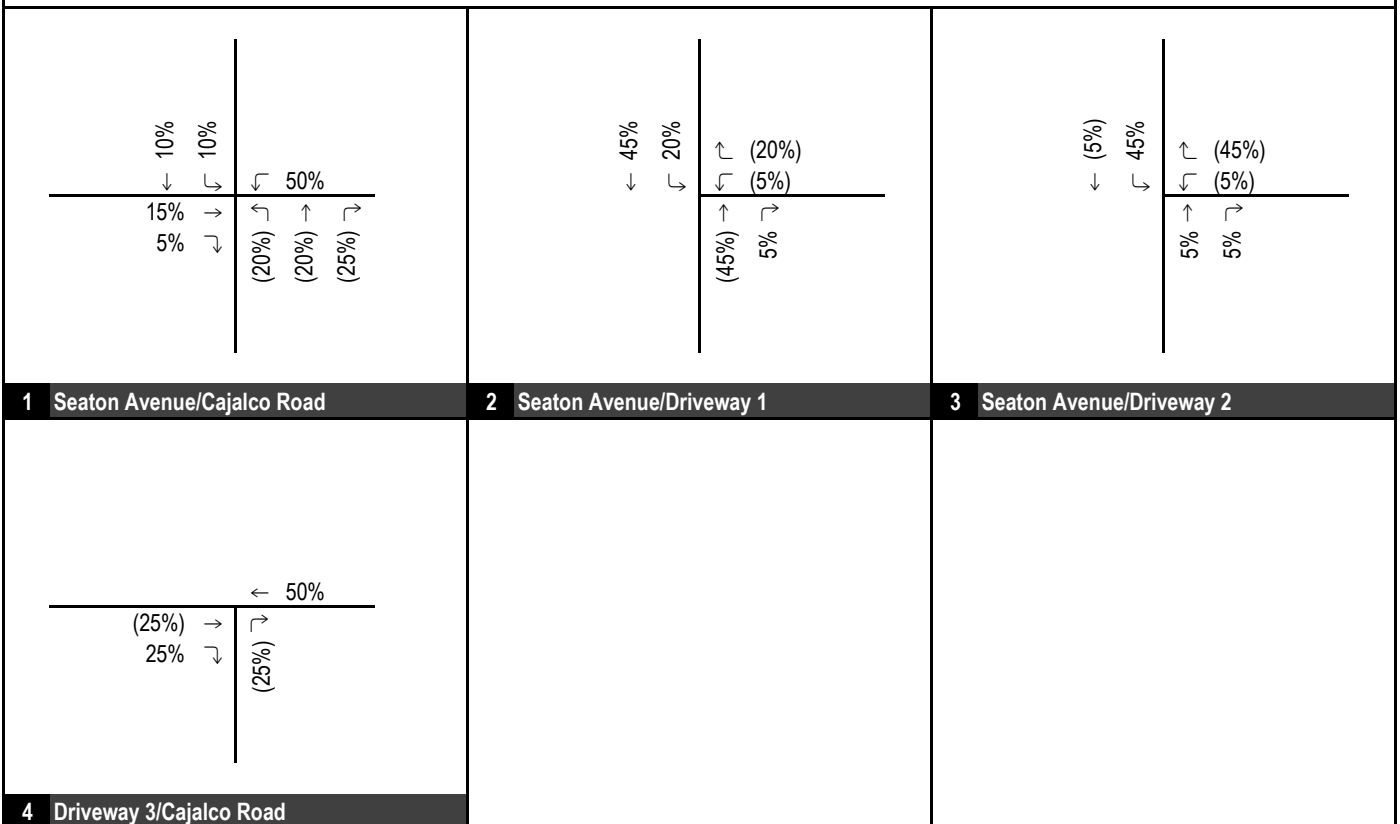
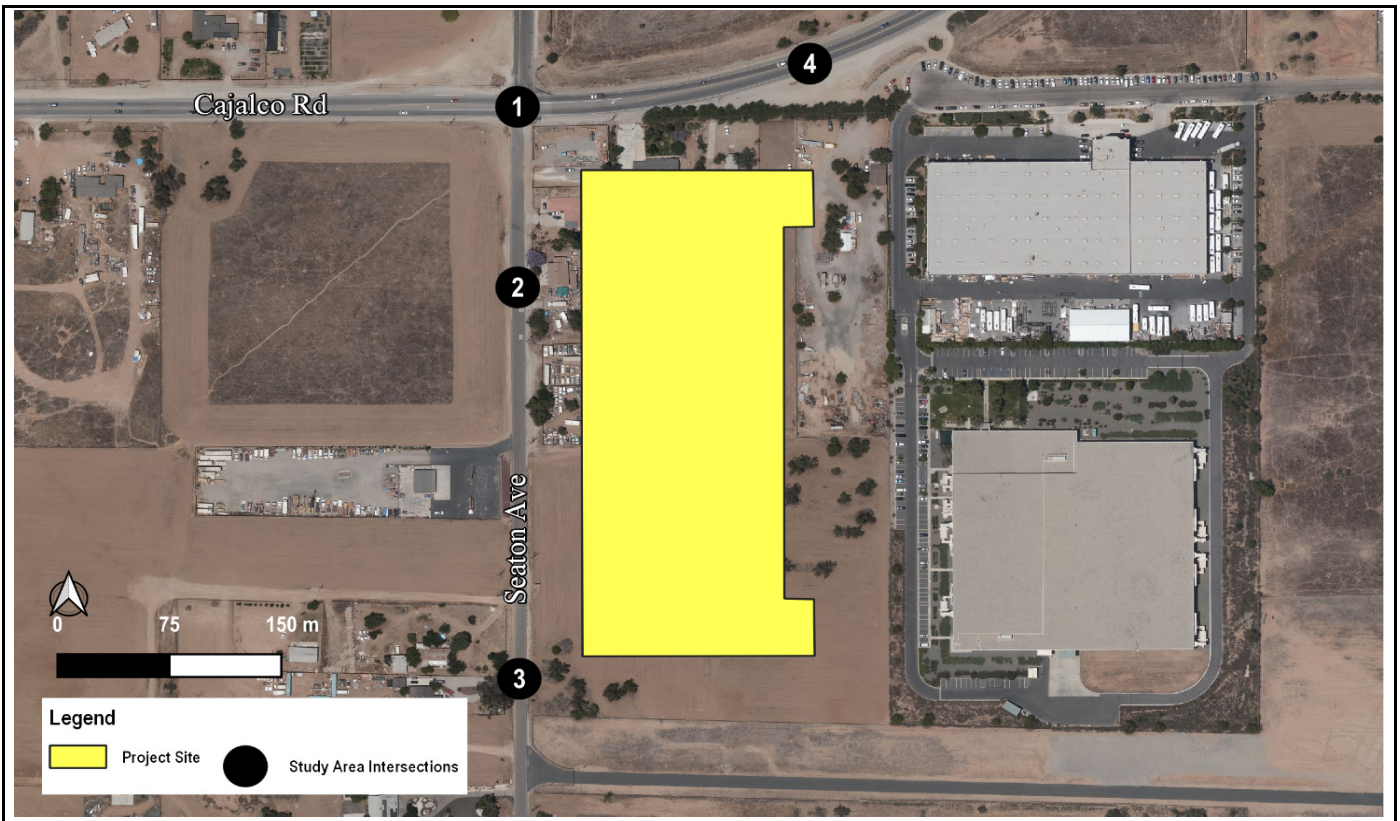


FIGURE 4

XXX%(YYY%) Inbound%(Outbound%) Percent

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Distribution (Autos)



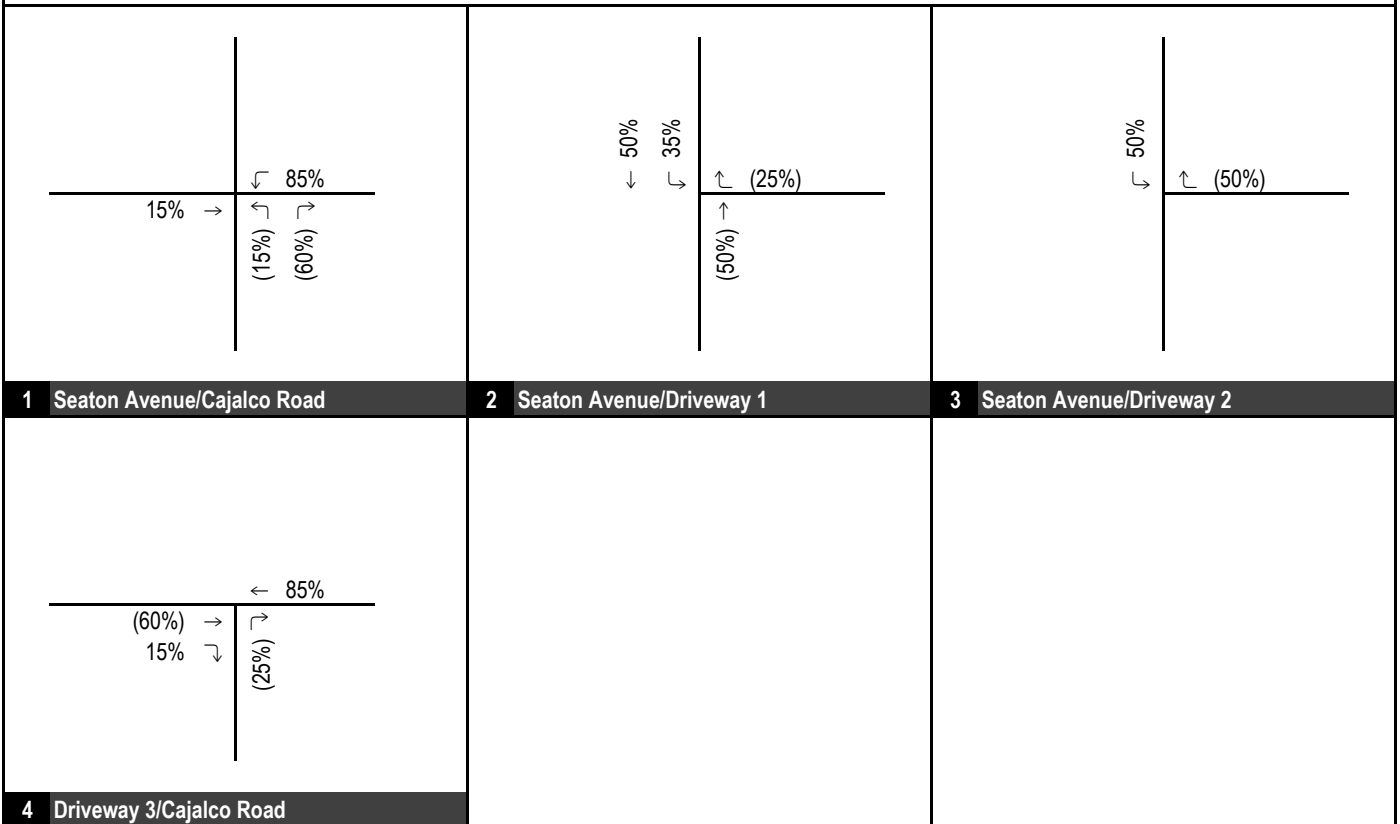
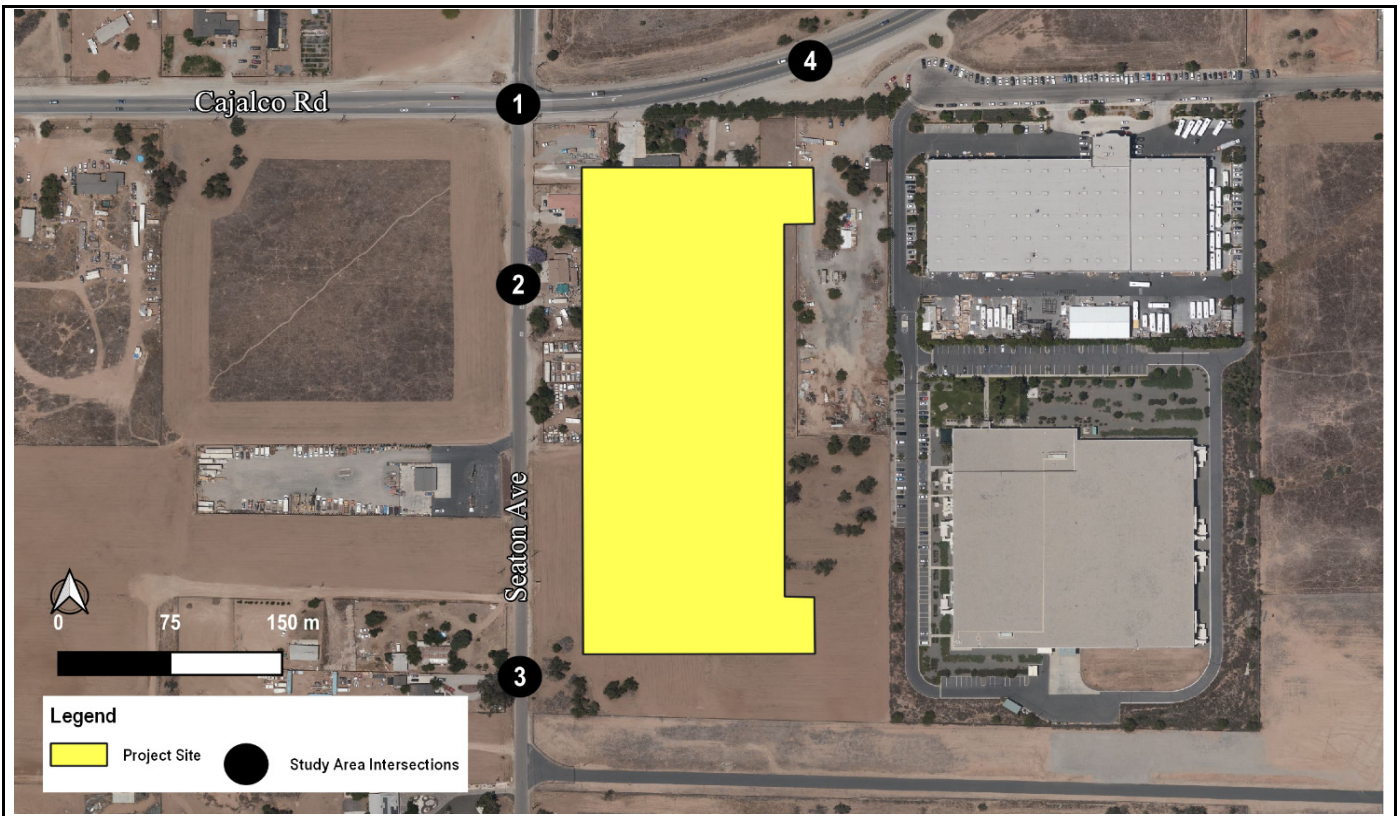


FIGURE 5

XXX%(YYY%) Inbound%(Outbound%) Percent



**Seaton Avenue and Cajalco Road High-Cube Warehouse
Project Trip Distribution (Trucks)**

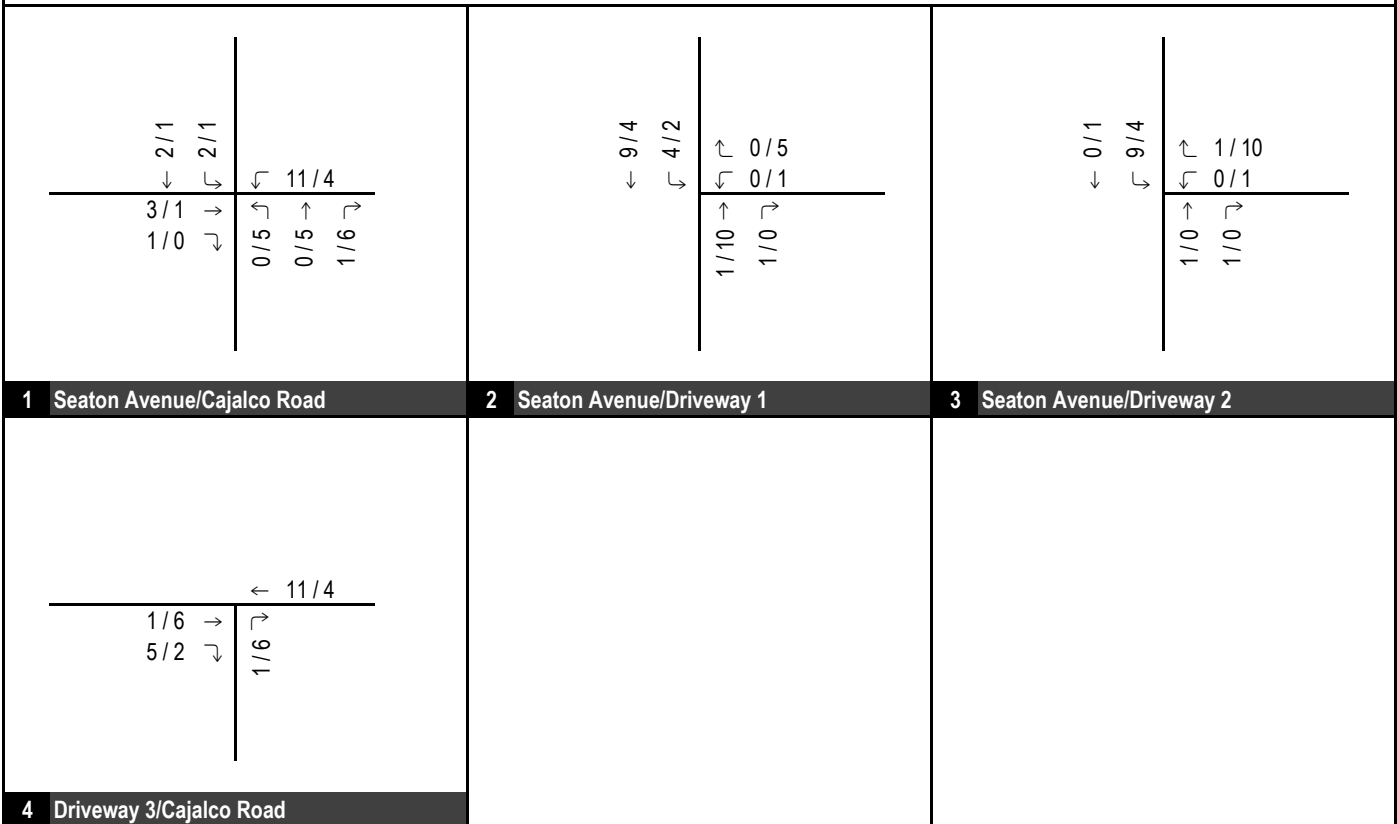
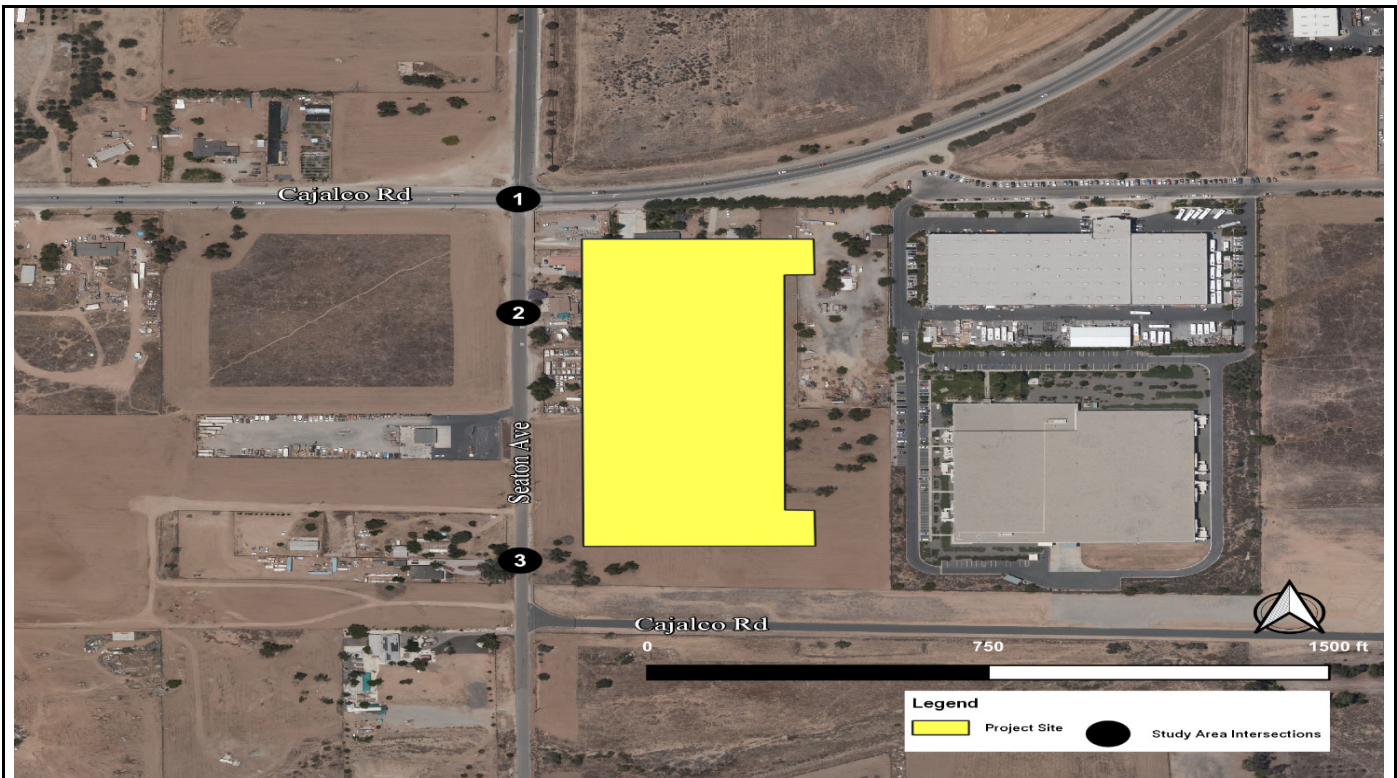


FIGURE 6

XXX / YYY AM / PM Peak Hour Trips

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Assignment (Autos)



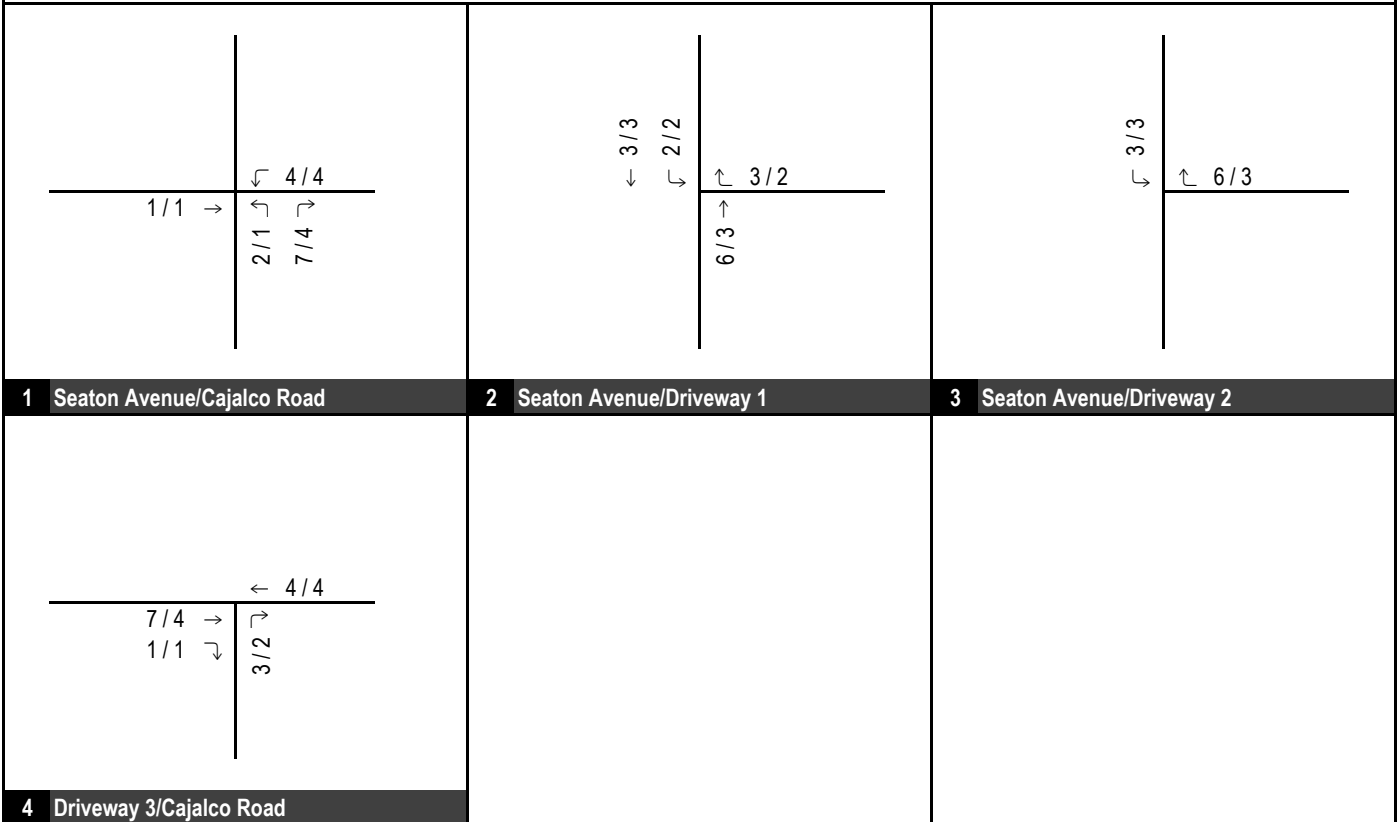
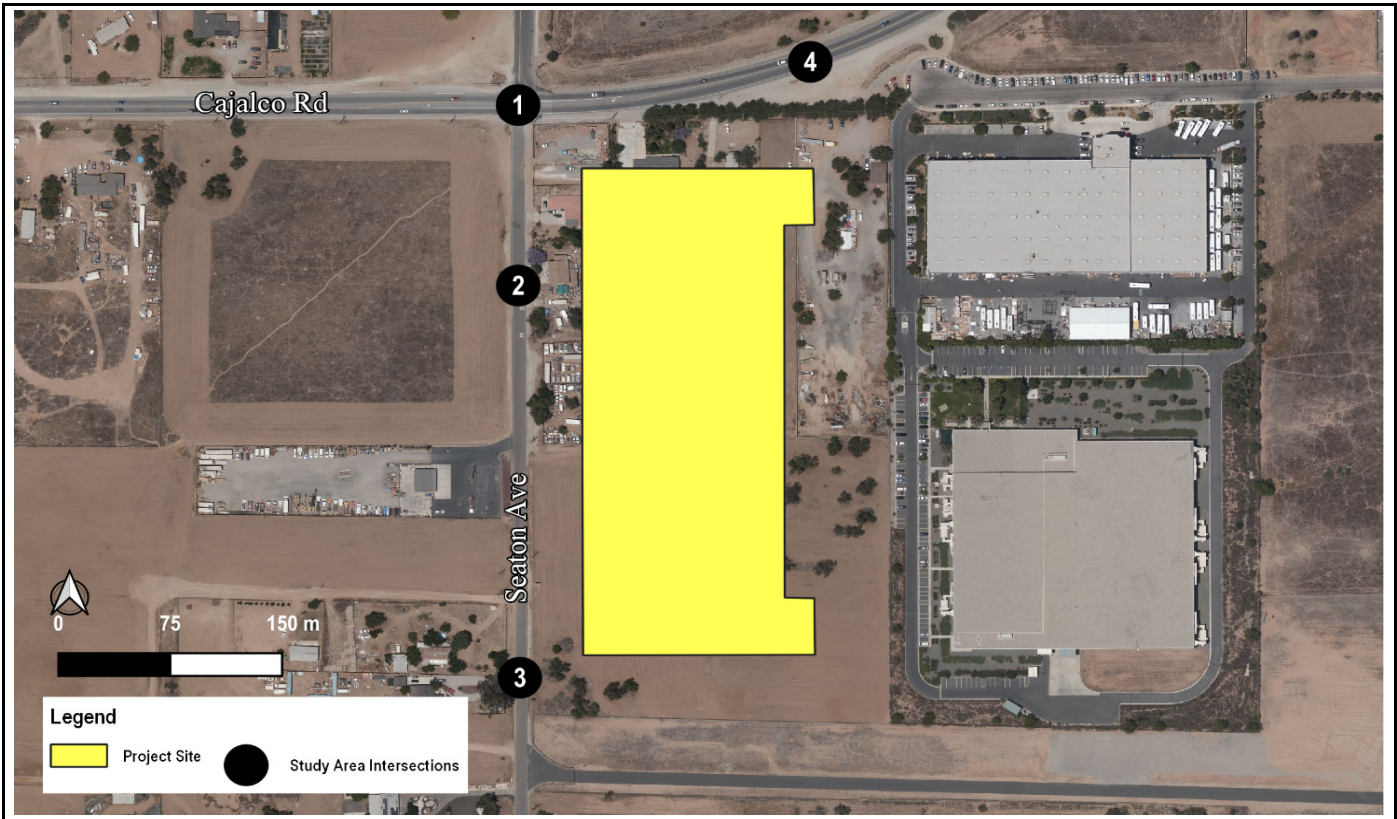


FIGURE 7

XXX / YYY AM / PM Peak Hour Trips



Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Assignment (Trucks)

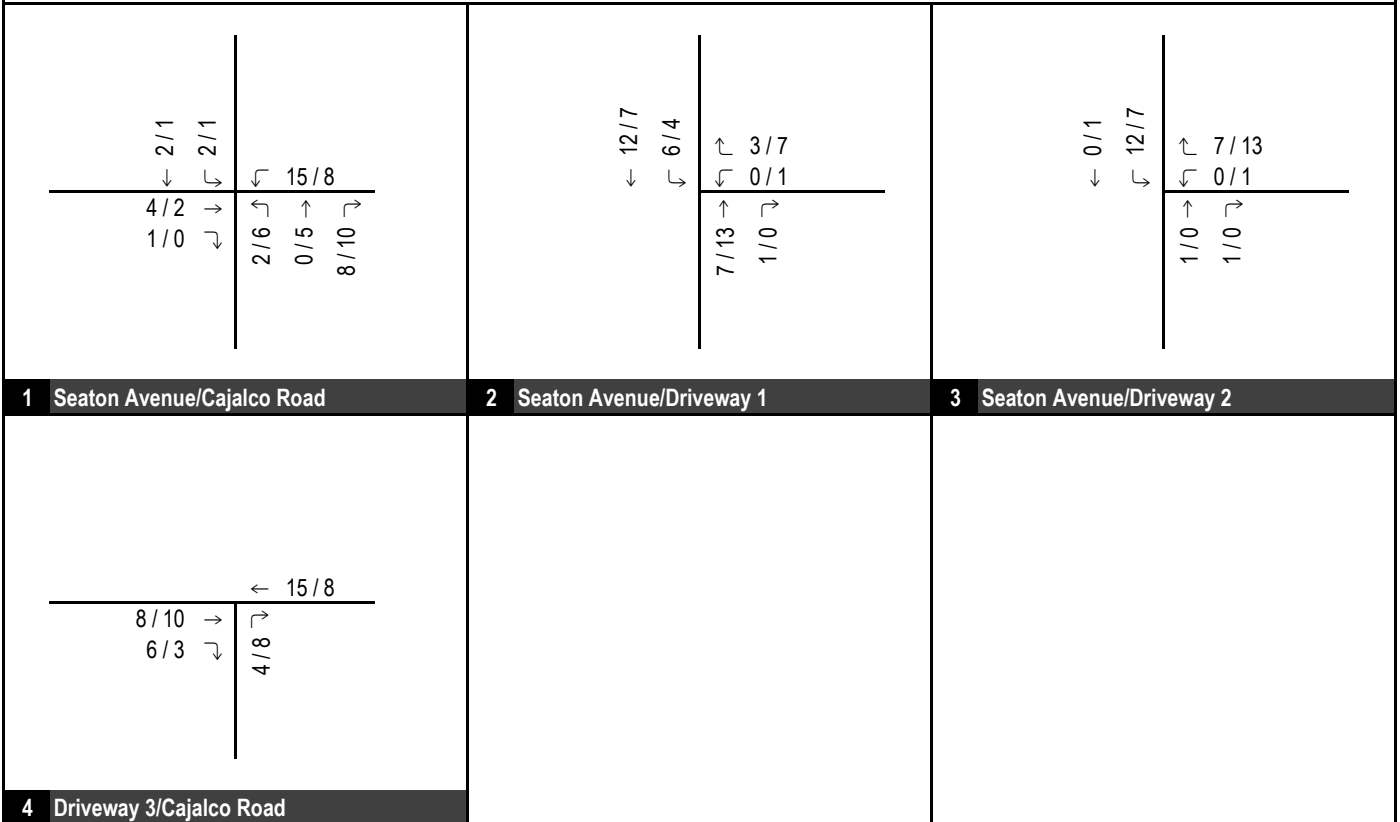
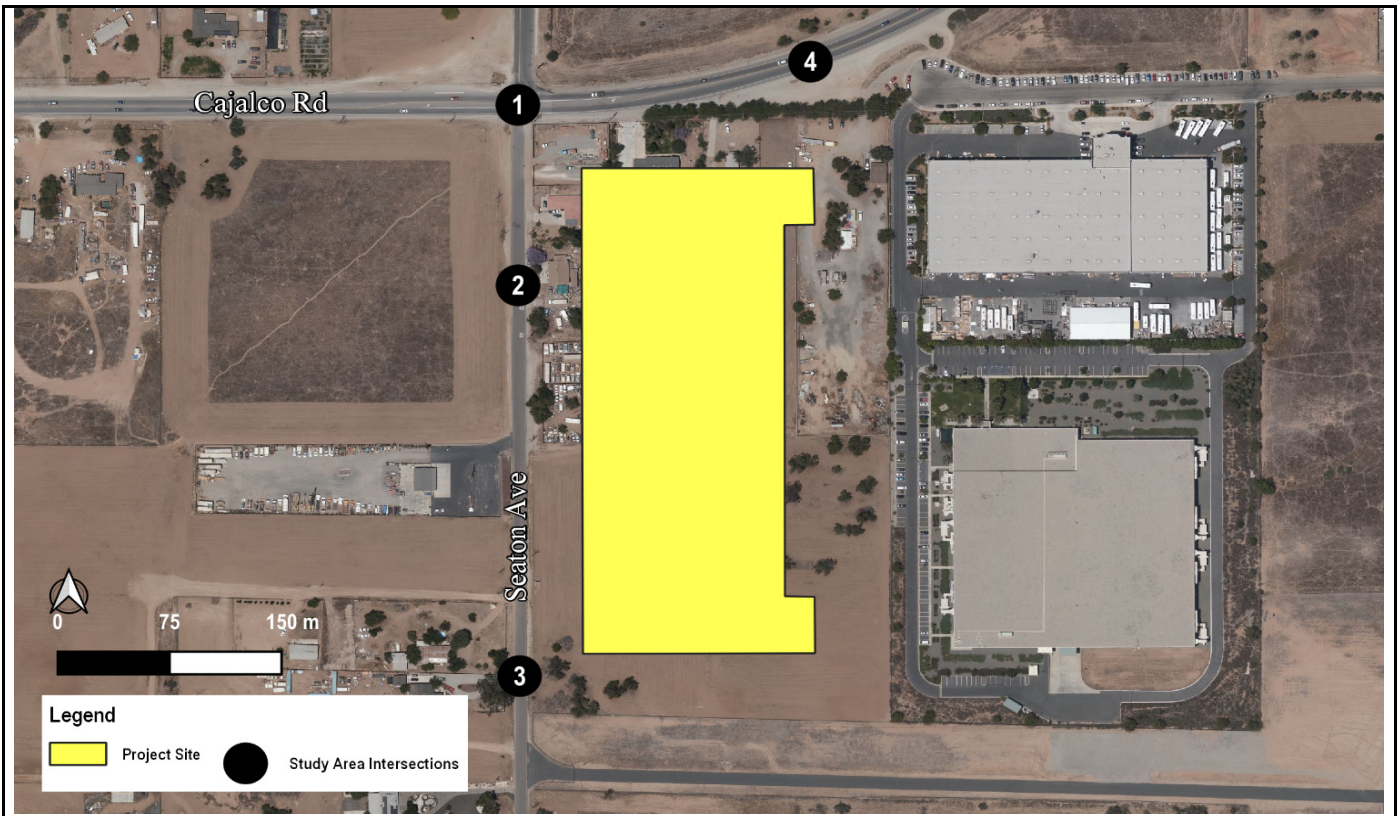


FIGURE 8

XXX / YYY AM / PM Peak Hour Trips



**Seaton Avenue and Cajalco Road High-Cube Warehouse
Total Project Trip Assignment**

Table D: Level of Service Criteria

LOS	Description of Drivers' Perception and Traffic Operation	HCM (Delay in Seconds)	
		Unsignalized	Signalized
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10	≤ 10
B	This level is assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	> 10 and ≤ 15	> 10 and ≤ 20
C	This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 15 and ≤ 25	> 20 and ≤ 35
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	> 25 and ≤ 35	> 35 and ≤ 55
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	> 35 and ≤ 50	> 55 and ≤ 80
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 50	> 80

Source: *Highway Capacity Manual 6th Edition*

- Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.
- LOS D shall apply to all development proposals located within any of the following Areas Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley, and those Community Development Areas of the Elsinore, Lane Mathews/Woodcrest, Mead Valley and Temescal Canyon Areas Plans.

The Level of Service standard applicable to the project is LOS D, since the project is located within a Community Development Area.

3.3 General Plan Consistency Requirements

The County Guidelines include criteria to identify improvements required to provide acceptable operations for General Plan consistency. Operational improvements would be required under the following conditions:

1. When existing traffic conditions exceed the General Plan target LOS.
2. When project traffic, when added to existing traffic, will deteriorate the LOS to below the target LOS.
3. When cumulative traffic, exceeds the General Plan target LOS.

4.0 VOLUME DEVELOPMENT METHODOLOGY

Forecast traffic volumes at study intersections were developed consistent with the County's guidelines. This section discusses the volume development methodology used to forecast future traffic volumes.

4.1 Existing Traffic Volumes

Existing traffic volumes are based on peak hour intersection turn movement counts collected by AimTD in October 2018. A growth rate of 2 percent for 3 years (2018 to 2021) was applied to the existing counts to develop existing 2021 peak hour volumes. Count sheets are contained in Appendix B. Detailed volume development worksheets are included in Appendix C.

4.2 Project Completion Traffic Volumes

Project Completion peak hour traffic volumes were developed by applying an annual growth rate of 2 percent per year for 2 years to the existing volumes (2021 to 2023) and adding project trips. Detailed volume development worksheets are included in Appendix C.

4.4 Cumulative Traffic Volumes

Cumulative peak hour traffic volumes were developed by adding traffic generated by other approved projects in the study area to the Project Completion traffic volumes. The cumulative projects included in the analysis are illustrated in Figure 9. Table E lists the cumulative projects included in the analysis. The cumulative projects are anticipated to generate 1,289 a.m. peak hour PCE trips, 1,424 p.m. peak hour PCE trips, and 21,886 daily PCE trips.

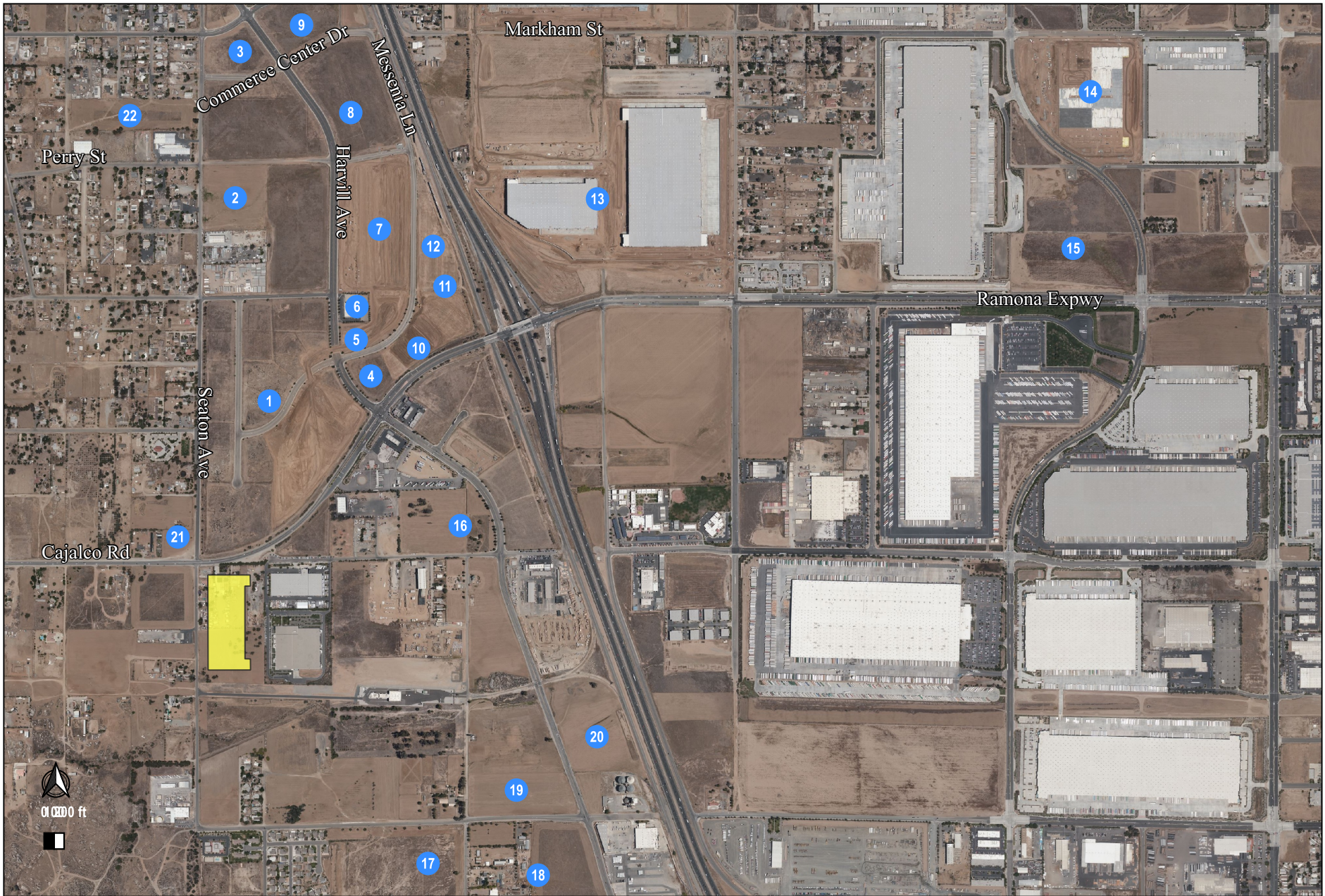
5.0 EXISTING CONDITIONS

This section discusses the existing transportation conditions in the study area.

5.1 Existing Roadway Conditions

Regional access to the project site is provided by Interstate 215 to the east. Local access to the project will be provided by the following roadways:

- **Seaton Avenue** is oriented in the north-south direction and is a 2-lane roadway within the project study area. The County's circulation plan designates Seaton Avenue as a Secondary Highway with a right-of-way width of 100 feet.
- **Cajalco Road** is oriented in the east-west direction and is a 2-lane roadway within the project study area. The County's circulation plan designates Cajalco Road as an Expressway with a right-of-way width of 220 feet.



Legend

- Project Site
- Cumulative Project Locations

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FIGURE 9
Seaton Avenue and Cajalco Road High-Cube Warehouse
Cumulative Project Locations

Table E: Cumulative Projects Trip Generation

Project Number	Project and Location	Land Use	Quantity	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
					In	Out	Total	In	Out	Total	
1	Majestic Freeway Business Center Buildings 1, 3, & 4 NEC of Seaton Ave./Cajalco Rd.	High-Cube Warehouse/Warehousing ¹	1,244.67	TSF	104	30	134	52	134	186	2,240
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
2	Seaton Commerce Center SEC of Seaton Ave./Perry St.	High-Cube Warehouse ²	210.80	TSF	11	2	13	5	14	19	249
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
3	Majestic Freeway Business Center Building 15 SEC of Seaton Ave./Markham St.	Warehouse ³	90	TSF	11	3	14	3	11	14	103
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
4	Farmer Boys/Retail NEC of Harvill Ave./Cajalco Rd.	Fast-Food With Drive Thru ⁴	3.252	TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
		Trip Generation Rates									
		Trip Generation									
		Pass-By Trips									
		Total Net Trip Generation	16.306	TSF	0.58	0.36	0.94	1.83	1.98	3.81	37.75
		Retail ⁵									
		Trip Generation Rates									
		Trip Generation									
		Pass-By Trips									
		Total Net Trip Generation									
5	Majestic Freeway Business Center Building 5 NEC of Harvill Ave./Messenia Ln.	Warehouse ³	40	TSF	5	1	6	1	5	6	46
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
6	Majestic Freeway Business Center Building 6 North of Messinia Ln. East of Harvill Ave.	Warehouse ³	72	TSF	9	2	11	3	9	12	82
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
7	Majestic Freeway Business Center Building 10 SEC of Harvill Ave./Perry St.	High-Cube Warehouse ²	600.00	TSF	31	5	36	14	40	54	708
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
8	Majestic Freeway Business Center Building 11 SEC of Harvill Ave./Commerce Center Dr.	High-Cube Warehouse ²	391.05	TSF	20	3	23	9	26	35	461
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
9	Majestic Freeway Business Center Building 12 NEC Harvill Ave./Commerce Center Dr.	Warehouse ³	155	TSF	18	5	23	6	19	25	176
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									

Table E: Cumulative Projects Trip Generation

Project Number	Project and Location	Land Use	Quantity	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
					In	Out	Total	In	Out	Total	
10	Majestic Freeway Business Center Building 7 North of Cajalco Rd. East of Harvill Ave.	Warehouse ³	80	TSF	10	2	12	3	10	13	91
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
11	Majestic Freeway Business Center Building 8 North of Cajalco Rd. East of Harvill Ave.	Warehouse ³	110	TSF	14	3	17	4	14	18	125
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
12	Majestic Freeway Business Center Building 9 East of Messinia Ln. North of Harvill Ave.	Warehouse ³	45	TSF	6	1	7	1	6	7	51
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
13	High-Cube Warehouse West of Webster Ave. North of Ramona Expwy.	High-Cube Warehouse ²	1,455.00	TSF	75	12	87	34	97	131	1,717
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
14	High-Cube Warehouse NEC Indian Ave./Markham St.	High-Cube Warehouse ²	669.00	TSF	35	5	40	15	45	60	789
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
15	High-Cube Warehouse NEC Indian Ave./Ramona Expwy.	High-Cube Warehouse ²	428.73	TSF	22	4	26	10	29	39	506
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
16	High-Cube Warehouse NWC Harvill Ave./Old Cajalco Rd.	High-Cube Warehouse ²	280.31	TSF	15	2	17	6	19	25	331
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
17	High-Cube Warehouse SWC Patterson Ave./Rider St.	High-Cube Warehouse ²	612.48	TSF	32	5	37	14	41	55	723
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
18	High-Cube Warehouse SWC Harvill Ave./Rider St.	High-Cube Warehouse ²	423.67	TSF	22	3	25	10	28	38	500
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									

Table E: Cumulative Projects Trip Generation

Project Number	Project and Location	Land Use	Quantity	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
					In	Out	Total	In	Out	Total	
19	Warehouse NEC Patterson Ave./Rider St.	Warehouse ³	204	TSF	25	6	31	8	25	33	233
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
20	Harvill and Rider Warehouse NEC of Harvill Ave./Rider St.	High-Cube Warehouse/Warehousing ⁶	335.00	TSF	36	7	43	9	38	47	466
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
21	Gas Station/Convenience Market	Gas Station With Convenience Market ⁷	4.088	TSF	40.31	40.31	80.61	39.37	39.37	78.73	1,056.59
		Trip Generation Rates									
		Trip Generation									
		Pass-By Trips									
		Total Net Trip Generation									
22	Seaton Small Business Center North of Perry St. between Beck St. & Seaton Ave.	General Light Industrial ⁸	335.00	TSF	48	7	54	6	43	49	386
		Passenger Cars									
		Truck PCEs									
		Total PCE Trip Generation									
					911	380	1,289	459	965	1,424	21,886

Notes: TSF=Thousand Square Feet

¹ Trip Generation from "Majestic Freeway Business Center Specific Plan - Buildings 1, 3, & 4 (PPT180028) Traffic Impact Analysis" from Urban Crossroads (June 2019).

² Rates based on Land Use 154 - "High-Cube Transload and Short-Term Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

³ Rates based on Land Use 150 "Warehousing" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement.).

⁴ Rates based on Land Use 934 "Fast-Food Restaurant with Drive-Through Window" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed).

⁵ Rates based on Land Use 820 "Shopping Center" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed).

⁶ Trip Generation from "Harvill and Rider Warehouse (PPT190039) Traffic Impact Analysis" from Urban Crossroads (February 2020).

⁷ Rates based on Land Use 945 - "Gasoline/Service Station With Convenience Market" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed).

⁸ Trip Generation from "Seaton Small Business Center Traffic Impact Analysis" from EPD Solutions (October 2021).

5.2 Existing Transit Service

Public transportation services within the project area includes bus transit service provided by the Riverside Transit Agency (RTA) and commuter rail transportation (Metrolink). These services are further described below.

Bus Service. Public transportation within the project area is provided by RTA, which is the regional transit operator in Riverside County.

- **Route 41** provides transit service on Cajalco Road. Route 41 has major stops at the Mead Valley Community Center, Ross/Lowe's/Starcrest facilities, and the Perris/Ramona Expressway stop. Route 41 operates at 90-minute headways on weekdays and weekends.

Commuter Rail Service. Commuter rail service is provided by Metrolink, which is operated by the Southern California Regional Rail Authority (SCRRA). Metrolink train service is available between the counties of Ventura, Los Angeles, San Bernardino, Orange, Riverside, and north San Diego. The area is served by the Perris Downtown Metrolink Station, and is approximately 4 miles southeast of the project site.

Figure 10 illustrates the existing transit services. As shown in Figure 10, the closest transit route to the project is located on Cajalco Road via Route 41. The closest bus stop is located at the intersection of Seaton Avenue and Cajalco Road.

5.3 Existing Pedestrian & Bicycle Facilities

Riverside County uses three types of bike path classifications and are discussed below:

- **Class I:** Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow minimized. The right-of-way for Class I Bikeways may be substantial, separated from roadways by landscaped stripes or other barriers. In some cases, where appropriate, Class I Bikeways may be designed and signed to also permit golf carts.
- **Class II:** Class II Bikeways, or bike lanes, are intended for preferential use by bicycles, and are provided for within the paved areas of roadways. Bike lane pavement striping and other markings, and bikeway signs are intended to promote an orderly flow of traffic by establishing demarcations between lanes designated for bicycles and lanes designated for motor vehicles. Bike lanes are one-way facilities that follow the flow of motor vehicle movement.
- **Class III:** Class III Bikeways, or bike routes, are intended to provide continuity within the bikeways system, usually by connecting dis-contiguous segments of Class I and Class II Bikeways. Bike routes are shared facilities, either with motor vehicles on roads or with pedestrians on sidewalks, and bicycle usage of the facilities is considered secondary. Bike routes are not marked on pavement but are supported by signs.

Figure 11 illustrates the existing bicycle facilities within the County. As shown in Figure 11, there are no existing bike lanes adjacent to the project area. Pedestrian circulation within the County is primarily provided via sidewalks. The existing pedestrian sidewalks adjacent to the project are illustrated in Figure 12. As illustrated in Figure 12, there are no sidewalks on Seaton Avenue adjacent to the project site.

5.4 Existing Levels of Service

An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. Figure 13 shows the existing lane geometrics and stop controls at the study intersections. The existing traffic volumes at study intersections are illustrated in Figure 14. Detailed volume development worksheets are included in Appendix C. The existing levels of service for the study area intersections are summarized in Table F. Level of service calculation worksheets are contained in Appendix D. As shown in Table F, all study area intersections are currently operating at satisfactory levels of service with the exception of the following:

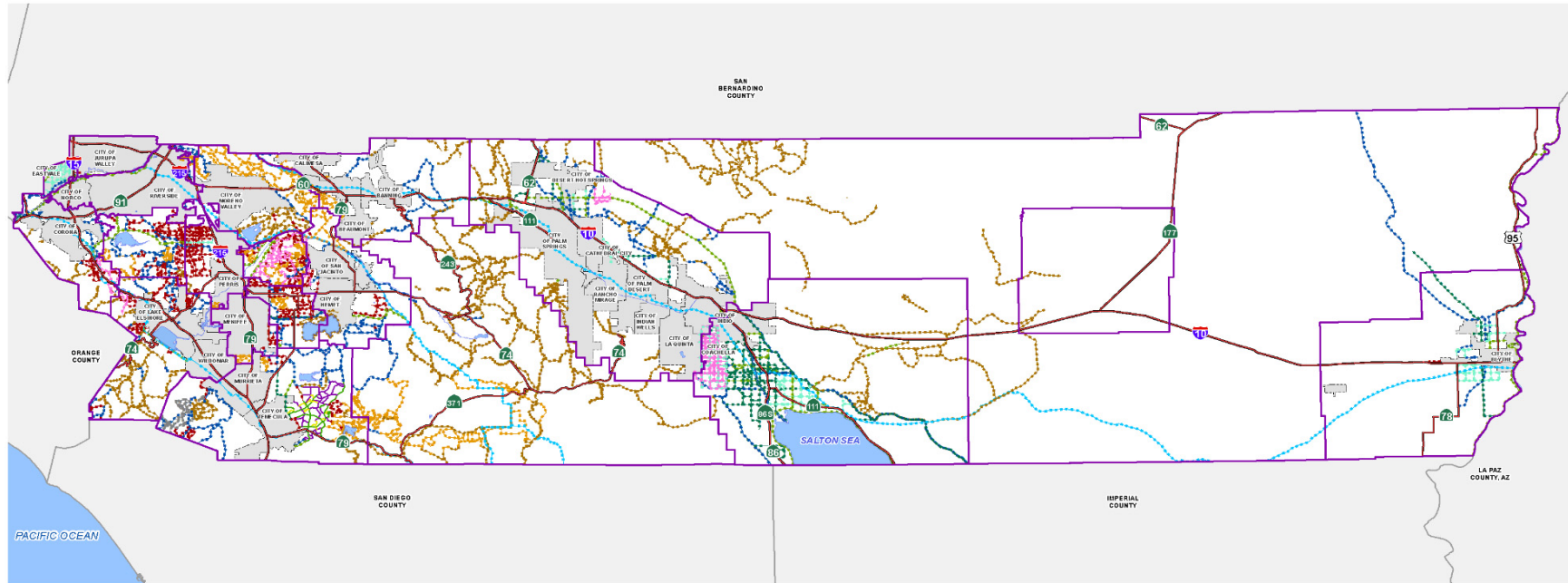
- Seaton Avenue and Cajalco Road: (a.m. and p.m. peak hours).



Legend
 Project Site Route 41



FIGURE 10
Seaton Avenue and Cajalco Road High-Cube Warehouse Transit



Data Source: Riverside County Parks

- Wine Country Connector Trails
- Regional Open Space Trail
- Wine Country Roadside Trail
- Regional Trail: Urban/Suburban
- Community Trail
- Combination Trail (Regional Trail/Class I Bike Path)
- Class I Bike Path
- Class II Bike Path
- Regional Trail: Open Space
- Design Guidelines Trail
- Historic Trail (Southern Immigrant Trail, Juan Bautista De Anza National Historic Trail)
- Non-County Trail (Public and Quasi-Public Lands)
- Private Trail
- Highways
- Area Plan Boundary
- City Boundary
- Waterbodies

Figure C-7

Note: Trails shown in non-county jurisdictions for informational/coordination purposes only. The descriptions for the Wine Country Connector, Regional Open Space and Wine Country Roadside Trails are located within the Southwest Area Plan.

October 24, 2017

Disclaimer: Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty of jurisdiction or liability for the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

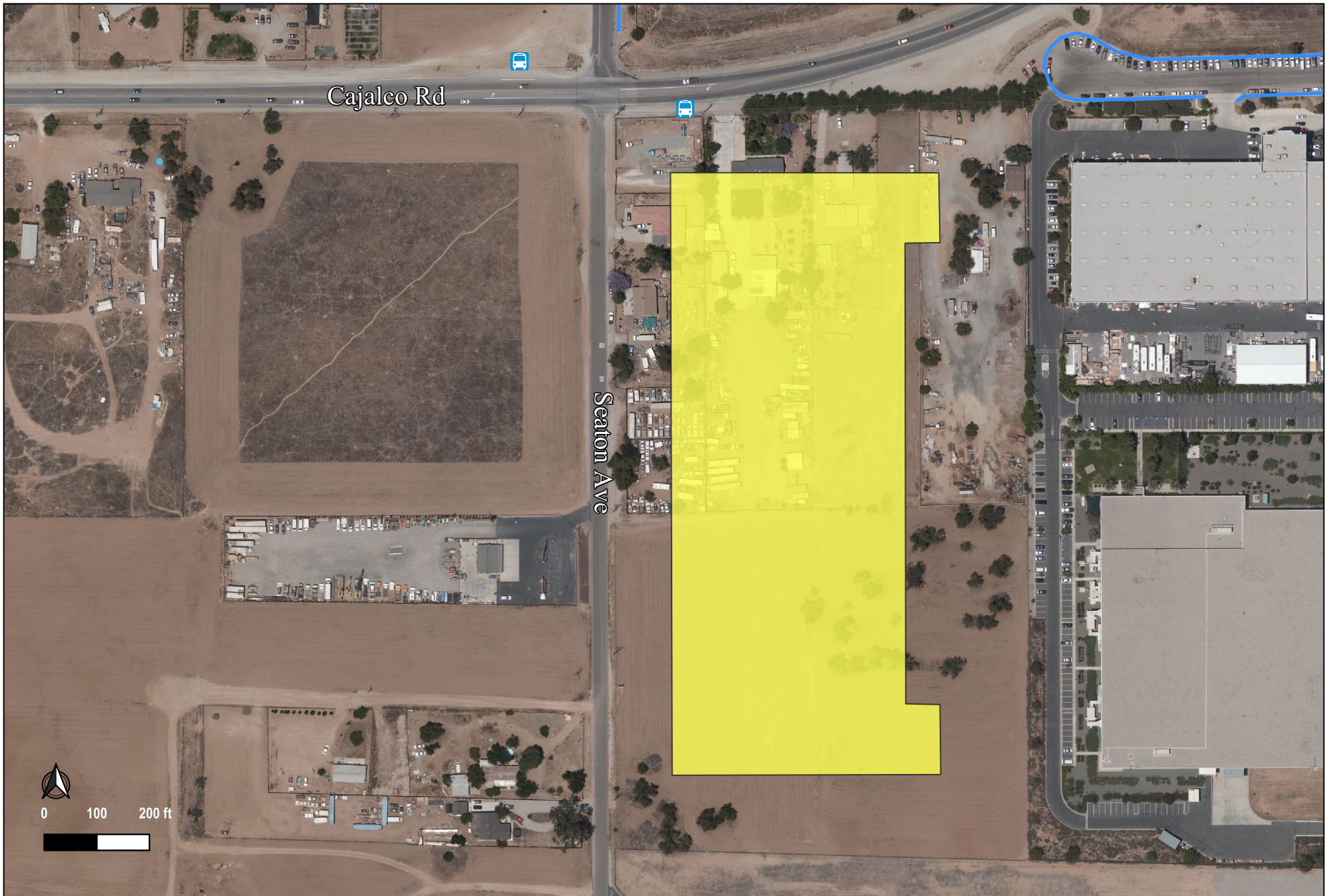


**RIVERSIDE COUNTY
TRAILS AND BIKEWAY SYSTEM**

FIGURE 11

**Seaton Avenue and Cajalco Road High-Cube Warehouse
Riverside County Trails and Bikeway System**



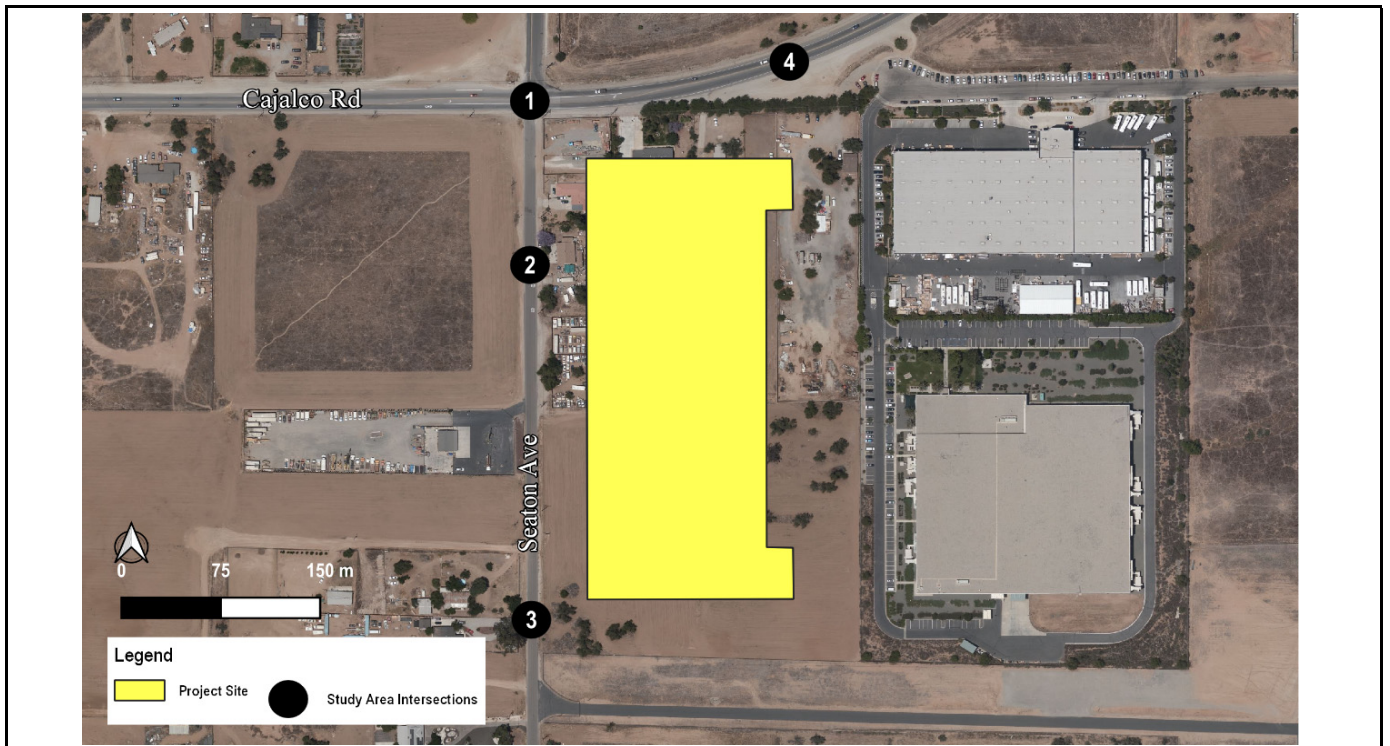


Legend

- Project Site
- Sidewalks



FIGURE 12
Seaton Avenue and Cajalco Road High-Cube Warehouse
Pedestrian Facilities



	<p style="text-align: center;">Future Intersection</p>	<p style="text-align: center;">Future Intersection</p>
<p>1 Seaton Avenue/Cajalco Road</p>	<p>2 Seaton Avenue/Driveway 1</p>	<p>3 Seaton Avenue/Driveway 2</p>
<p style="text-align: center;">Future Intersection</p>		
<p>4 Driveway 3/Cajalco Road</p>		

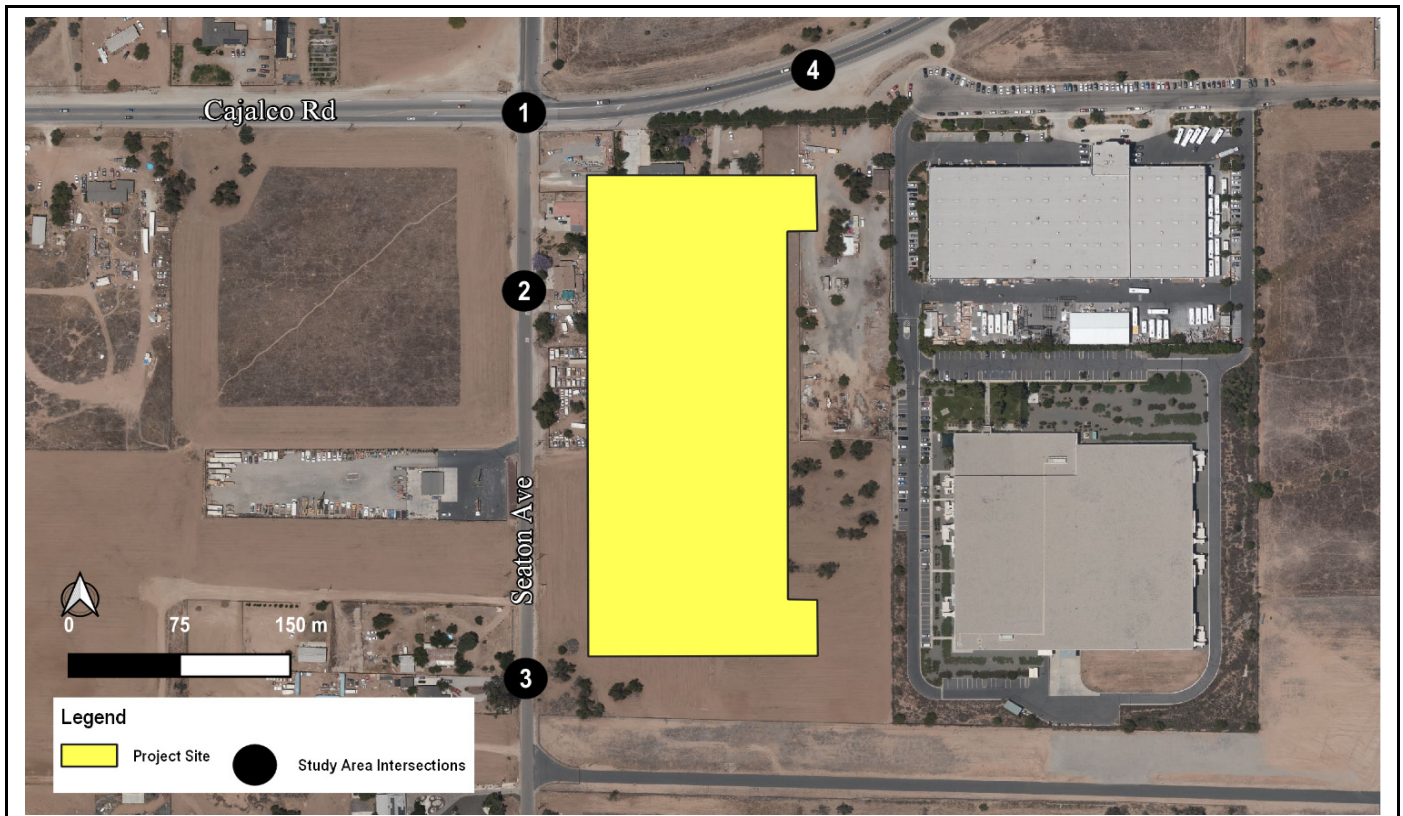
FIGURE 13

Legend

- Signal
- Stop Sign

**Seaton Avenue and Cajalco Road High-Cube Warehouse
Existing Intersection Lane Geometrics and Stop Control**





<table border="1"> <tr> <td>19 / 19</td> <td>4 / 0</td> <td>6 / 1</td> <td>30 / 5</td> </tr> <tr> <td>↶</td> <td>↷</td> <td>↷</td> <td>↶</td> </tr> <tr> <td>↶</td> <td>↷</td> <td>↷</td> <td>↶</td> </tr> <tr> <td>32 / 14</td> <td>↶</td> <td>↷</td> <td>1186 / 1098</td> </tr> <tr> <td>970 / 1224</td> <td>↶</td> <td>↷</td> <td>17 / 13</td> </tr> <tr> <td>43 / 55</td> <td>↷</td> <td>↷</td> <td>↶</td> </tr> <tr> <td></td> <td>27 / 16</td> <td>3 / 2</td> <td>↷</td> </tr> <tr> <td></td> <td></td> <td>16 / 13</td> <td>↷</td> </tr> </table>	19 / 19	4 / 0	6 / 1	30 / 5	↶	↷	↷	↶	↶	↷	↷	↶	32 / 14	↶	↷	1186 / 1098	970 / 1224	↶	↷	17 / 13	43 / 55	↷	↷	↶		27 / 16	3 / 2	↷			16 / 13	↷	Future Intersection	Future Intersection
19 / 19	4 / 0	6 / 1	30 / 5																															
↶	↷	↷	↶																															
↶	↷	↷	↶																															
32 / 14	↶	↷	1186 / 1098																															
970 / 1224	↶	↷	17 / 13																															
43 / 55	↷	↷	↶																															
	27 / 16	3 / 2	↷																															
		16 / 13	↷																															
1 Seaton Avenue/Cajalco Road	2 Seaton Avenue/Driveway 1	3 Seaton Avenue/Driveway 2																																
Future Intersection																																		
4 Driveway 3/Cajalco Road																																		

FIGURE 14

XXXX / YYYY AM / PM Peak Hour Traffic Volumes

Seaton Avenue and Cajalco Road High-Cube Warehouse Existing Peak Hour Traffic Volumes



Table F: Existing Levels of Service

Intersection	LOS Std.	Control	Without Project			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1 . Seaton Avenue/Cajalco Road	D	TWSC	>100	F *	>100	F *
2 . Seaton Avenue/Driveway 1	D	TWSC	Future Intersection			
3 . Seaton Avenue/Driveway 2	D	TWSC	Future Intersection			
4 . Driveway 3/Cajalco Road	D	TWSC	Future Intersection			

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

The intersection of Seaton Avenue Cajalco Road operates at unsatisfactory levels of service. Based on the County Guidelines, when existing traffic conditions exceed the target LOS, operational improvements are required.

6.0 PROJECT COMPLETION CONDITIONS

This section discusses project completion transportation conditions in the study area. It is anticipated that the project will open in 2023.

6.1 Project Completion Roadway Conditions

Project completion roadway conditions are assumed to be the same as those under existing conditions.

6.2 Project Completion Transit Service

Transit service under project completion conditions is anticipated to remain the same as under existing conditions.

6.3 Project Completion Pedestrian & Bicycle Facilities

Pedestrian and bicycle facilities under project completion conditions are anticipated to remain the same as under existing conditions, however, the County of Riverside is proposing a Class II Bike Lane on Cajalco Road. Figure 11 shows the County's proposed bicycle lanes.

6.5 Project Completion Levels of Service

An intersection level of service analysis was conducted for project completion conditions to determine circulation system performance. Figure 15 shows the existing lane geometrics and stop controls at the study intersections. Project completion traffic volumes at study intersections are shown in Figure 16. The project completion with project levels of service for the study area intersections are summarized in Table G. Detailed volume development worksheets are included in Appendix C. Level of service calculation worksheets are contained in Appendix D. As shown in Table G, all study area intersections are forecast to operate at satisfactory levels of service with the exception of the following:

- Seaton Avenue and Cajalco Road: (a.m. and p.m. peak hours).

The intersection of Seaton Avenue and Cajalco Road also operates at unsatisfactory levels of service under existing conditions and the project traffic does not deteriorate the LOS below that target LOS.

7.0 CUMULATIVE CONDITIONS

This section discusses cumulative transportation conditions in the study area.

7.1 Cumulative Roadway Conditions

Cumulative roadway conditions are assumed to be the same as those under project completion conditions.

7.2 Cumulative Transit Service

Transit service under cumulative conditions is anticipated to remain the same as under project completion conditions.

7.3 Cumulative Pedestrian & Bicycle Facilities

Pedestrian and bicycle facilities under cumulative conditions are anticipated to remain the same as under project completion conditions.

7.5 Cumulative Levels of Service

An intersection level of service analysis was conducted for cumulative conditions to determine circulation system performance. Cumulative traffic volumes at study intersections are shown in Figure 17. The cumulative levels of service for the study area intersections are summarized in Table H. Detailed volume development worksheets are included in Appendix C. Level of service calculation worksheets are contained in Appendix D. As shown in Table H, all study area intersections are forecast to operate at satisfactory levels of service with the exception of the following:

- Seaton Avenue and Cajalco Road: (a.m. and p.m. peak hours).

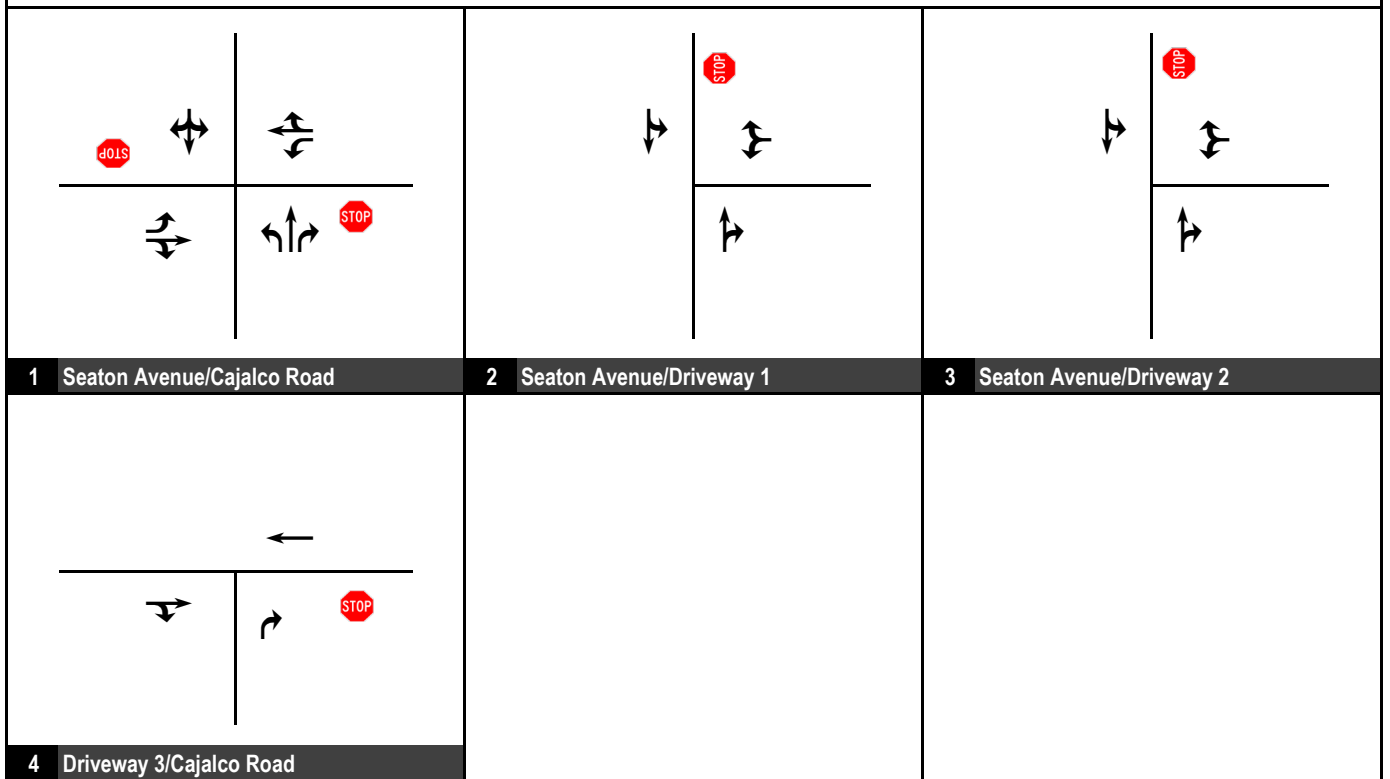
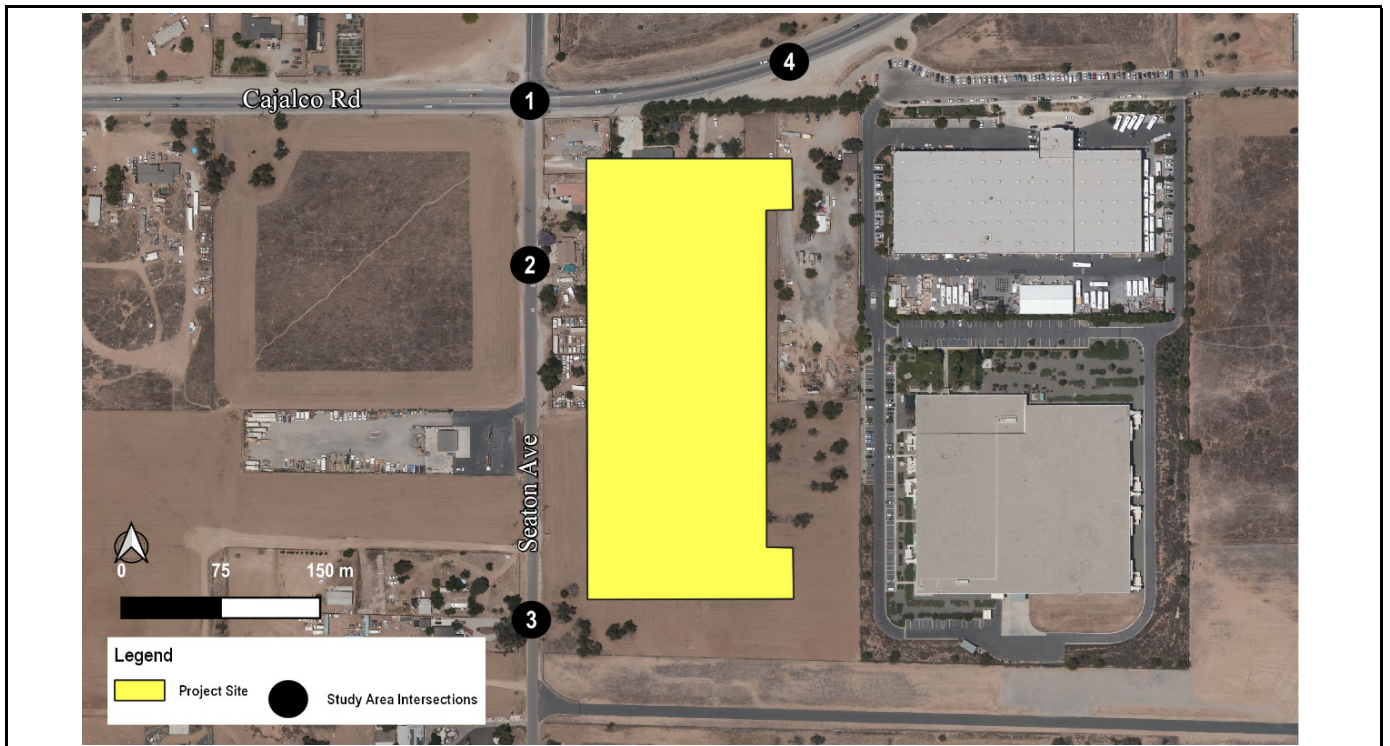


FIGURE 15

Legend

-  Signal
-  Stop Sign

**Seaton Avenue and Cajalco Road High-Cube Warehouse
Project Completion and Cumulative Intersection Lane Geometrics and Stop Control**



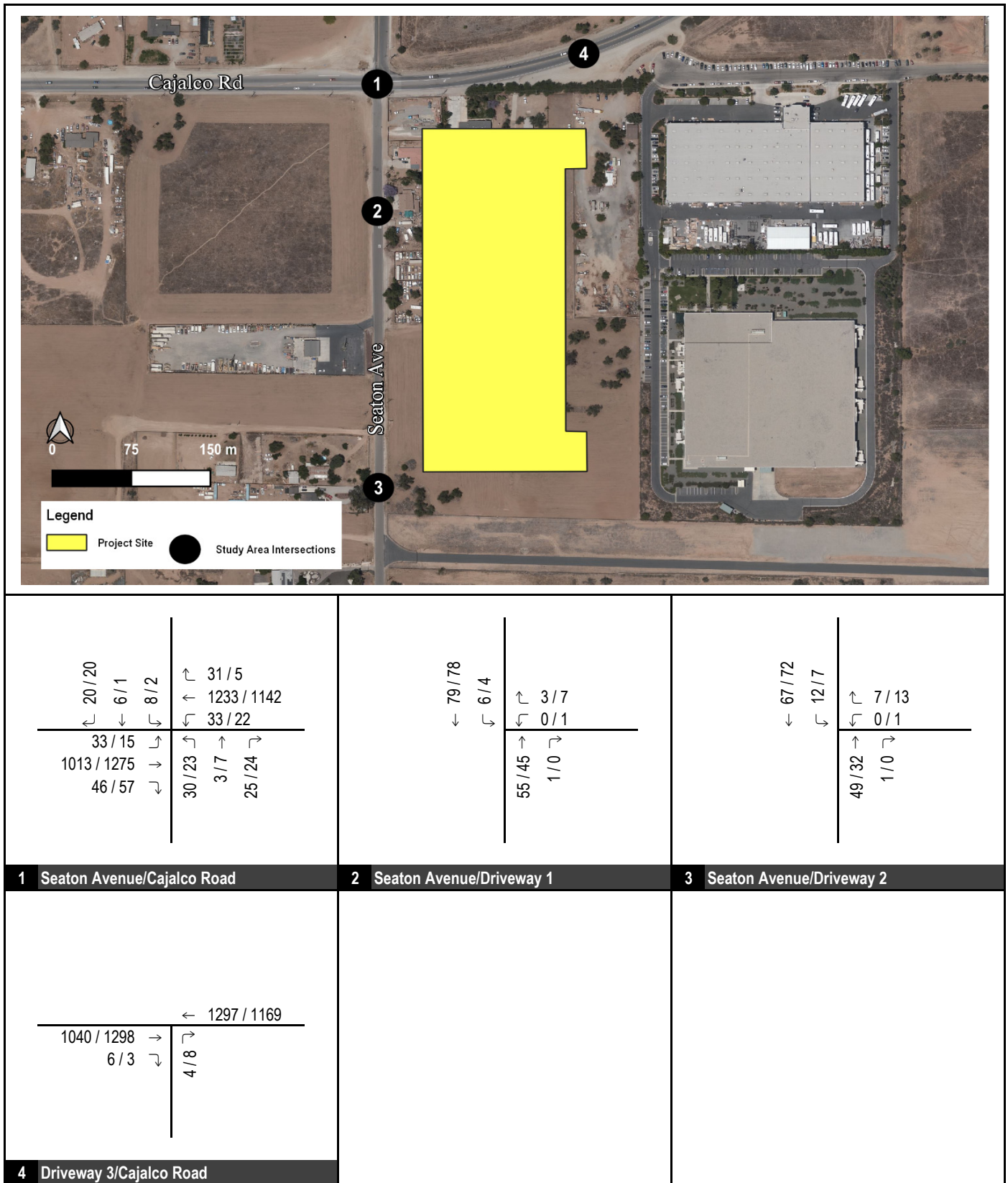


FIGURE 16

XXXX / YYYY AM / PM Peak Hour Traffic Volumes

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Completion Peak Hour Traffic Volumes



Table G: Project Completion Levels of Service

Intersection	LOS Std.	Control	Existing				Project Completion			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1 . Seaton Avenue/Cajalco Road	D	TWSC	>100	F *	>100	F *	>100	F *	>100	F *
2 . Seaton Avenue/Driveway 1	D	TWSC	Future Intersection				8.6	A	8.6	A
3 . Seaton Avenue/Driveway 2	D	TWSC	Future Intersection				8.6	A	8.6	A
4 . Driveway 3/Cajalco Road	D	TWSC	Future Intersection				19.7	C	27.2	D

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

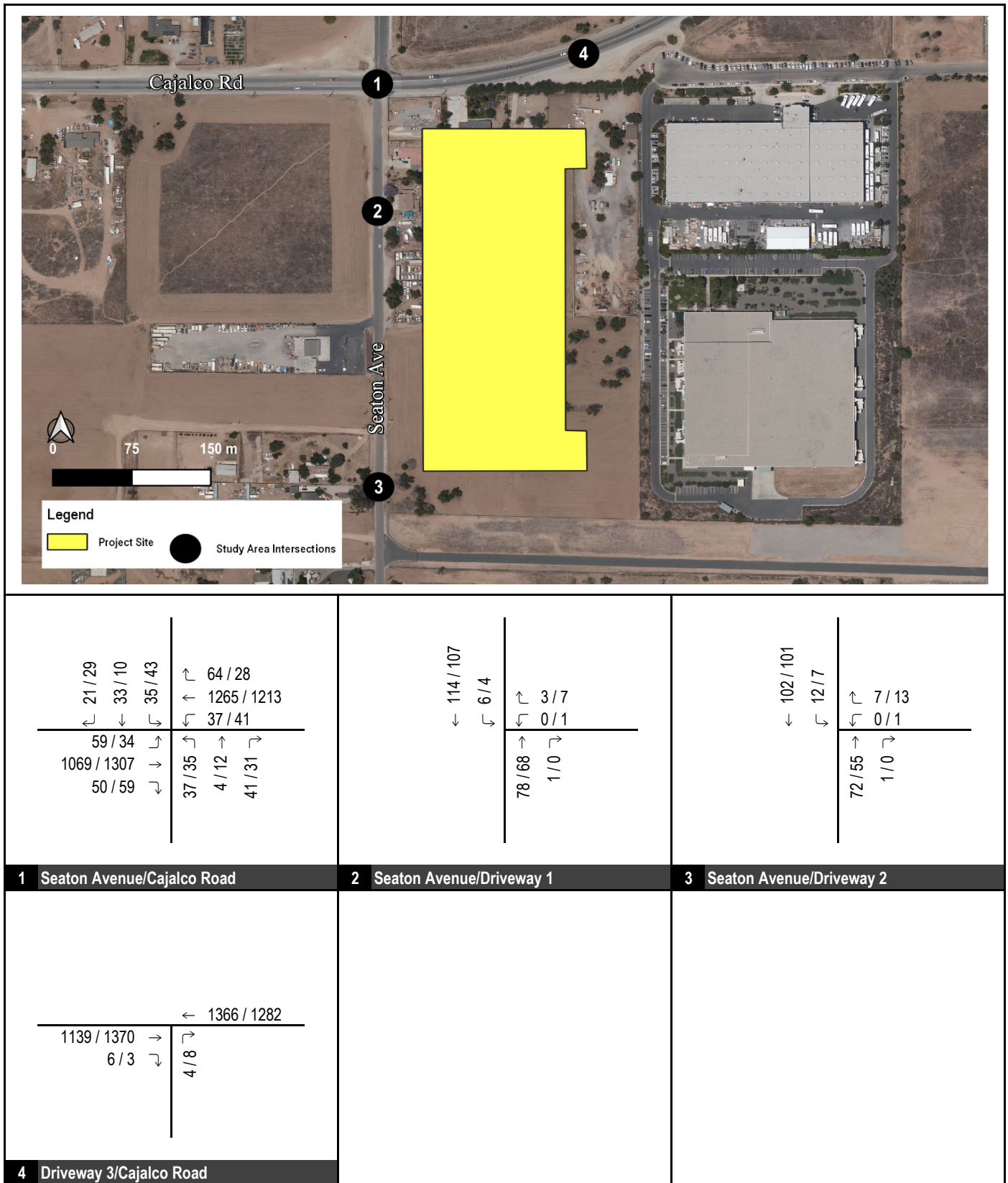


FIGURE 17

XXXX / YYYY AM / PM Peak Hour Traffic Volumes

**Seaton Avenue and Cajalco Road High-Cube Warehouse
Cumulative Peak Hour Traffic Volumes**



Table H: Cumulative Levels of Service

Intersection	LOS Std.	Control	Existing Conditions				Cumulative Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1 . Seaton Avenue/Cajalco Road	D	TWSC	>100	F *	>100	F *	>100	F *	>100	F *
2 . Seaton Avenue/Driveway 1	D	TWSC	Future Intersection		8.7	A	8.8	A		
3 . Seaton Avenue/Driveway 2	D	TWSC	Future Intersection		8.7	A	8.7	A		
4 . Driveway 3/Cajalco Road	D	TWSC	Future Intersection		22.1	C	29.9	D		

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

The intersection of Seaton Avenue and Cajalco Road operates at unsatisfactory levels of service under cumulative conditions. Based on the County Guidelines, when cumulative traffic exceeds the General Plan target LOS, operation improvements are required.

8.0 CIRCULATION IMPROVEMENTS

The County guidelines require operational improvements based on the criteria listed in Chapter 3.3 General Plan Consistency Requirements. These improvements may include conversion of stop control, signalization, changes to signal phasing, and/or addition of lanes as appropriate.

8.1 Project Completion Conditions

Under project completion conditions, the following improvements are recommended to restore satisfactory operations:

- **Seaton Avenue and Cajalco Road** – Installation of a traffic signal. The fair-share calculation at this intersection was calculated from the total trips generated by the project divided by the total cumulative traffic minus the existing traffic. The project fair share calculations are shown in Table I. As shown in Table I, the project fair share contribution at this intersection is 9.39%. A queue analysis for the westbound left-turn lane was conducted to determine if the queue fits within the available storage length. Table J shows the queuing analysis. As shown in Table J, the westbound left-turn queue fits within the available storage length.

The resulting levels of service for project completion with improvements conditions are included in Table K. Figure 18 illustrates the recommended improvements. With the implementation of recommended improvements, all intersections will operate at satisfactory levels of service.

8.2 Cumulative Conditions

Under cumulative conditions, the following improvements are recommended to restore satisfactory operations:

- **Seaton Avenue and Cajalco Road** – Installation of a traffic signal. The fair-share calculation at this intersection was calculated from the total trips generated by the project divided by the total cumulative traffic minus the existing traffic. The project fair share calculations are shown in Table I. As shown in Table I, the project fair share contribution at this intersection is 9.39%. A queue analysis for the westbound left-turn lane was conducted to determine if the queue fits within the available storage length. Table J shows the queuing analysis. As shown in Table J, the westbound left-turn queue fits within the available storage length.

The resulting levels of service for cumulative with improvements conditions are included in Table L. Figure 18 illustrates the recommended improvements. With the implementation of recommended improvements, all intersections will operate at satisfactory levels of service.

9.0 SOUTHBOUND TRAFFIC ON SEATON AVENUE

The southbound traffic on Seaton Avenue was evaluated to determine if drivers experienced significant delays or extended queues because of project traffic making southbound left-turns in to the project site. The cumulative a.m. and p.m. peak hour traffic volumes are shown in Figure 17. The south leg departure volume at the intersection of Seaton Avenue and Cajalco Road is 120 vehicles in the a.m. peak hour and 110 vehicles in the p.m. peak hour. The southbound left-turn project traffic is a maximum of 12 vehicles in the a.m. peak hour and 7 vehicles in the p.m. peak hour. Based on the County guidelines, an exclusive left-turn lane may be needed if left-turning peak hour volumes are over 100 vehicles. Based on the County guidelines, an exclusive left-turn lane is not needed for the southbound left-turning project traffic. In addition, the maximum southbound through-left-turn movement delay is 7.4 seconds (LOS A) in the a.m. peak hour and 7.3 seconds (LOS A) in the p.m. peak hour. Based on the delays in the a.m. and p.m. peak hours, the southbound traffic is not experiencing significant delays. Furthermore, a queuing analysis for the southbound through-left turn movements at both project driveways was conducted. The southbound through-left queues are

Table I: Project Fair Share Calculations

Intersection	AM Peak Hour					PM Peak Hour					Project Fair Share %
	Total Volume		Total Growth	Project Trips	Project %	Total Volume		Total Growth	Project Trips	Project %	
	Existing Conditions	Cumulative Conditions				Existing Conditions	Cumulative Conditions				
1 . Seaton Avenue/Cajalco Road	2,353	2,715	362	34	9.39%	2,460	2,842	382	33	8.64%	9.39%

Note: The fair share calculation is based on County guidelines.

Table J: With Improvements Queue Analysis

Intersection	Movement	Storage Length (In Feet)	Pr. Comp. With Improvements		Cumul. With Improvements	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			Queue Length ¹	Queue Length ¹	Queue Length ¹	Queue Length ¹
1 . Seaton Avenue/Cajalco Road	NBL	185	54	43	62	59
	NBR	260	16	15	34	21
	WBL	150	59	43	66	72

Notes:

Bold = Exceeds storage length

¹Queues reported are 95th Percentile queue lengths per movement in feet.

Table K: Project Completion With Improvements Levels of Service

Intersection	LOS Std.	Control	With Project				Control	With Project With Improvements			
			AM Peak Hour		PM Peak Hour			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS
1 . Seaton Avenue/Cajalco Road	D	TWSC	>100	F *	>100	F *	Signal	17	B	19	B

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

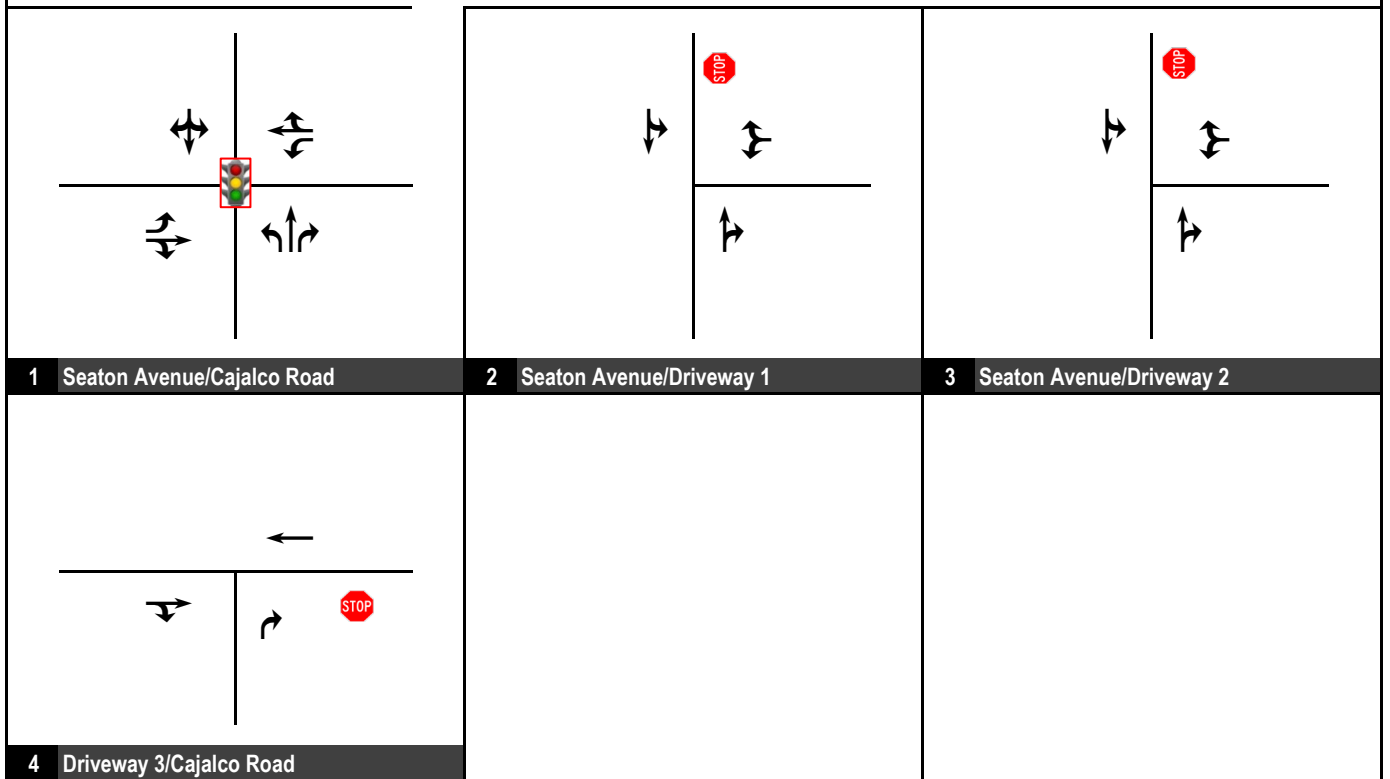
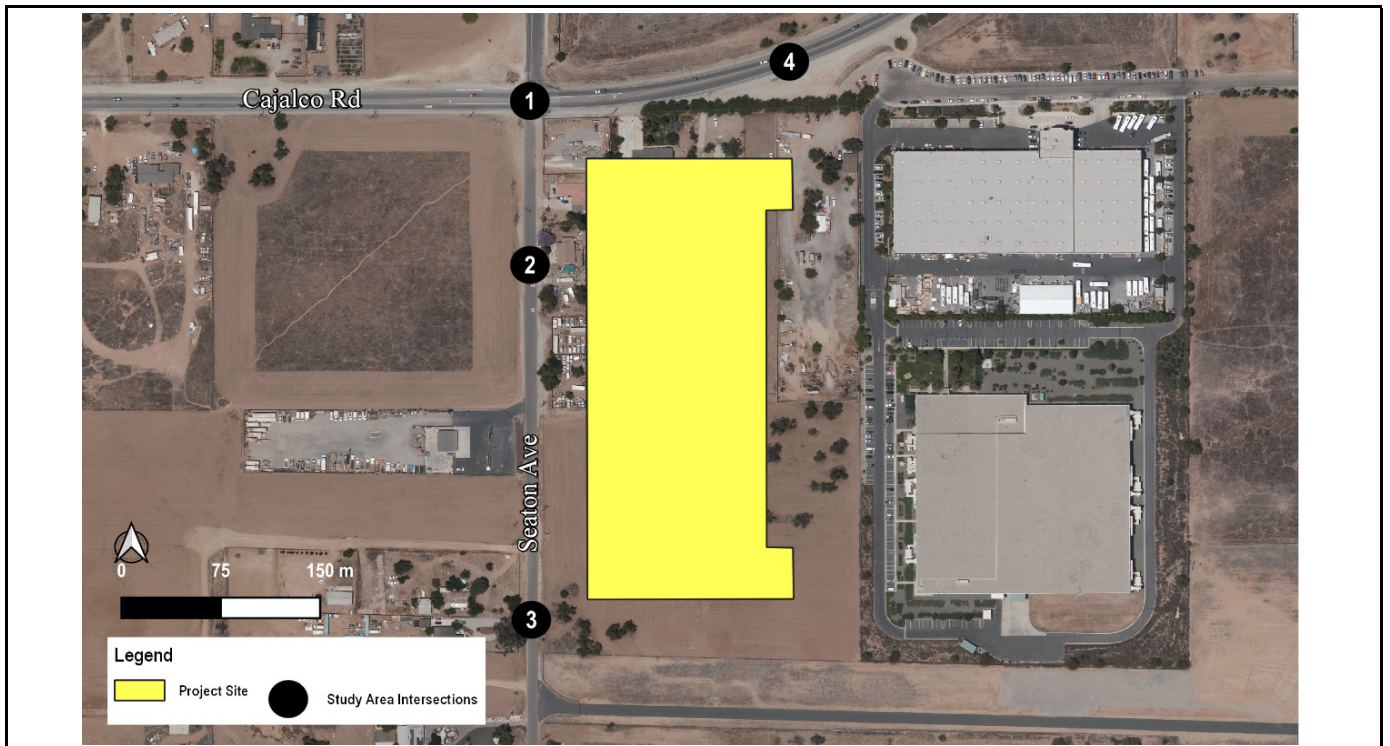


FIGURE 18

Legend



Signal



Improvements



Stop Sign

**Seaton Avenue and Cajalco Road High-Cube Warehouse
Project Completion and Cumulative With Improvements Lane Geometrics and Stop Control**



Table L: Cumulative Levels of Service

Intersection	LOS Std.	Control	With Project				Control	With Project With Improvements			
			AM Peak Hour		PM Peak Hour			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS
1 . Seaton Avenue/Cajalco Road	D	TWSC	>100	F *	>100	F *	Signal	23.8	C	28.8	C

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

Table M: Seaton Avenue Southbound Queue Analysis

Intersection	Movement	Storage Length (In Feet)	Pr. Comp. Conditions		Cumul. Conditions	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			Queue Length ¹	Queue Length ¹	Queue Length ¹	Queue Length ¹
2 . Seaton Avenue/Driveway 1	SBTL	260	Nominal	Nominal	Nominal	Nominal
3 . Seaton Avenue/Driveway 2	SBTL	650	Nominal	Nominal	Nominal	Nominal

Notes:

Bold = Exceeds storage length

¹Queues reported are 95th Percentile queue lengths per movement in feet.

included in Table M. As shown in Table M, the southbound through-left turn queues are minimal in the a.m. and peak hours at both project driveways on Seaton Avenue. Therefore, since the southbound left-turn queues and delays are minimal and the levels of service are satisfactory at both driveways, dedicated southbound left-turn lanes at both driveways are not required.

9.0 VEHICLE MILES TRAVELED (VMT) SCREENING ANALYSIS

The County Guidelines include VMT analysis methodologies, screening tools, and thresholds to address changes to CEQA pursuant to SB-743. Based on the County guidelines, significance thresholds for industrial developments are based on VMT per employee. The County has adopted the existing county-wide average Work VMT per employee as the threshold of significance for industrial projects. The existing county-wide average VMT/employee for industrial projects is 14.2 VMT/employee. A project would result in a significant project generated VMT impact if the project VMT exceeds 14.2 VMT/employee. The VMT/employee was calculated from the Riverside Transportation Analysis Model (RivTAM). The base “plus project” conditions VMT was derived from a full model run performed to isolate the VMT for the project. The total homebased work VMT is the sum of the internal and external homebased work VMT. Table N shows the baseline plus project VMT/employee. As shown in Table N, baseline plus project VMT/employee is 14.11 miles. Based on the County threshold, the project VMT/employee of 14.11 miles does not exceed the county-wide average VMT/employee of 14.2 miles. Therefore, the project does not create a significant VMT impact.

10.0 IMPACT CRITERIA FOR CEQA DETERMINATION

This section evaluates the CEQA checklist for impact evaluation.

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project is consistent with the County’s adopted plans and policies. The project would not conflict with adopted policies supporting alternative transportation modes. The project will not change roadway designations from those in the County’s General Plan. The project will also not result in removal of any of the facilities listed above. Therefore, the project impact is considered less than significant.

B. Conflict or be inconsistent with CEQA Guidelines 15064.3, subdivision (b)?

Based on the County threshold, the project VMT/employee of 14.11 miles does not exceed the county-wide average VMT/employee of 14.2 miles. Therefore, the project does not create a significant VMT impact.

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The design of driveways and other project access locations will be based on County Code, which sets the standard for such design. It is not anticipated that traffic hazards will increase, therefore, the project impact is considered less than significant.

D. Result in inadequate emergency access?

The proposed driveways will be designed in accordance with all applicable design and safety standards required by adopted fire codes, safety codes, and building codes established by the County’s Engineering and Fire Departments. The project will not increase delays on street segments substantially, therefore, the project will not result in inadequate emergency access, and the project impact is considered less than significant.

10.0 SUMMARY & CONCLUSIONS

The proposed project is forecast to generate 39 PCE trips during the a.m. peak hour, 42 PCE trips during the p.m. peak hour, and 715 daily PCE trips. With the implementation of the recommended improvements, all study intersections are forecast to operate at satisfactory levels of service. Based on the County threshold, the project VMT/employee of 14.11 miles does not exceed the county-wide average VMT/employee of 14.2 miles. Therefore, the project does not create a significant VMT impact.

Table N: Project VMT Per Employee

	2012 Neighboring Zone (3711)	2012 Project
Households	-	-
Total Employment	123	451
Total Population (a)	-	-
Total Trips (OD) (b)	500	1,589
External Trips (c)	2	5
% External Trips (d = c/b)	0.3%	0.3%
Total Attractions (PA) (e)	203	652
Homebased Work Attractions (PA) (f)	167	536
% Homebased Trips (g = f/e)	82%	82%
Homebased Work External Trips (h = c*g)		4.2
External Trip Length (TAZ 3711)(i) *		62.3
Homebased Work External VMT (j = h*i)		261
Homebased Work Internal VMT (k)		6,102
Homebased Work External VMT (j)		261
Total Homebased Work VMT (l = k+j)		6,363
VMT per employee (m = l/a)		14.11

*:Work (HBW) Trip Attractions Avg External Length obtained for adjacent zone (3711) using the "External_Average_Trip_Lengths.xlsx" obtained from the County of Riverside.

APPENDIX A: SCOPING AGREEMENT



translutions, inc.
 17632 Irvine Boulevard, Suite 200,
 Tustin, California 92780
 Phone (949)656-3131 Fax (949)445-3131
 solutions@translutions.com

June 4, 2021

Mr. Kevin Tsang, P.E.
 RCTLMA, Transportation Department
 4080 Lemon Street
 Riverside, California 92502



Focused traffic analysis & VMT
 analysis approved with comments
 on subsequent pages.

Subject: Seaton Avenue & Cajalco Road High-Cube Warehouse – Focused Traffic Analysis & VMT Analysis

Dear Kevin:

Translutions, Inc. (Translutions) is under contract to prepare a focused traffic study for the proposed Seaton Avenue and Cajalco Road High-Cube Warehouse in Riverside County. The project includes the construction of a warehouse facility consisting of 292,040 square feet of high-cube transload and short-term storage and 73,010 square feet of high-cube cold-storage uses. Figure 1 illustrates the site plan for the project.

The Riverside County Transportation Analysis Guidelines for Level of Service/Vehicle Miles Traveled (December 2020) include exemptions from level of service analysis. However, the County Transportation Department reserves the right to require a traffic impact analysis for any development regardless of size or type. Based on discussion with County Transportation staff, a focused traffic analysis will be required for the project. The following scope of work will be included in the focused traffic analysis.

TRIP GENERATION

Trip generation for the project is based on trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation (10th Edition) and are based on Land Use 154 "High-Cube Transload and Short-Term Storage Warehouse" and Land Use 157 High-Cube Cold Storage Warehouse". Further, the County Guidelines require projects that anticipate the generation of significant truck traffic convert all truck trips into passenger car equivalents (PCE). The truck trips were converted to PCEs using the conversion rates of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks and 3.0 for 4+ axle trucks. Table A shows a summary of the total project trip generation for both the high-cube transload, and short-term storage and high-cube cold storage uses. As shown in Table A, the total project is anticipated to generate 31 total trips during the a.m. peak hour, 37 total trips during the p.m. peak hour, and 564 total daily trips. After converting to PCEs, the total project is anticipated to generate 43 PCE trips during the a.m. peak hour, 44 PCE trips during the p.m. peak hour, and 746 daily PCE trips. Table B shows the breakdown of the trip generation for the high-cube transload and short-term storage use. Table C shows the breakdown of the trip generation for the high-cube cold-storage use.

PROJECT TRIP ASSIGNMENT AND STUDY AREA

Project trip distribution patterns for the proposed project were developed based on the location of regional and local destinations. Figures 2 and 3 illustrate the total project trip distribution and the resulting project trips at the proposed study intersections The operational analysis of the following intersections are proposed:

1. Seaton Avenue/ Cajalco Road.
2. Seaton Avenue/Driveway 1.
3. Seaton Avenue/Driveway 2.

ANALYSIS SCENARIOS

Translutions proposes to analyze the a.m. and p.m. peak hour traffic operations at the above intersections under the following scenarios:

- Existing conditions.
- Project Completion conditions (Existing plus Ambient Growth plus Project).
- Cumulative Conditions (Existing plus Ambient Growth plus Cumulative Projects).

Per phone call with Robert at
 Translutions, build year is 2023.

EXISTING AND FORECAST TRAFFIC VOLUMES

Traffic counts will be collected at the proposed study area intersection. However due to current traffic conditions from the Covid-19 pandemic, it is anticipated that the counts will be compared to historical counts to determine if a growth factor may need to be applied to the current counts.

Project completion traffic volumes will be developed through application of growth rates to existing traffic volumes and adding project trips. An ambient growth rate of 2 percent will be applied per annum based on County guidelines. Cumulative traffic volumes will be developed by adding traffic generated by other approved projects to the project completion traffic volumes.

LEVEL OF SERVICE METHODOLOGY

Traffic volumes obtained above will be used to calculate levels of service at the study intersections, Level of service calculations will be conducted using Synchro 11.0 software, which follows HCM methodologies. Translutions would also like to request an updated list of cumulative projects in the vicinity of this project from the County to develop cumulative traffic volumes.

VMT ANALYSIS

The County of Riverside guidelines include VMT screening tools to determine if a presumption of a non-significant transportation impact can be made on the facts of the project. The screening tools include several criteria including a screening criterion for projects whose GHG emissions are less than 3,000 Metric Tons of Carbon Dioxide Equivalent. If the project does not screen out using this criterion, a full VMT analysis will be conducted consistent with the County VMT guidelines.

I would appreciate it if you could review the scope of the analysis outlined in this letter and the accompanying figures. Please let me know whether the City has any comments on the trip generation, trip distribution, or the proposed study area, as well as any specific issues that it wants the traffic study to address. Finally, if the City is aware of any other approved or pending projects in the vicinity of this project, I would appreciate receiving information on those projects so that we may include trips generated by those projects in the study.

Thank you for your assistance in this matter. I can be reached at (949) 656-3131 or by email at sandipan@translutions.com.

Sincerely,

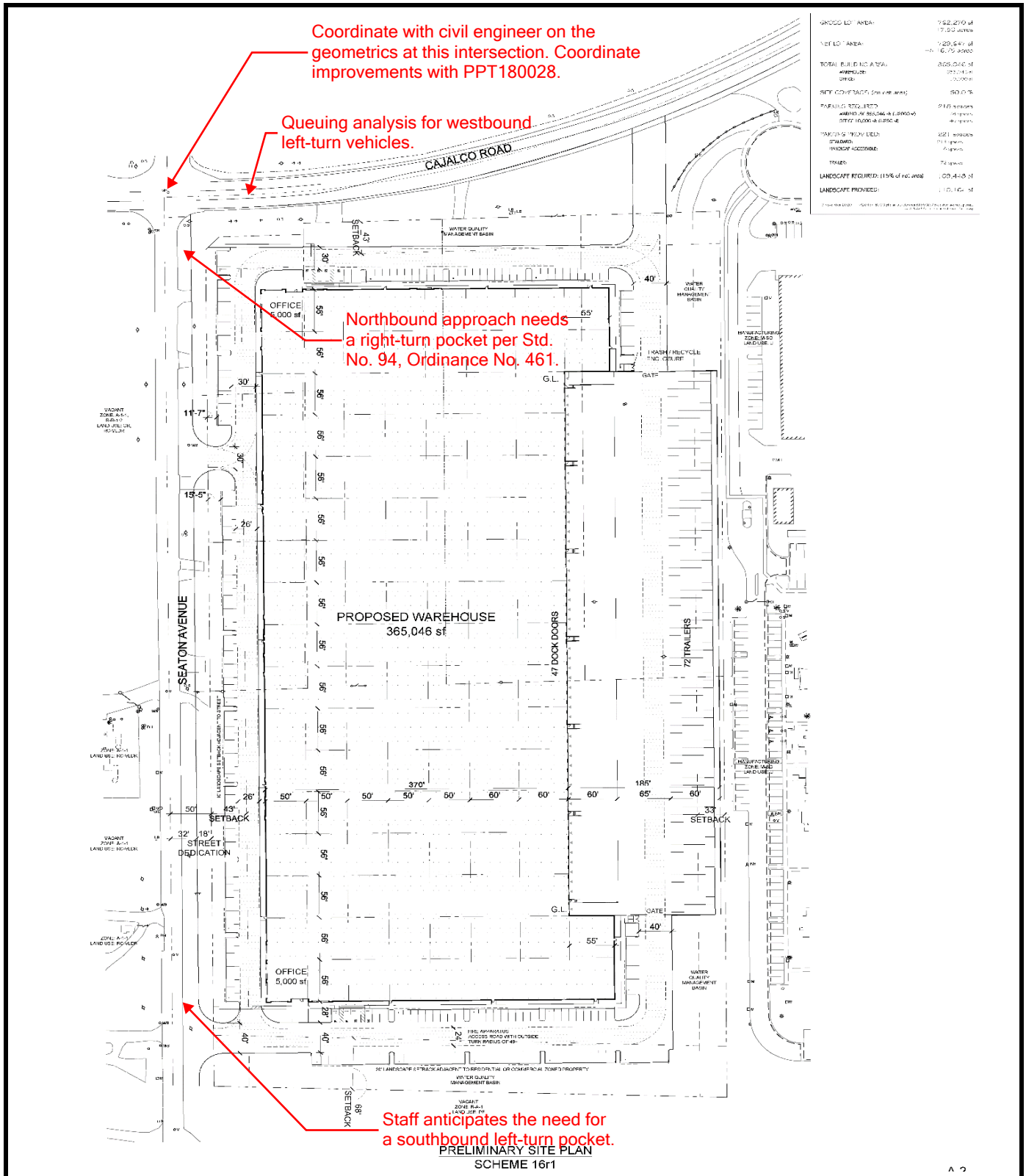
County

translutions, Inc.



Sandipan Bhattacharjee, P.E., T.E., AICP, ENV SP
Principal

- Attachments:
- Figure 1 – Site Plan
 - Table A – Project Trip Generation
 - Figure 2 – Project Trip Distribution (Autos)
 - Figure 3 – Project Trip Assignment (Autos)
 - Figure 4 – Project Trip Distribution (Trucks)
 - Figure 5 – Project Trip Distribution (Trucks)
 - Figure 6 – Total Project Trip Assignment



Source: Carlile Coatsworth Architects, Inc. (November 12, 2020).

FIGURE 1

Seaton Avenue and Cajalco Road High-Cube Warehouse Preliminary Site Plan



Table A: Total Project Trip Generation

Land Use	Units	Peak Hour						Daily	
		AM Peak Hour			PM Peak Hour				
		In	Out	Total	In	Out	Total		
Total Project Trip Generation (Trips, By Vehicle Type)									
Warehouse	292.040	TSF							
Passenger Cars			16	2	18	7	19	26	345
2-Axle Trucks			0	1	1	0	0	0	11
3-Axle Trucks			0	1	1	1	0	1	15
4+ Axle Trucks			2	2	4	1	1	2	39
All Trucks			2	4	6	2	1	3	65
Total Vehicles			18	6	24	9	20	29	410
Cold Storage Warehouse	73.010	TSF							
Passenger Cars			6	0	6	3	4	7	100
2-Axle Trucks			0	0	0	0	0	0	9
3-Axle Trucks			0	0	0	0	0	0	12
4+ Axle Trucks			0	1	1	0	1	1	33
All Trucks			0	1	1	0	1	1	54
Total Vehicles			6	1	7	3	5	8	154
Entire Project	365.050	TSF							
Passenger Cars			22	2	24	10	23	33	445
2-Axle Trucks			0	1	1	0	0	0	20
3-Axle Trucks			0	1	1	1	0	1	27
4+ Axle Trucks			2	3	5	1	2	3	72
All Trucks			2	5	7	2	2	4	119
Total Vehicles			24	7	31	12	25	37	564
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)									
Passenger Cars			22	2	24	10	23	33	445
Truck PCE									
2-Axle Trucks			0	2	2	0	0	0	31
3-Axle Trucks			0	2	2	2	0	2	54
4+ Axle Trucks			6	9	15	3	6	9	216
Total Truck PCE			6	13	19	5	6	11	301
Total PCE			28	15	43	15	29	44	746

¹ Rates based on Land Use 154 & 157 - from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table B: Project Trip Generation (High-Cube Transload and Short-Term Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
PCE Inbound/Outbound Splits		69%	31%	100%	31%	69%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		84.09%	44.57%	75.00%	83.21%	92.64%	90.00%	84.29%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks								
Recommended Mix (%) ²		2.69%	9.39%	4.23%	2.84%	1.25%	1.69%	2.66%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.002	0.003	0.005	0.001	0.001	0.003	0.056
3-Axle Trucks								
Recommended Mix (%) ²		3.61%	12.59%	5.68%	3.81%	1.67%	2.27%	3.57%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.004	0.005	0.009	0.002	0.002	0.005	0.100
4-Axle Trucks								
Recommended Mix (%) ²		9.60%	33.46%	15.09%	10.13%	4.44%	6.04%	9.48%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.018	0.018	0.036	0.009	0.010	0.018	0.398
Warehouse Net PCE Rate		0.076	0.034	0.110	0.035	0.080	0.115	1.734
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	292.040 TSF							
Passenger Cars		16	2	18	7	19	26	345
2-Axle Trucks		0	1	1	0	0	0	11
3-Axle Trucks		0	1	1	1	0	1	15
4+ Axle Trucks		2	2	4	1	1	2	39
All Trucks		2	4	6	2	1	3	65
Total Vehicles		18	6	24	9	20	29	410
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars		16	2	18	7	19	26	345
Truck PCE								
2-Axle Trucks		0	2	2	0	0	0	17
3-Axle Trucks		0	2	2	2	0	2	30
4+ Axle Trucks		6	6	12	3	3	6	117
Total Truck PCE		6	10	16	5	3	8	164
Total PCE		22	12	34	12	22	34	509

¹ Rates based on Land Use 154 - "High-Cube Transload and Short-Term Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table C: Project Trip Generation (High-Cube Cold Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.089	0.021	0.110	0.047	0.073	0.120	2.120
PCE Inbound/Outbound Splits		72%	28%	100%	41%	59%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		83.16%	28.23%	72.73%	70.51%	77.87%	75.00%	64.62%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.074	0.006	0.080	0.033	0.057	0.090	1.370
2-Axle Trucks								
Recommended Mix (%) ²		2.85%	12.15%	4.62%	4.99%	3.75%	4.23%	5.99%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.004	0.004	0.008	0.004	0.004	0.008	0.191
3-Axle Trucks								
Recommended Mix (%) ²		3.82%	16.30%	6.19%	6.70%	5.03%	5.68%	8.03%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.007	0.007	0.014	0.006	0.007	0.014	0.341
4-Axle Trucks								
Recommended Mix (%) ²		10.16%	43.32%	16.46%	17.80%	13.36%	15.09%	21.35%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.027	0.027	0.054	0.025	0.029	0.054	1.358
Warehouse Net PCE Rate		0.112	0.044	0.156	0.068	0.098	0.166	3.259
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	73.010	TSF						
Passenger Cars			6	0	6	3	4	7
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	1	1	0	1	1
All Trucks			0	1	1	0	1	1
Total Vehicles			6	1	7	3	5	8
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars			6	0	6	3	4	7
Truck PCE								
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	3	3	0	3	3
Total Truck PCE			0	3	3	0	3	3
Total PCE			6	3	9	3	7	10

¹ Rates based on Land Use 157 - "High-Cube Cold Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

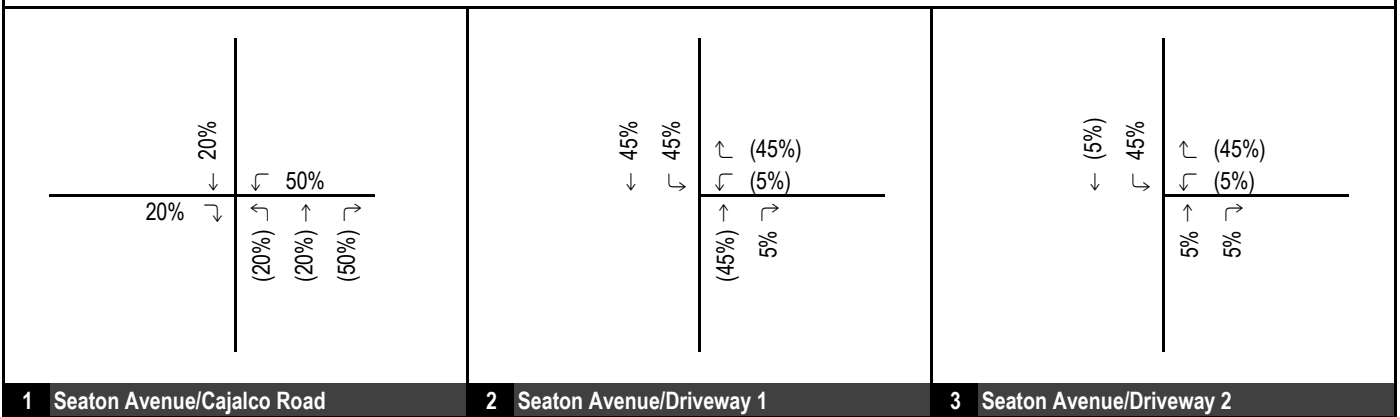
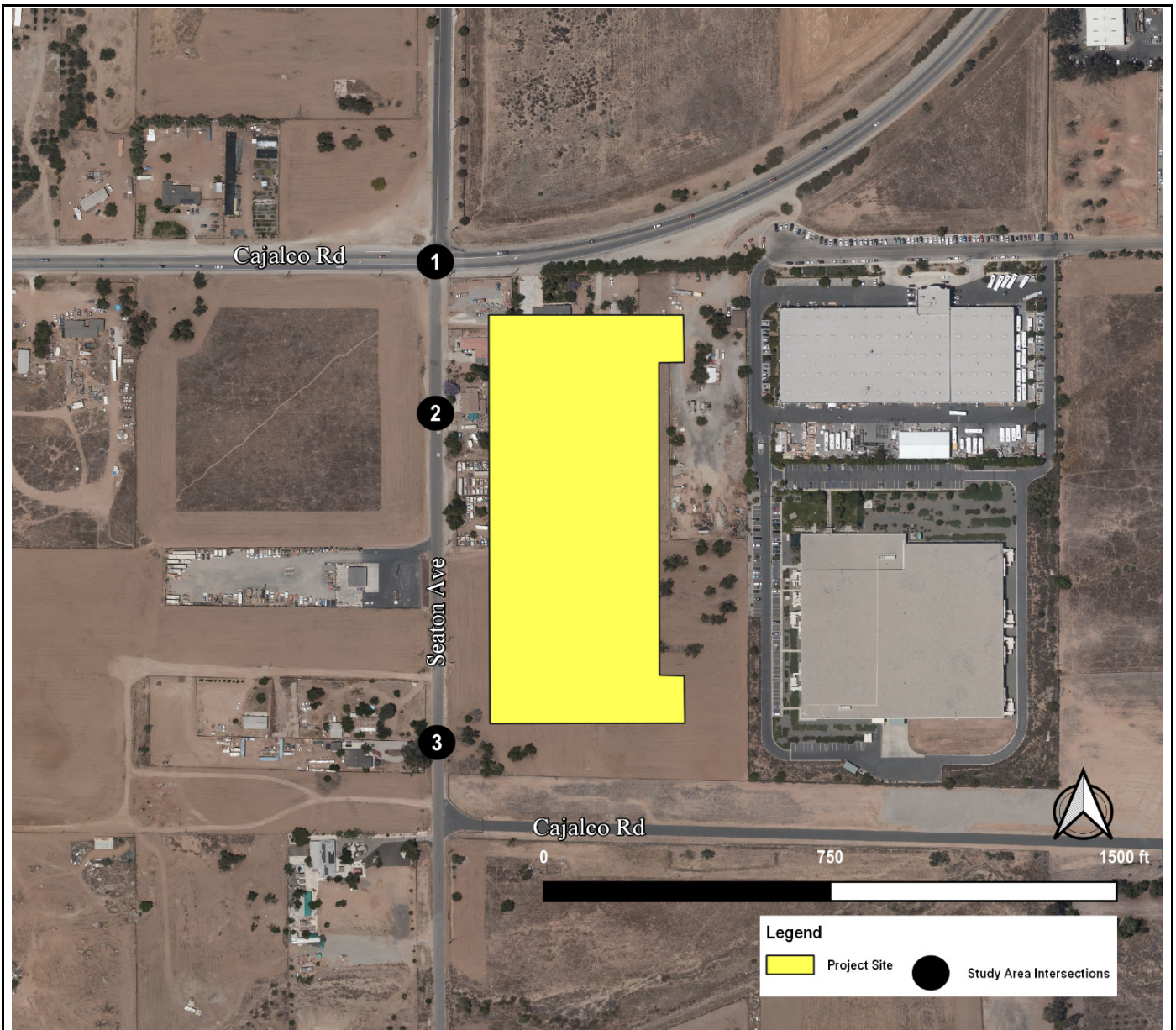


FIGURE 2

XXX%(YYY%) Inbound%(Outbound%) Percent

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Distribution (Autos)



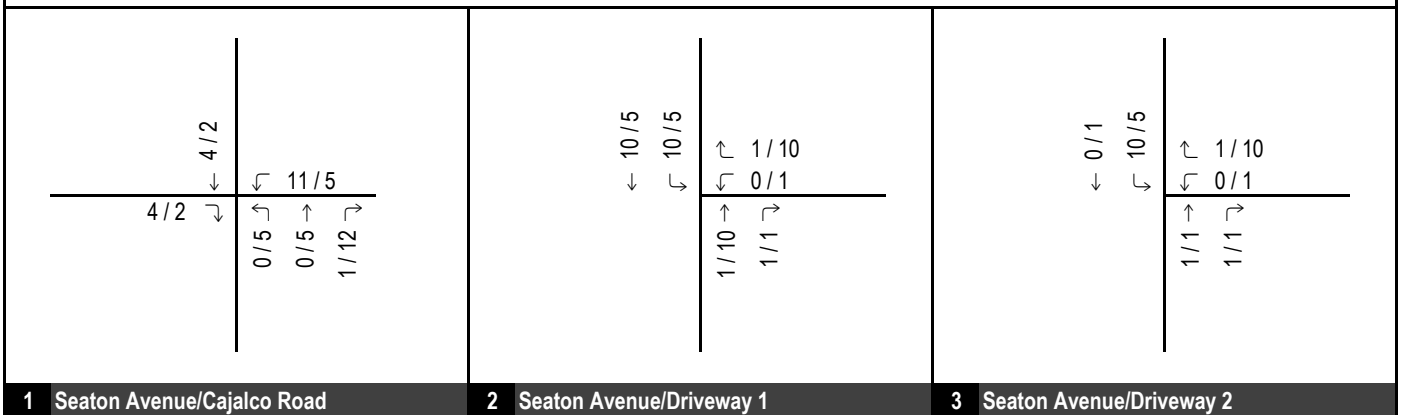
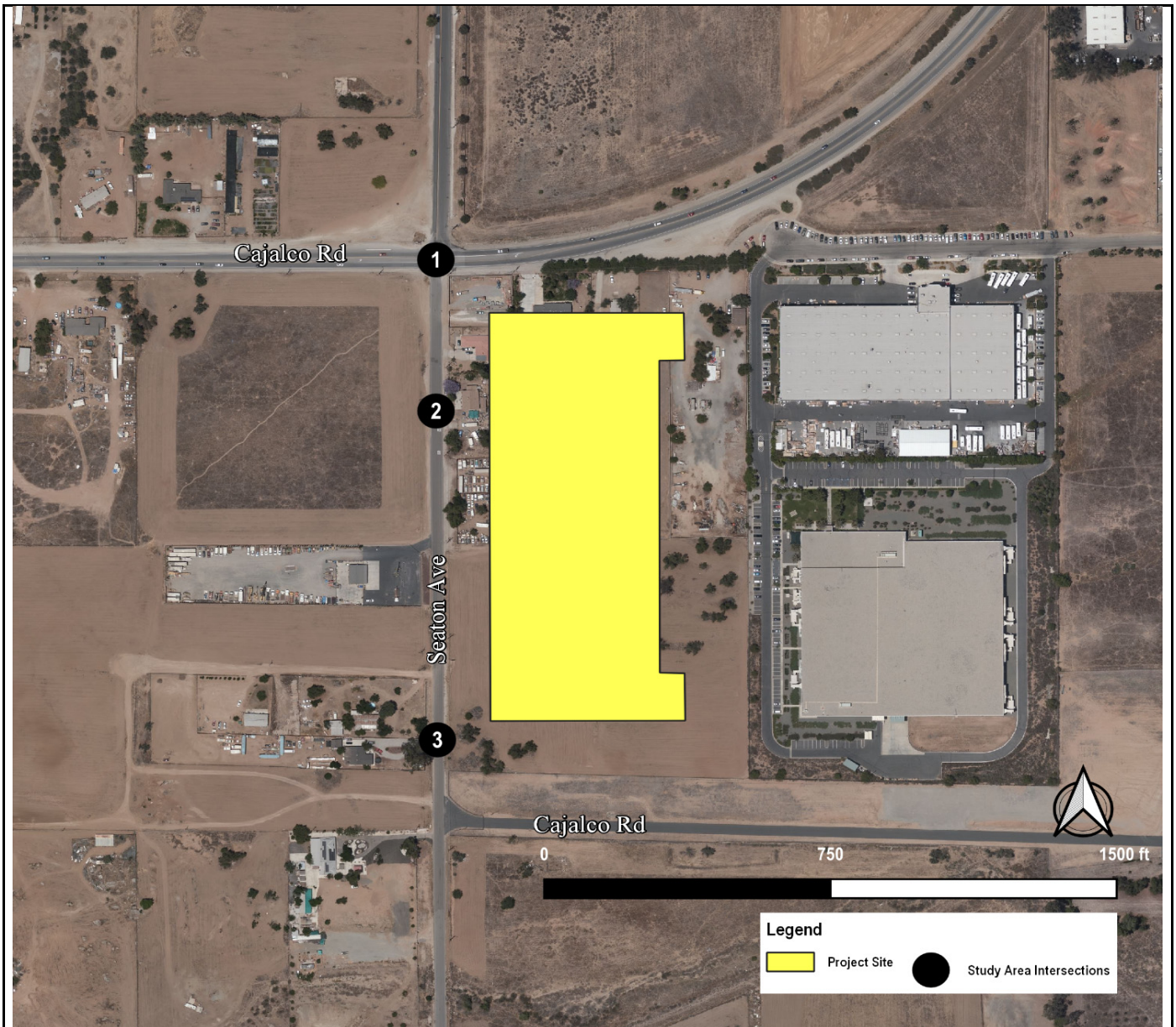


FIGURE 3

XXX / YYY AM / PM Peak Hour Trips



Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Assignment (Autos)

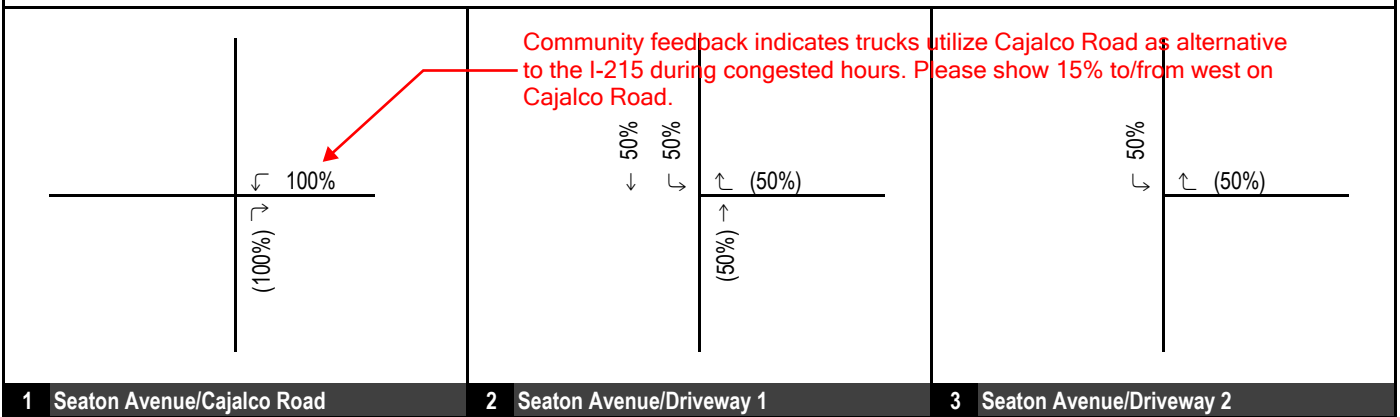
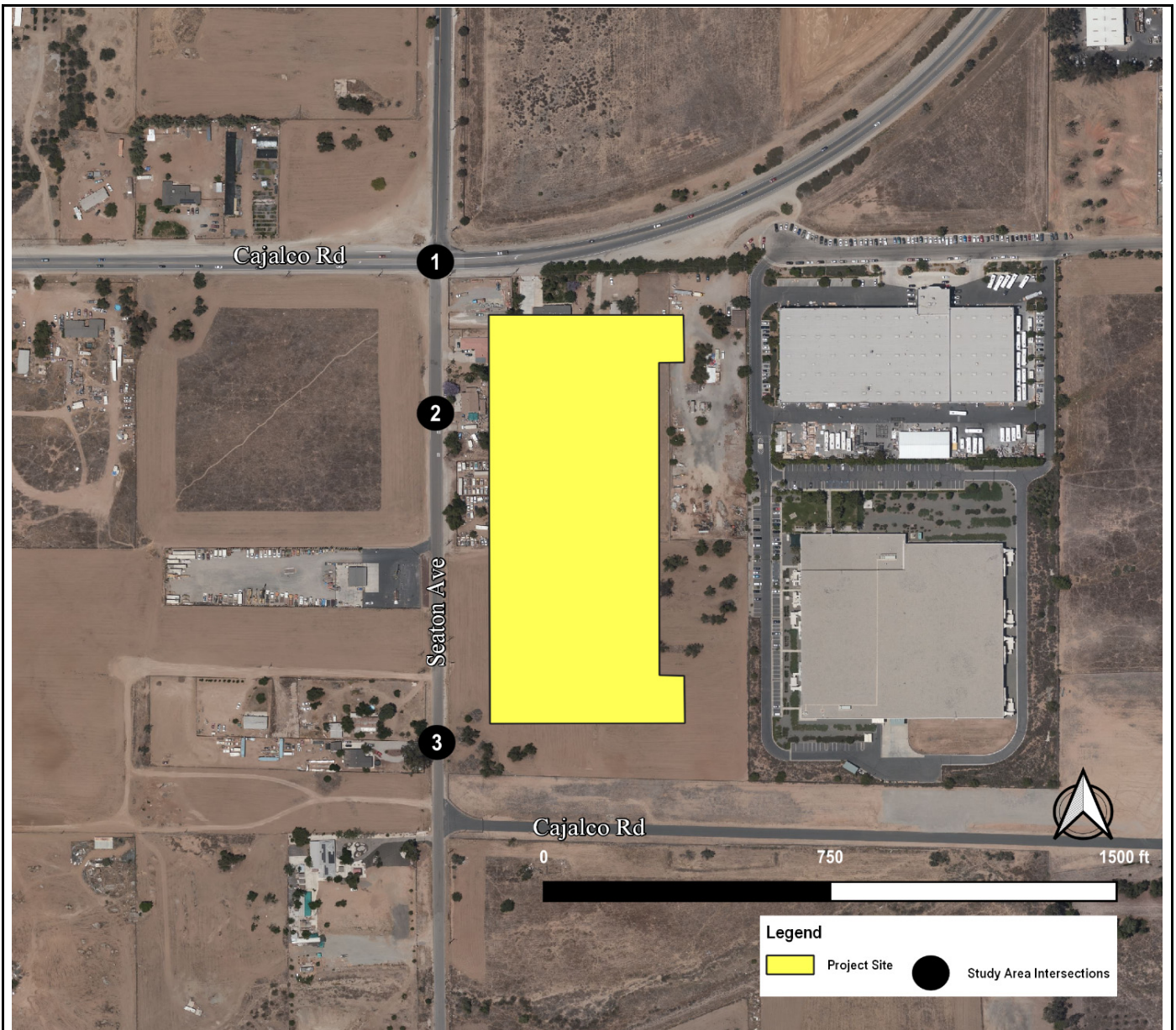


FIGURE 4

XXX%(YYY%) Inbound%(Outbound%) Percent

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Distribution (Trucks)



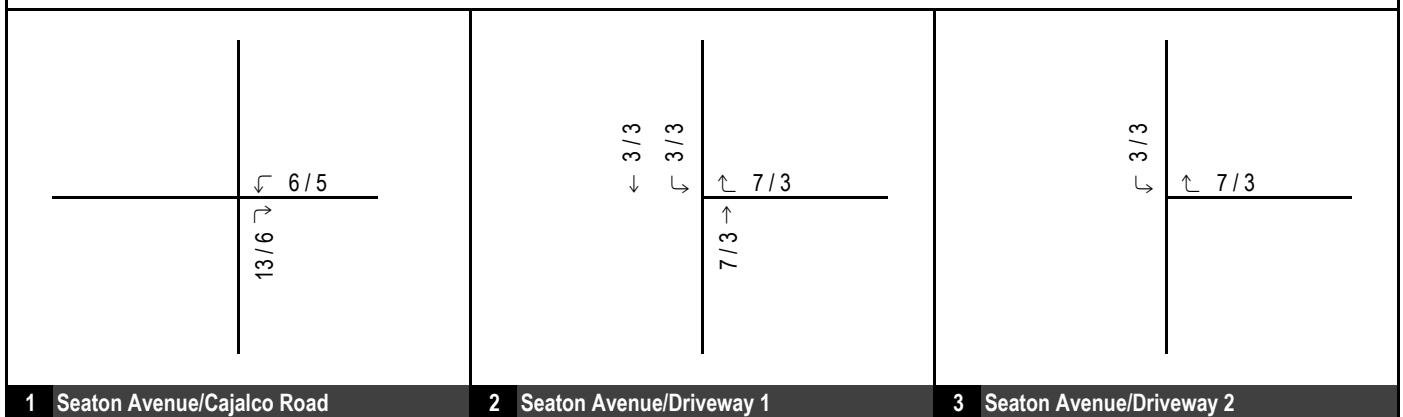
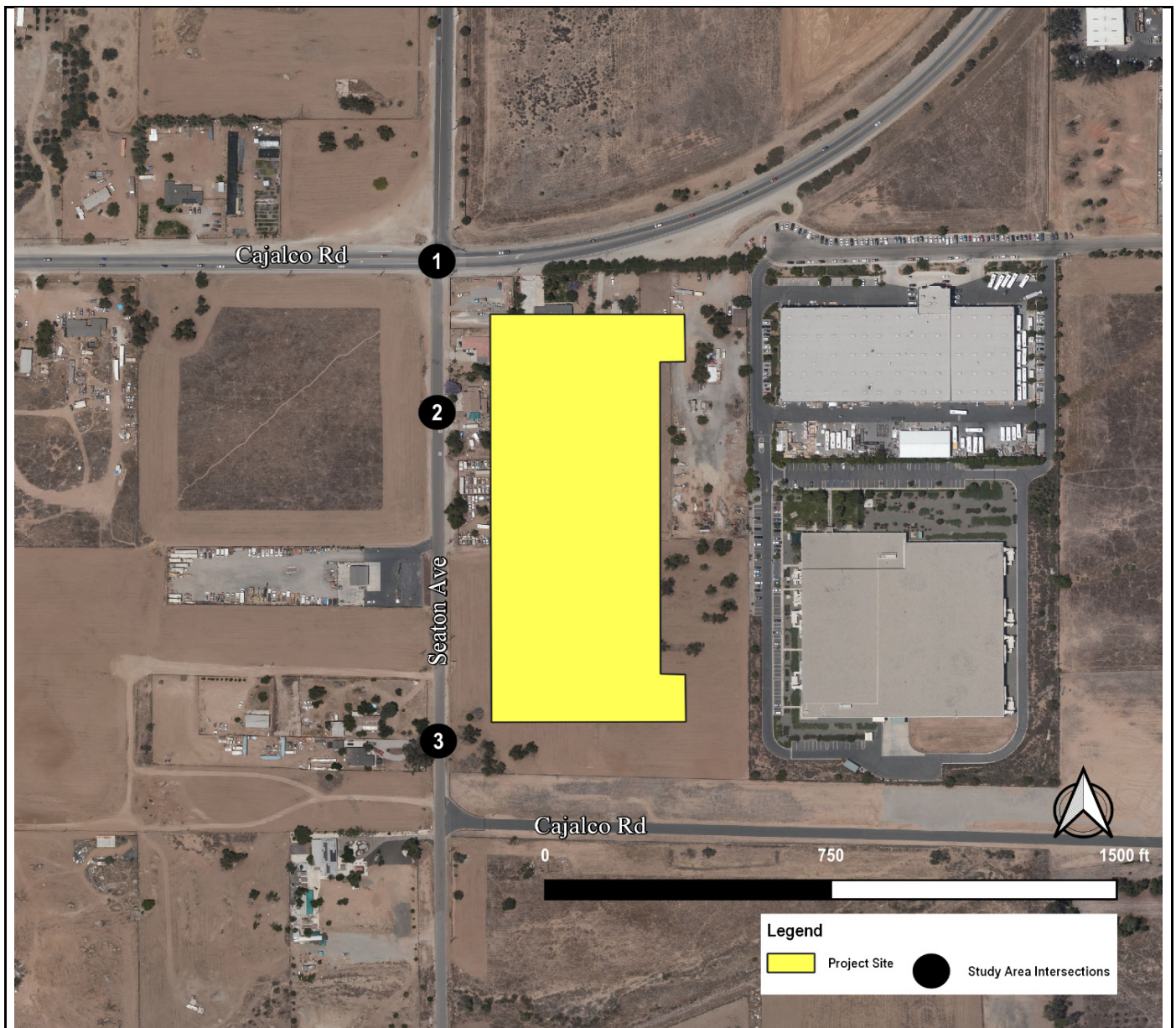


FIGURE 5

XXX / YYY AM / PM Peak Hour Trips



Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Assignment (Trucks)

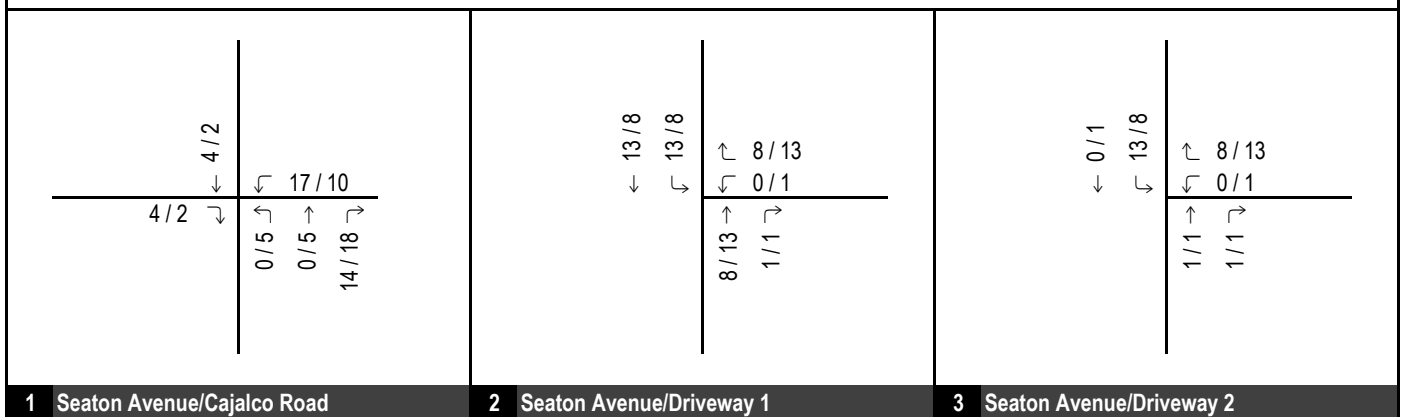
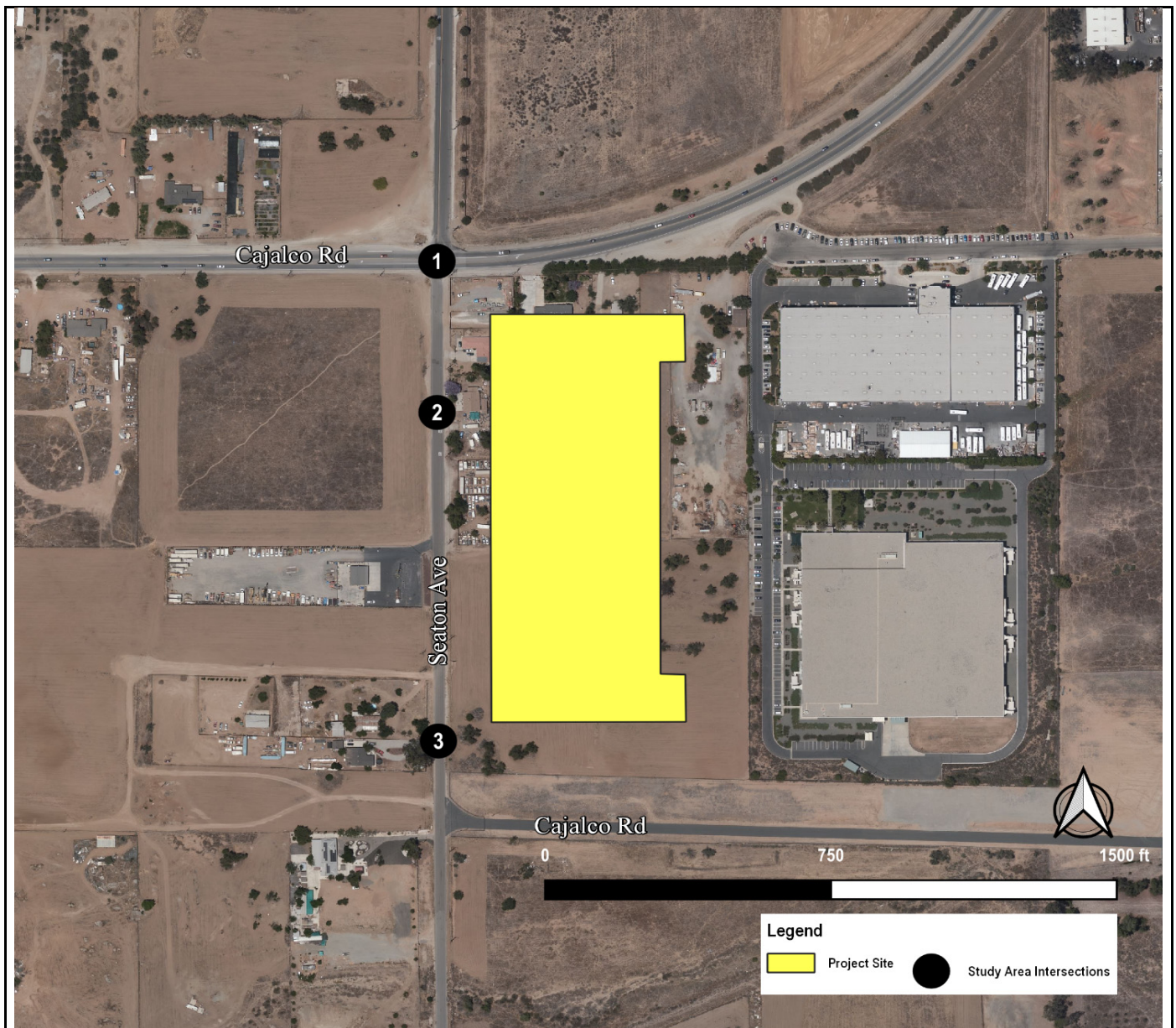


FIGURE 6

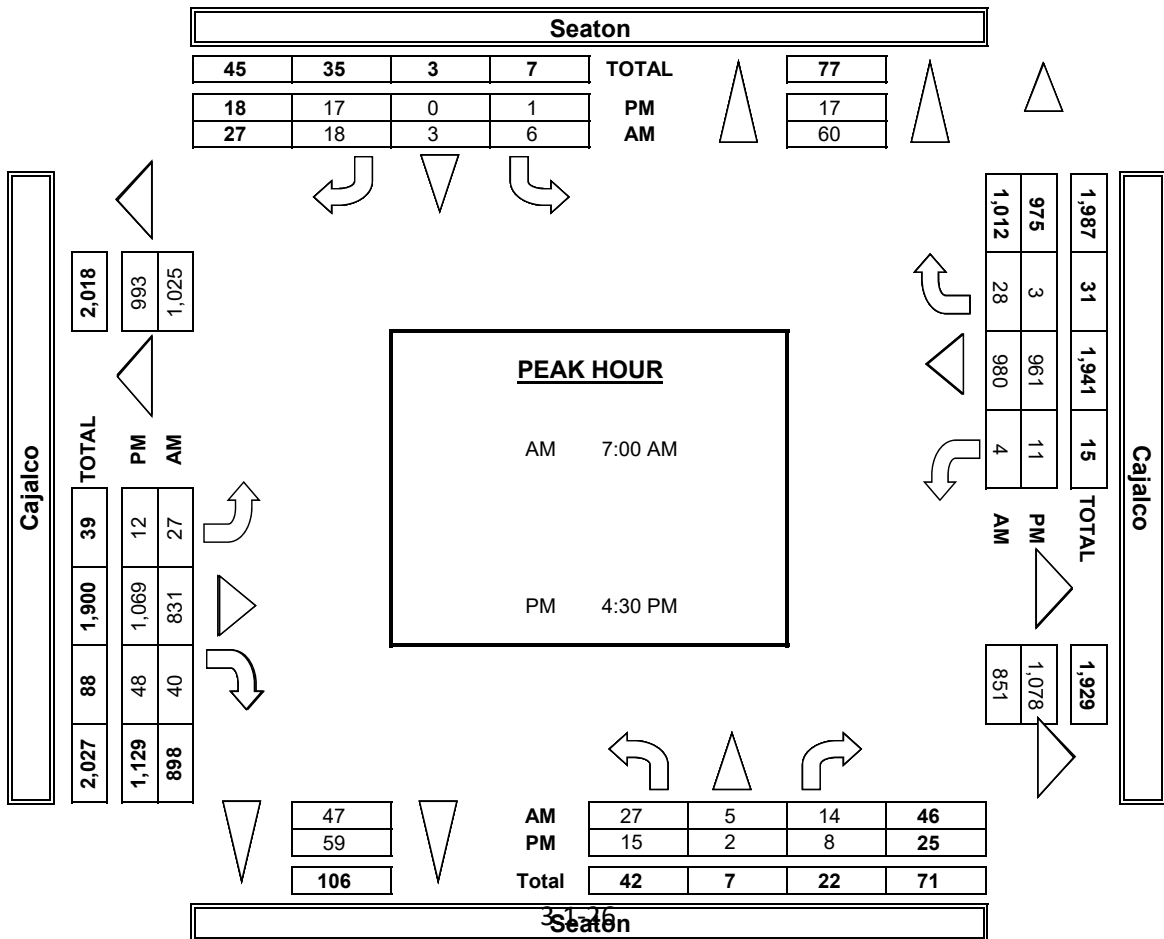
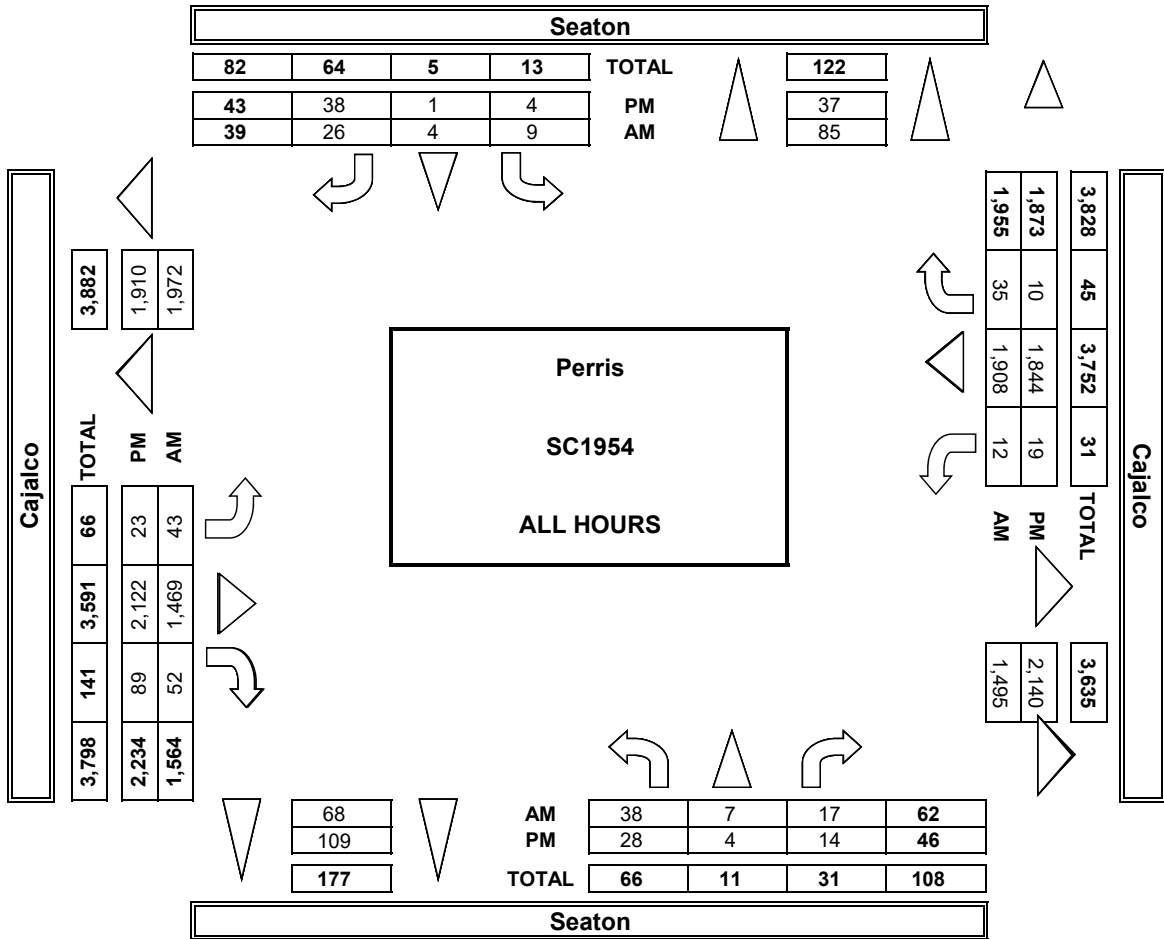
XXX / YYY AM / PM Peak Hour Trips



Seaton Avenue and Cajalco Road High-Cube Warehouse
Total Project Trip Assignment

APPENDIX B: TRAFFIC COUNTS

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 10/23/18 TUESDAY	LOCATION:	Perris	PROJECT #:	SC1954
	NORTH & SOUTH:	Seaton	LOCATION #:	4
	EAST & WEST:	Cajalco	CONTROL:	STOP N/S

CLASS 1: PASSENGER VEHICLES	NOTES:	AM	▲	▶
		PM	▲	▶
		MD	◀	W
		OTHER	S	▶
		OTHER		

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

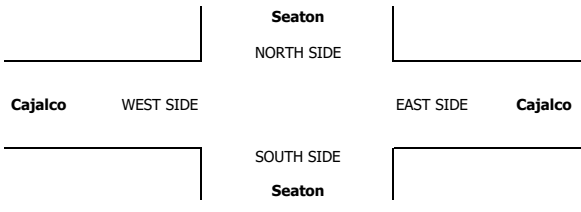
U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR X	SRR X	ERR X	WRR X

7:00 AM	7	0	4	1	0	4	3	156	5	0	267	5	452
7:15 AM	9	2	2	2	0	0	2	159	10	0	205	10	401
7:30 AM	7	0	4	1	1	8	12	209	8	2	215	8	475
7:45 AM	2	1	3	2	1	4	8	224	16	1	177	2	441
8:00 AM	3	0	0	1	1	4	6	147	4	0	233	5	404
8:15 AM	2	1	2	1	0	2	3	140	7	1	215	1	375
8:30 AM	1	1	0	1	0	1	3	135	1	0	195	1	339
8:45 AM	3	0	0	0	0	1	2	129	0	2	145	0	282
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	34	5	15	9	3	24	39	1,299	51	6	1,652	32	3,169
APPROACH %	63%	9%	28%	25%	8%	67%	3%	94%	4%	0%	98%	2%	
APP/DEPART	54	/	76	36	/	60	1,389	/	1,323	1,690	/	1,710	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	25	3	13	6	2	16	25	748	39	3	864	25	1,769
APPROACH %	61%	7%	32%	25%	8%	67%	3%	92%	5%	0%	97%	3%	
PEAK HR FACTOR	0.788			0.600			0.819			0.820			0.931
APP/DEPART	41	/	53	24	/	44	812	/	767	892	/	905	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	8	1	0	1	0	6	1	222	12	1	221	1	474
4:15 PM	0	1	1	0	0	2	0	228	9	3	220	2	466
4:30 PM	2	0	1	0	0	4	1	228	7	1	221	0	465
4:45 PM	2	2	2	0	0	3	1	254	9	1	212	1	487
5:00 PM	7	0	4	0	0	5	4	238	14	3	253	1	529
5:15 PM	4	0	0	1	0	1	3	251	16	5	214	1	496
5:30 PM	0	0	1	1	0	7	3	259	9	1	165	2	448
5:45 PM	3	0	2	0	1	5	4	247	9	1	211	0	483
VOLUMES	26	4	11	3	1	33	17	1,927	85	16	1,717	8	3,848
APPROACH %	63%	10%	27%	8%	3%	89%	1%	95%	4%	1%	99%	0%	
APP/DEPART	41	/	29	37	/	102	2,029	/	1,941	1,741	/	1,776	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	15	2	7	1	0	13	9	971	46	10	900	3	1,977
APPROACH %	63%	8%	29%	7%	0%	93%	1%	95%	4%	1%	99%	0%	
PEAK HR FACTOR	0.545			0.700			0.950			0.888			0.934
APP/DEPART	24	/	14	14	/	56	1,026	/	979	913	/	928	0

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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 10/23/18 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Seaton Cajalco	PROJECT #: LOCATION #: CONTROL:	SC1954 4 STOP N/S
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM		▲ N	
		PM	◀ W		E ▶
		MD		S	
		OTHER		▼	

LANES:	NORTHBOUND <small>Seaton</small>			SOUTHBOUND <small>Seaton</small>			EASTBOUND <small>Cajalco</small>			WESTBOUND <small>Cajalco</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR

7:00 AM	2	0	0	0	0	1	1	11	0	0	19	1	35
7:15 AM	0	0	0	0	1	0	0	20	0	0	24	1	46
7:30 AM	0	0	0	0	0	1	0	16	0	0	14	1	32
7:45 AM	0	0	0	0	0	0	0	10	1	0	15	0	26
8:00 AM	0	0	0	0	0	0	0	14	0	1	22	0	37
8:15 AM	0	0	0	0	0	0	1	12	0	0	27	0	40
8:30 AM	0	0	0	0	0	0	0	10	0	0	21	0	31
8:45 AM	1	0	0	0	0	0	0	12	0	0	18	0	31
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

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VOLUMES	3	0	0	0	1	2	2	105	1	1	160	3	278
APPROACH %	100%	0%	0%	0%	33%	67%	2%	97%	1%	1%	98%	2%	
APP/DEPART	3	/	5	3	/	3	108	/	105	164	/	165	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	0	0	0	0	1	1	0	60	1	1	75	2	141
APPROACH %	0%	0%	0%	0%	50%	50%	0%	98%	2%	1%	96%	3%	
PEAK HR FACTOR	0.000			0.500			0.763			0.780			0.766
APP/DEPART	0	/	2	2	/	3	61	/	60	78	/	76	0

0	0	0	0
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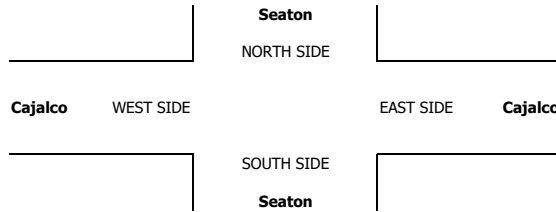
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	1	0	0	0	1	20	0	0	8	0	31
4:15 PM	0	0	0	0	0	0	0	23	0	0	16	1	40
4:30 PM	0	0	0	0	0	1	0	14	0	0	11	0	26
4:45 PM	0	0	0	0	0	0	0	18	2	0	6	0	26
5:00 PM	0	0	0	0	0	2	0	16	0	0	13	0	31
5:15 PM	0	0	0	0	0	1	0	23	0	0	9	0	33
5:30 PM	0	0	0	0	0	0	2	19	1	0	9	0	31
5:45 PM	0	0	0	0	0	1	0	12	0	0	9	1	23

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VOLUMES	1	0	1	0	0	5	3	145	3	0	81	2	241
APPROACH %	50%	0%	50%	0%	0%	100%	2%	96%	2%	0%	98%	2%	
APP/DEPART	2	/	5	5	/	3	151	/	146	83	/	87	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	0	0	0	3	0	71	2	0	46	1	123
APPROACH %	0%	0%	0%	0%	0%	100%	0%	97%	3%	0%	98%	2%	
PEAK HR FACTOR	0.000			0.375			0.793			0.691			0.769
APP/DEPART	0	/	1	3	/	2	73	/	71	47	/	49	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 10/23/18 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Seaton Cajalco	PROJECT #: LOCATION #: CONTROL:	SC1954 4 STOP N/S
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N S ▼	◀ W E ▶
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LANES:	NORTHBOUND <small>Seaton</small>			SOUTHBOUND <small>Seaton</small>			EASTBOUND <small>Cajalco</small>			WESTBOUND <small>Cajalco</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR

AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	5
	7:15 AM	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
	7:30 AM	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
	7:45 AM	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5
	8:00 AM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
	8:15 AM	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
	8:30 AM	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
	8:45 AM	0	0	1	0	0	0	1	4	0	1	3	0	0	0	10
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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VOLUMES	0	0	1	0	0	0	1	20	0	1	16	0	39
APPROACH %	0%	0%	100%	0%	0%	0%	5%	95%	0%	6%	94%	0%	
APP/DEPART	1	/	1	0	/	1	21	/	21	17	/	16	0
BEGIN PEAK HR	8:00 AM												
VOLUMES	0	0	1	0	0	0	1	10	0	1	8	0	21
APPROACH %	0%	0%	100%	0%	0%	0%	9%	91%	0%	11%	89%	0%	
PEAK HR FACTOR	0.250			0.000			0.550			0.563			0.525
APP/DEPART	1	/	1	0	/	1	11	/	11	9	/	8	0

0	0	0	0
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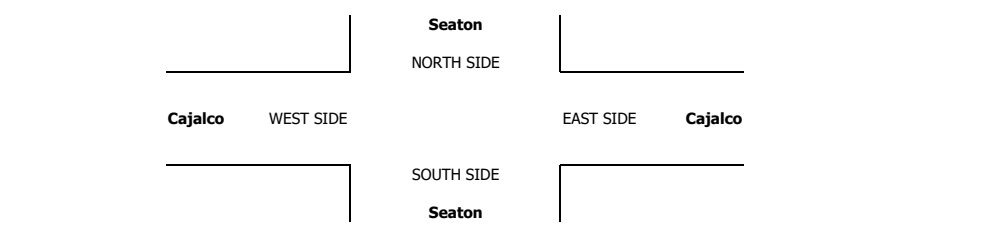
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	2	0	0	3	0	5
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	1	1	0	1	2	6
	4:45 PM	0	0	0	0	0	0	2	0	0	0	0	2
	5:00 PM	0	0	0	0	0	0	1	1	0	0	1	3
	5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2
	5:30 PM	0	0	0	1	0	0	0	0	0	3	0	4
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

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VOLUMES	0	0	1	1	0	0	2	6	0	1	11	0	22
APPROACH %	0%	0%	100%	100%	0%	0%	25%	75%	0%	8%	92%	0%	
APP/DEPART	1	/	2	1	/	1	8	/	8	12	/	11	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	1	0	0	0	2	4	0	1	5	0	13
APPROACH %	0%	0%	100%	0%	0%	0%	33%	67%	0%	17%	83%	0%	
PEAK HR FACTOR	0.250			0.000			0.750			0.500			0.542
APP/DEPART	1	/	2	0	/	1	6	/	5	6	/	5	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 10/23/18 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Seaton Cajalco	PROJECT #: LOCATION #: CONTROL:	SC1954 4 STOP N/S
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
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LANES:	NORTHBOUND <small>Seaton</small>			SOUTHBOUND <small>Seaton</small>			EASTBOUND <small>Cajalco</small>			WESTBOUND <small>Cajalco</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR

7:00 AM	0	0	0	0	0	0	0	3	0	0	7	0	10
7:15 AM	0	0	1	0	0	0	0	4	0	0	7	0	12
7:30 AM	0	2	0	0	0	0	0	5	0	0	6	0	13
7:45 AM	0	0	0	0	0	0	1	2	0	1	10	0	14
8:00 AM	0	0	0	0	0	0	0	6	0	0	10	0	16
8:15 AM	0	0	0	0	0	0	0	9	0	0	12	0	21
8:30 AM	0	0	0	0	0	0	0	2	0	2	10	0	14
8:45 AM	0	0	0	0	0	0	0	5	0	0	8	0	13
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

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VOLUMES	0	2	1	0	0	0	1	36	0	3	70	0	113
APPROACH %	0%	67%	33%	0%	0%	0%	3%	97%	0%	4%	96%	0%	
APP/DEPART	3	/	3	0	/	3	37	/	37	73	/	70	0
BEGIN PEAK HR	7:45 AM												
VOLUMES	0	0	0	0	0	0	1	19	0	3	42	0	65
APPROACH %	0%	0%	0%	0%	0%	0%	5%	95%	0%	7%	93%	0%	
PEAK HR FACTOR	0.000			0.000			0.556			0.938			0.774
APP/DEPART	0	/	1	0	/	3	20	/	19	45	/	42	0

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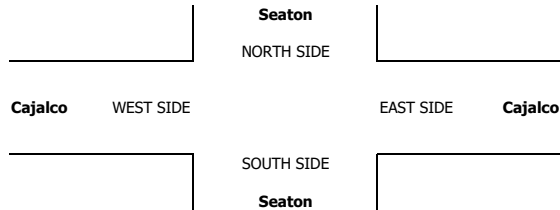
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03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	5	1	0	4	0	10
4:15 PM	0	0	1	0	0	0	0	7	0	0	4	0	12
4:30 PM	0	0	0	0	0	0	0	8	0	0	9	0	17
4:45 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
5:00 PM	0	0	0	0	0	0	1	2	0	0	2	0	5
5:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
5:30 PM	0	0	0	0	0	0	0	4	0	1	3	0	8
5:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
VOLUMES	0	0	1	0	0	0	1	34	1	1	29	0	67
APPROACH %	0%	0%	100%	0%	0%	0%	3%	94%	3%	3%	97%	0%	
APP/DEPART	1	/	1	0	/	2	36	/	35	30	/	29	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	1	0	0	0	0	23	1	0	19	0	44
APPROACH %	0%	0%	100%	0%	0%	0%	0%	96%	4%	0%	100%	0%	
PEAK HR FACTOR	0.250			0.000			0.750			0.528			0.647
APP/DEPART	1	/	0	0	/	1	24	/	24	19	/	19	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



APPENDIX C: VOLUME DEVELOPMENT WORKSHEETS

**Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)**

	AM Peak Hour					PM Peak Hour					Total PCE Volume	
	Pass. Veh.	Trucks			PCE	Pass. Veh.	Trucks			PCE		
		2 Axle	3 Axle	4 Axle			2 Axle	3 Axle	4 Axle			
1 . Seaton Avenue/Cajalco Road												
NBL	25	0	0	0	0	25	15	0	0	0	0	15
NBT	3	0	0	0	0	3	2	0	0	0	0	2
NBR	13	0	1	0	2	15	7	0	1	1	5	12
SBL	6	0	0	0	0	6	1	0	0	0	0	1
SBT	2	1	0	0	2	4	0	0	0	0	0	0
SBR	16	1	0	0	2	18	13	3	0	0	5	18
EBL	25	0	1	1	5	30	9	0	2	0	4	13
EBT	748	60	10	19	167	915	971	71	4	23	184	1,155
EBR	39	1	0	0	2	41	46	2	0	1	6	52
WBL	3	1	1	3	13	16	10	0	1	0	2	12
WBT	864	75	8	42	255	1,119	900	46	5	19	136	1,036
WBR	25	2	0	0	3	28	3	1	0	0	2	5
North Leg												
Approach	24	2	0	0	4	28	14	3	0	0	5	19
Departure	53	2	1	1	8	61	14	1	2	0	6	20
Total	77	4	1	1	12	89	28	4	2	0	11	39
South Leg												
Approach	41	0	1	0	2	43	24	0	1	1	5	29
Departure	44	3	1	3	17	61	56	2	1	1	8	64
Total	85	3	2	3	19	104	80	2	2	2	13	93
East Leg												
Approach	892	78	9	45	271	1,163	913	47	6	19	140	1,053
Departure	767	60	11	19	169	936	979	71	5	24	189	1,168
Total	1,659	138	20	64	440	2,099	1,892	118	11	43	329	2,221
West Leg												
Approach	812	61	11	20	174	986	1,026	73	6	24	194	1,220
Departure	905	76	8	42	257	1,162	928	49	5	19	141	1,069
Total	1,717	137	19	62	431	2,148	1,954	122	11	43	335	2,289
Total Approaches												
Approach	1,769	141	21	65	451	2,220	1,977	123	13	44	344	2,321
Departure	1,769	141	21	65	451	2,220	1,977	123	13	44	344	2,321
Total	3,538	282	42	130	902	4,440	3,954	246	26	88	688	4,642

Table C-2 - Existing With Growth Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Growth	Existing With Growth	Existing Without Project	Growth	Existing With Growth
1 . Seaton Avenue/Cajalco Road						
NBL	25	2	27	15	1	16
NBT	3	0	3	2	0	2
NBR	15	1	16	12	1	13
SBL	6	0	6	1	0	1
SBT	4	0	4	0	0	0
SBR	18	1	19	18	1	19
EBL	30	2	32	13	1	14
EBT	915	55	970	1,155	69	1,224
EBR	41	2	43	52	3	55
WBL	16	1	17	12	1	13
WBT	1,119	67	1,186	1,036	62	1,098
WBR	28	2	30	5	0	5
North Leg						
Approach	28	1	29	19	1	20
Departure	61	4	65	20	1	21
Total	89	5	94	39	2	41
South Leg						
Approach	43	3	46	29	2	31
Departure	61	3	64	64	4	68
Total	104	6	110	93	6	99
East Leg						
Approach	1,163	70	1,233	1,053	63	1,116
Departure	936	56	992	1,168	70	1,238
Total	2,099	126	2,225	2,221	133	2,354
West Leg						
Approach	986	59	1,045	1,220	73	1,293
Departure	1,162	70	1,232	1,069	64	1,133
Total	2,148	129	2,277	2,289	137	2,426
Total Approaches						
Approach	2,220	133	2,353	2,321	139	2,460
Departure	2,220	133	2,353	2,321	139	2,460
Total	4,440	266	4,706	4,642	278	4,920

Table C-3 - Project Completion (2023) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion
1. Seaton Avenue/Cajalco Road										
NBL	27	1	28	2	30	16	1	17	6	23
NBT	3	0	3	0	3	2	0	2	5	7
NBR	16	1	17	8	25	13	1	14	10	24
SBL	6	0	6	2	8	1	0	1	1	2
SBT	4	0	4	2	6	0	0	0	1	1
SBR	19	1	20	0	20	19	1	20	0	20
EBL	32	1	33	0	33	14	1	15	0	15
EBT	970	39	1009	4	1013	1,224	49	1273	2	1275
EBR	43	2	45	1	46	55	2	57	0	57
WBL	17	1	18	15	33	13	1	14	8	22
WBT	1,186	47	1233	0	1233	1,098	44	1142	0	1142
WBR	30	1	31	0	31	5	0	5	0	5
North Leg										
Approach	29	1	30	4	34	20	1	21	2	23
Departure	65	2	67	0	67	21	1	22	5	27
Total	94	3	97	4	101	41	2	43	7	50
South Leg										
Approach	46	2	48	10	58	31	2	33	21	54
Departure	64	3	67	18	85	68	3	71	9	80
Total	110	5	115	28	143	99	5	104	30	134
East Leg										
Approach	1,233	49	1,282	15	1,297	1,116	45	1,161	8	1,169
Departure	992	40	1,032	14	1,046	1,238	50	1,288	13	1,301
Total	2,225	89	2,314	29	2,343	2,354	95	2,449	21	2,470
West Leg										
Approach	1,045	42	1,087	5	1,092	1,293	52	1,345	2	1,347
Departure	1,232	49	1,281	2	1,283	1,133	46	1,179	6	1,185
Total	2,277	91	2,368	7	2,375	2,426	98	2,524	8	2,532
Total Approaches										
Approach	2,353	94	2,447	34	2,481	2,460	100	2,560	33	2,593
Departure	2,353	94	2,447	34	2,481	2,460	100	2,560	33	2,593
Total	4,706	188	4,894	68	4,962	4,920	200	5,120	66	5,186

Table C-3 - Project Completion (2023) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion
2 Seaton Avenue/Driveway 1										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	46	2	48	7	55	31	1	32	13	45
NBR	0	0	0	1	1	0	0	0	0	0
SBL	0	0	0	6	6	0	0	0	4	4
SBT	64	3	67	12	79	68	3	71	7	78
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	1	1
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	3	3	0	0	0	7	7
North Leg										
Approach	64	3	67	18	85	68	3	71	11	82
Departure	46	2	48	10	58	31	1	32	20	52
Total	110	5	115	28	143	99	4	103	31	134
South Leg										
Approach	46	2	48	8	56	31	1	32	13	45
Departure	64	3	67	12	79	68	3	71	8	79
Total	110	5	115	20	135	99	4	103	21	124
East Leg										
Approach	0	0	0	3	3	0	0	0	8	8
Departure	0	0	0	7	7	0	0	0	4	4
Total	0	0	0	10	10	0	0	0	12	12
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	110	5	115	29	144	99	4	103	32	135
Departure	110	5	115	29	144	99	4	103	32	135
Total	220	10	230	58	288	198	8	206	64	270

Table C-3 - Project Completion (2023) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion
3 Seaton Avenue/Driveway 2										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	46	2	48	1	49	31	1	32	0	32
NBR	0	0	0	1	1	0	0	0	0	0
SBL	0	0	0	12	12	0	0	0	7	7
SBT	64	3	67	0	67	68	3	71	1	72
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	1	1
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	7	7	0	0	0	13	13
North Leg										
Approach	64	3	67	12	79	68	3	71	8	79
Departure	46	2	48	8	56	31	1	32	13	45
Total	110	5	115	20	135	99	4	103	21	124
South Leg										
Approach	46	2	48	2	50	31	1	32	0	32
Departure	64	3	67	0	67	68	3	71	2	73
Total	110	5	115	2	117	99	4	103	2	105
East Leg										
Approach	0	0	0	7	7	0	0	0	14	14
Departure	0	0	0	13	13	0	0	0	7	7
Total	0	0	0	20	20	0	0	0	21	21
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	110	5	115	21	136	99	4	103	22	125
Departure	110	5	115	21	136	99	4	103	22	125
Total	220	10	230	42	272	198	8	206	44	250

Table C-3 - Project Completion (2023) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion	Exist Volumes	Growth	Back. NP	Project Trips	Pr. Completion
4 Driveway 3/Cajalco Road										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	4	4	0	0	0	8	8
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	992	40	1032	8	1040	1,238	50	1288	10	1298
EBR	0	0	0	6	6	0	0	0	3	3
WBL	0	0	0	0	0	0	0	0	0	0
WBT	1,233	49	1282	15	1297	1,116	45	1161	8	1169
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
South Leg										
Approach	0	0	0	4	4	0	0	0	8	8
Departure	0	0	0	6	6	0	0	0	3	3
Total	0	0	0	10	10	0	0	0	11	11
East Leg										
Approach	1,233	49	1,282	15	1,297	1,116	45	1,161	8	1,169
Departure	992	40	1,032	12	1,044	1,238	50	1,288	18	1,306
Total	2,225	89	2,314	27	2,341	2,354	95	2,449	26	2,475
West Leg										
Approach	992	40	1,032	14	1,046	1,238	50	1,288	13	1,301
Departure	1,233	49	1,282	15	1,297	1,116	45	1,161	8	1,169
Total	2,225	89	2,314	29	2,343	2,354	95	2,449	21	2,470
Total Approaches										
Approach	2,225	89	2,314	33	2,347	2,354	95	2,449	29	2,478
Departure	2,225	89	2,314	33	2,347	2,354	95	2,449	29	2,478
Total	4,450	178	4,628	66	4,694	4,708	190	4,898	58	4,956

Table C-4 - Cumulative Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP
1. Seaton Avenue/Cajalco Road										
NBL	28	7	35	2	37	17	12	29	6	35
NBT	3	1	4	0	4	2	5	7	5	12
NBR	17	16	33	8	41	14	7	21	10	31
SBL	6	27	33	2	35	1	41	42	1	43
SBT	4	27	31	2	33	0	9	9	1	10
SBR	20	1	21	0	21	20	9	29	0	29
EBL	33	26	59	0	59	15	19	34	0	34
EBT	1,009	56	1065	4	1069	1,273	32	1305	2	1307
EBR	45	4	49	1	50	57	2	59	0	59
WBL	18	4	22	15	37	14	19	33	8	41
WBT	1,233	32	1265	0	1265	1,142	71	1213	0	1213
WBR	31	33	64	0	64	5	23	28	0	28
North Leg										
Approach	30	55	85	4	89	21	59	80	2	82
Departure	67	60	127	0	127	22	47	69	5	74
Total	97	115	212	4	216	43	106	149	7	156
South Leg										
Approach	48	24	72	10	82	33	24	57	21	78
Departure	67	35	102	18	120	71	30	101	9	110
Total	115	59	174	28	202	104	54	158	30	188
East Leg										
Approach	1,282	69	1,351	15	1,366	1,161	113	1,274	8	1,282
Departure	1,032	99	1,131	14	1,145	1,288	80	1,368	13	1,381
Total	2,314	168	2,482	29	2,511	2,449	193	2,642	21	2,663
West Leg										
Approach	1,087	86	1,173	5	1,178	1,345	53	1,398	2	1,400
Departure	1,281	40	1,321	2	1,323	1,179	92	1,271	6	1,277
Total	2,368	126	2,494	7	2,501	2,524	145	2,669	8	2,677
Total Approaches										
Approach	2,447	234	2,681	34	2,715	2,560	249	2,809	33	2,842
Departure	2,447	234	2,681	34	2,715	2,560	249	2,809	33	2,842
Total	4,894	468	5,362	68	5,430	5,120	498	5,618	66	5,684

Table C-4 - Cumulative Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP
2 Seaton Avenue/Driveway 1										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	48	23	71	7	78	32	23	55	13	68
NBR	0	0	0	1	1	0	0	0	0	0
SBL	0	0	0	6	6	0	0	0	4	4
SBT	67	35	102	12	114	71	29	100	7	107
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	1	1
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	3	3	0	0	0	7	7
North Leg										
Approach	67	35	102	18	120	71	29	100	11	111
Departure	48	23	71	10	81	32	23	55	20	75
Total	115	58	173	28	201	103	52	155	31	186
South Leg										
Approach	48	23	71	8	79	32	23	55	13	68
Departure	67	35	102	12	114	71	29	100	8	108
Total	115	58	173	20	193	103	52	155	21	176
East Leg										
Approach	0	0	0	3	3	0	0	0	8	8
Departure	0	0	0	7	7	0	0	0	4	4
Total	0	0	0	10	10	0	0	0	12	12
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	115	58	173	29	202	103	52	155	32	187
Departure	115	58	173	29	202	103	52	155	32	187
Total	230	116	346	58	404	206	104	310	64	374

Table C-4 - Cumulative Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP
3 Seaton Avenue/Driveway 2										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	48	23	71	1	72	32	23	55	0	55
NBR	0	0	0	1	1	0	0	0	0	0
SBL	0	0	0	12	12	0	0	0	7	7
SBT	67	35	102	0	102	71	29	100	1	101
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	1	1
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	7	7	0	0	0	13	13
North Leg										
Approach	67	35	102	12	114	71	29	100	8	108
Departure	48	23	71	8	79	32	23	55	13	68
Total	115	58	173	20	193	103	52	155	21	176
South Leg										
Approach	48	23	71	2	73	32	23	55	0	55
Departure	67	35	102	0	102	71	29	100	2	102
Total	115	58	173	2	175	103	52	155	2	157
East Leg										
Approach	0	0	0	7	7	0	0	0	14	14
Departure	0	0	0	13	13	0	0	0	7	7
Total	0	0	0	20	20	0	0	0	21	21
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	115	58	173	21	194	103	52	155	22	177
Departure	115	58	173	21	194	103	52	155	22	177
Total	230	116	346	42	388	206	104	310	44	354

Table C-4 - Cumulative Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP	2,023 Back.	Cumul. Pr.	Cumul. NP	Project Trips	Cumul. WP
4 Driveway 3/Cajalco Road										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	4	4	0	0	0	8	8
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	1,032	99	1131	8	1139	1,288	72	1360	10	1370
EBR	0	0	0	6	6	0	0	0	3	3
WBL	0	0	0	0	0	0	0	0	0	0
WBT	1,282	69	1351	15	1366	1,161	113	1274	8	1282
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
South Leg										
Approach	0	0	0	4	4	0	0	0	8	8
Departure	0	0	0	6	6	0	0	0	3	3
Total	0	0	0	10	10	0	0	0	11	11
East Leg										
Approach	1,282	69	1,351	15	1,366	1,161	113	1,274	8	1,282
Departure	1,032	99	1,131	12	1,143	1,288	72	1,360	18	1,378
Total	2,314	168	2,482	27	2,509	2,449	185	2,634	26	2,660
West Leg										
Approach	1,032	99	1,131	14	1,145	1,288	72	1,360	13	1,373
Departure	1,282	69	1,351	15	1,366	1,161	113	1,274	8	1,282
Total	2,314	168	2,482	29	2,511	2,449	185	2,634	21	2,655
Total Approaches										
Approach	2,314	168	2,482	33	2,515	2,449	185	2,634	29	2,663
Departure	2,314	168	2,482	33	2,515	2,449	185	2,634	29	2,663
Total	4,628	336	4,964	66	5,030	4,898	370	5,268	58	5,326

APPENDIX D: LEVEL OF SERVICE WORKSHEETS

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

11/30/2021

Intersection												
Int Delay, s/veh	17.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	32	970	43	17	1186	30	27	3	16	6	4	19
Future Vol, veh/h	32	970	43	17	1186	30	27	3	16	6	4	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	34	1032	46	18	1262	32	29	3	17	6	4	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1294	0	0	1078	0	0	2449	2453	1055	2447	2460	1278
Stage 1	-	-	-	-	-	-	1123	1123	-	1314	1314	-
Stage 2	-	-	-	-	-	-	1326	1330	-	1133	1146	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	542	-	-	655	-	-	~ 22	31	277	22	31	205
Stage 1	-	-	-	-	-	-	252	283	-	197	230	-
Stage 2	-	-	-	-	-	-	194	226	-	249	276	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	542	-	-	655	-	-	~ 16	28	277	18	28	205
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 16	28	-	18	28	-
Stage 1	-	-	-	-	-	-	236	265	-	185	224	-
Stage 2	-	-	-	-	-	-	167	220	-	216	259	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	\$ 780.7	151.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	25	542	-	-	655	-	-	51
HCM Lane V/C Ratio	1.957	0.063	-	-	0.028	-	-	0.605
HCM Control Delay (s)	\$ 780.7	12.1	-	-	10.7	-	-	151.4
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6	0.2	-	-	0.1	-	-	2.4

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

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

11/30/2021

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	14	1224	55	13	1098	5	16	2	13	1	0	19
Future Vol, veh/h	14	1224	55	13	1098	5	16	2	13	1	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	1302	59	14	1168	5	17	2	14	1	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1173	0	0	1361	0	0	2571	2563	1332	2569	2590	1171
Stage 1	-	-	-	-	-	-	1362	1362	-	1199	1199	-
Stage 2	-	-	-	-	-	-	1209	1201	-	1370	1391	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	603	-	-	512	-	-	18	27	191	18	26	237
Stage 1	-	-	-	-	-	-	185	218	-	228	261	-
Stage 2	-	-	-	-	-	-	225	260	-	183	211	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	603	-	-	512	-	-	~ 16	26	191	15	25	237
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 16	26	-	15	25	-
Stage 1	-	-	-	-	-	-	180	213	-	222	254	-
Stage 2	-	-	-	-	-	-	200	253	-	164	206	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	\$ 463.4	36.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	27	603	-	-	512	-	-	136
HCM Lane V/C Ratio	1.221	0.025	-	-	0.027	-	-	0.156
HCM Control Delay (s)	\$ 463.4	11.1	-	-	12.2	-	-	36.3
HCM Lane LOS	F	B	-	-	B	-	-	E
HCM 95th %tile Q(veh)	3.9	0.1	-	-	0.1	-	-	0.5

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

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

12/09/2021

Intersection												
Int Delay, s/veh	24.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗		↔	
Traffic Vol, veh/h	33	1013	46	33	1233	31	30	3	25	8	6	20
Future Vol, veh/h	33	1013	46	33	1233	31	30	3	25	8	6	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	185	-	260	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	35	1078	49	35	1312	33	32	3	27	9	6	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1345	0	0	1127	0	0	2585	2588	1103	2587	2596	1329
Stage 1	-	-	-	-	-	-	1173	1173	-	1399	1399	-
Stage 2	-	-	-	-	-	-	1412	1415	-	1188	1197	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	519	-	-	627	-	-	~17	26	259	17	25	191
Stage 1	-	-	-	-	-	-	236	268	-	176	209	-
Stage 2	-	-	-	-	-	-	173	206	-	232	261	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	519	-	-	627	-	-	~11	23	259	12	22	191
Mov Cap-2 Maneuver	-	-	-	-	-	-	~11	23	-	12	22	-
Stage 1	-	-	-	-	-	-	220	250	-	164	197	-
Stage 2	-	-	-	-	-	-	140	194	-	192	244	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	\$ 815.6	\$ 368.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	23	259	519	-	-	627	-	-	33
HCM Lane V/C Ratio	2.901	0.139	0.103	0.068	-	-	0.056	-	-	1.096
HCM Control Delay (s)	\$ 1541.3	185.3	20.5	12.4	-	-	11.1	-	-	\$ 368.7
HCM Lane LOS	F	F	C	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5	0.4	0.3	0.2	-	-	0.2	-	-	3.9

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

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	55	1	6	79
Future Vol, veh/h	0	3	55	1	6	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	60	1	7	86

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	161	61	0	0	61	0
Stage 1	61	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	835	1010	-	-	1555	-
Stage 1	967	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	831	1010	-	-	1555	-
Mov Cap-2 Maneuver	831	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1010	1555
HCM Lane V/C Ratio	-	-	0.003	0.004
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
3: Seaton Ave & Dwy 2

12/09/2021

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	49	1	12	67
Future Vol, veh/h	0	7	49	1	12	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	53	1	13	73

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	153	54	0	0	54	0
Stage 1	54	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	843	1019	-	-	1564	-
Stage 1	974	-	-	-	-	-
Stage 2	930	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	835	1019	-	-	1564	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	922	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1564
HCM Lane V/C Ratio	-	-	0.007	0.008
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
4: Driveway 3 & Cajalco Rd

12/09/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	1040	6	0	1297	0	4
Future Vol, veh/h	1040	6	0	1297	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1130	7	0	1410	0	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	1134
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	249
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	249
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	249	-	-	-
HCM Lane V/C Ratio	0.017	-	-	-
HCM Control Delay (s)	19.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

12/09/2021

Intersection												
Int Delay, s/veh	13.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗		↔	
Traffic Vol, veh/h	15	1275	57	22	1142	5	23	7	24	2	1	20
Future Vol, veh/h	15	1275	57	22	1142	5	23	7	24	2	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	185	-	260	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	1356	61	23	1215	5	24	7	26	2	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1220	0	0	1417	0	0	2694	2685	1387	2699	2713	1218
Stage 1	-	-	-	-	-	-	1419	1419	-	1264	1264	-
Stage 2	-	-	-	-	-	-	1275	1266	-	1435	1449	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	579	-	-	487	-	-	~ 14	22	177	14	21	222
Stage 1	-	-	-	-	-	-	171	205	-	210	243	-
Stage 2	-	-	-	-	-	-	207	242	-	168	198	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	579	-	-	487	-	-	~ 11	20	177	8	19	222
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 11	20	-	8	19	-
Stage 1	-	-	-	-	-	-	166	199	-	204	232	-
Stage 2	-	-	-	-	-	-	178	231	-	135	192	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			\$ 576.9			103.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	20	177	579	-	-	487	-	-	59
HCM Lane V/C Ratio	2.224	0.372	0.144	0.028	-	-	0.048	-	-	0.415
HCM Control Delay (s)	\$ 1243	267.6	28.7	11.4	-	-	12.8	-	-	103.8
HCM Lane LOS	F	F	D	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	4	1.1	0.5	0.1	-	-	0.2	-	-	1.6

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

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	45	0	4	78
Future Vol, veh/h	1	7	45	0	4	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	8	49	0	4	85

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	142	49	0	0	49
Stage 1	49	-	-	-	-
Stage 2	93	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	856	1025	-	-	1571
Stage 1	979	-	-	-	-
Stage 2	936	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	853	1025	-	-	1571
Mov Cap-2 Maneuver	853	-	-	-	-
Stage 1	979	-	-	-	-
Stage 2	933	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1000	1571
HCM Lane V/C Ratio	-	-	0.009	0.003
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	13	32	0	7	72
Future Vol, veh/h	1	13	32	0	7	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	14	35	0	8	78

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	129	35	0	0	35	0
Stage 1	35	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	870	1044	-	-	1589	-
Stage 1	993	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	866	1044	-	-	1589	-
Mov Cap-2 Maneuver	866	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1029	1589
HCM Lane V/C Ratio	-	-	0.015	0.005
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
4: Driveway 3 & Cajalco Rd

12/09/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	1298	3	0	1169	0	8
Future Vol, veh/h	1298	3	0	1169	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1411	3	0	1271	0	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1413
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.2
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.3
Pot Cap-1 Maneuver	-	- 0	- 0 171
Stage 1	-	- 0	- 0 -
Stage 2	-	- 0	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 171
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	171	-	-	-
HCM Lane V/C Ratio	0.051	-	-	-
HCM Control Delay (s)	27.2	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

12/09/2021

Intersection												
Int Delay, s/veh	122.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗		↕	
Traffic Vol, veh/h	59	1069	50	37	1265	64	37	4	41	35	33	21
Future Vol, veh/h	59	1069	50	37	1265	64	37	4	41	35	33	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	185	-	260	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	63	1137	53	39	1346	68	39	4	44	37	35	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1414	0	0	1190	0	0	2777	2782	1164	2772	2774	1380
Stage 1	-	-	-	-	-	-	1290	1290	-	1458	1458	-
Stage 2	-	-	-	-	-	-	1487	1492	-	1314	1316	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	488	-	-	594	-	-	~12	19	239	~13	~19	179
Stage 1	-	-	-	-	-	-	203	236	-	163	196	-
Stage 2	-	-	-	-	-	-	157	189	-	197	229	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	488	-	-	594	-	-	-	15	239	~7	~15	179
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	15	-	~7	~15	-
Stage 1	-	-	-	-	-	-	177	206	-	142	183	-
Stage 2	-	-	-	-	-	-	104	177	-	137	199	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.3		\$ 3717.7
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	15	239	488	-	-	594	-	-	12
HCM Lane V/C Ratio	-	0.284	0.182	0.129	-	-	0.066	-	-	7.89
HCM Control Delay (s)		\$ 321.8	23.4	13.5	-	-	11.5	-	-	\$ 3717.7
HCM Lane LOS	-	F	C	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.8	0.7	0.4	-	-	0.2	-	-	13.1

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

HCM 6th TWSC
2: Seaton Ave & Dwy 1

12/09/2021

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	78	1	6	114
Future Vol, veh/h	0	3	78	1	6	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	85	1	7	124

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	224	86	0	0	86	0
Stage 1	86	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	769	978	-	-	1523	-
Stage 1	942	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	765	978	-	-	1523	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	978	1523
HCM Lane V/C Ratio	-	-	0.003	0.004
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
3: Seaton Ave & Dwy 2

12/09/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	72	1	12	102
Future Vol, veh/h	0	7	72	1	12	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	78	1	13	111

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	216	79	0	0	79	0
Stage 1	79	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	777	987	-	-	1532	-
Stage 1	949	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	770	987	-	-	1532	-
Mov Cap-2 Maneuver	770	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1532
HCM Lane V/C Ratio	-	-	0.008	0.009
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
4: Driveway 3 & Cajalco Rd

12/09/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	1139	6	0	1366	0	4
Future Vol, veh/h	1139	6	0	1366	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1238	7	0	1485	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1242
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.2
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.3
Pot Cap-1 Maneuver	-	-	0 - 0 215
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 215
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	215	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-
HCM Control Delay (s)	22.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th TWSC
1: Seaton Ave & Cajalco Rd

12/09/2021

Intersection												
Int Delay, s/veh	415.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗		↔	
Traffic Vol, veh/h	34	1307	59	41	1213	28	35	12	31	43	10	29
Future Vol, veh/h	34	1307	59	41	1213	28	35	12	31	43	10	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	185	-	260	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	36	1390	63	44	1290	30	37	13	33	46	11	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1320	0	0	1453	0	0	2908	2902	1422	2910	2918	1305
Stage 1	-	-	-	-	-	-	1494	1494	-	1393	1393	-
Stage 2	-	-	-	-	-	-	1414	1408	-	1517	1525	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	530	-	-	472	-	-	~ 10	16	169	~ 10	16	198
Stage 1	-	-	-	-	-	-	155	188	-	177	211	-
Stage 2	-	-	-	-	-	-	172	207	-	150	182	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	530	-	-	472	-	-	~ 3	14	169	~ 2	14	198
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	14	-	~ 2	14	-
Stage 1	-	-	-	-	-	-	144	175	-	165	191	-
Stage 2	-	-	-	-	-	-	124	188	-	104	170	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	\$ 3428.7	\$ 11132.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	3	14	169	530	-	-	472	-	-	4
HCM Lane V/C Ratio	12.411	0.912	0.195	0.068	-	-	0.092	-	-	-21.809
HCM Control Delay (s)	\$ 7418.7	\$ 567.7	31.4	12.3	-	-	13.4	-	-	\$ 11132.4
HCM Lane LOS	F	F	D	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6.4	2.1	0.7	0.2	-	-	0.3	-	-	12.9

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

HCM 6th TWSC
2: Seaton Ave & Dwy 1

12/09/2021

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	68	0	4	107
Future Vol, veh/h	1	7	68	0	4	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	8	74	0	4	116

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	198	74	0	0	74	0
Stage 1	74	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	795	993	-	-	1538	-
Stage 1	954	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	793	993	-	-	1538	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	1538
HCM Lane V/C Ratio	-	-	0.009	0.003
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
3: Seaton Ave & Dwy 2

12/09/2021

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	1	13	55	0	7	101
Future Vol, veh/h	1	13	55	0	7	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	14	60	0	8	110

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	186	60	0	0	60	0
Stage 1	60	-	-	-	-	-
Stage 2	126	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	808	1011	-	-	1556	-
Stage 1	968	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	804	1011	-	-	1556	-
Mov Cap-2 Maneuver	804	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	900	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	993	1556
HCM Lane V/C Ratio	-	-	0.015	0.005
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
4: Driveway 3 & Cajalco Rd

12/09/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	1370	3	0	1282	0	8
Future Vol, veh/h	1370	3	0	1282	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1489	3	0	1393	0	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1491
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.2
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.3
Pot Cap-1 Maneuver	-	- 0	- 0 153
Stage 1	-	- 0	- 0 -
Stage 2	-	- 0	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 153
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	29.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	153	-	-	-
HCM Lane V/C Ratio	0.057	-	-	-
HCM Control Delay (s)	29.9	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

HCM 6th Signalized Intersection Summary

1: Seaton Ave & Cajalco Rd

12/09/2021

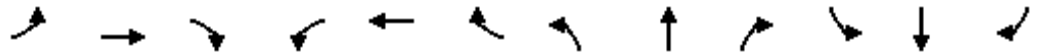


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷		↷	↷
Traffic Volume (veh/h)	33	1013	46	33	1233	31	30	3	25	8	6	20
Future Volume (veh/h)	33	1013	46	33	1233	31	30	3	25	8	6	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	1078	49	35	1312	33	32	3	27	9	6	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	1410	64	77	1443	36	163	118	100	58	27	60
Arrive On Green	0.04	0.78	0.78	0.04	0.78	0.78	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1810	1803	82	1810	1845	46	1405	1900	1610	244	439	957
Grp Volume(v), veh/h	35	0	1127	35	0	1345	32	3	27	36	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1885	1810	0	1892	1405	1900	1610	1641	0	0
Q Serve(g_s), s	2.0	0.0	34.4	2.0	0.0	56.9	0.0	0.2	1.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	34.4	2.0	0.0	56.9	1.8	0.2	1.7	2.1	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.25		0.58
Lane Grp Cap(c), veh/h	77	0	1475	77	0	1480	163	118	100	145	0	0
V/C Ratio(X)	0.46	0.00	0.76	0.46	0.00	0.91	0.20	0.03	0.27	0.25	0.00	0.00
Avail Cap(c_a), veh/h	119	0	1475	119	0	1480	314	322	273	315	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.6	0.0	6.3	49.6	0.0	8.7	47.5	46.7	47.4	47.7	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	3.8	4.2	0.0	9.8	0.6	0.1	1.4	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	9.0	1.0	0.0	16.4	0.8	0.1	0.7	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	0.0	10.1	53.8	0.0	18.5	48.1	46.8	48.9	48.5	0.0	0.0
LnGrp LOS	D	A	B	D	A	B	D	D	D	D	A	A
Approach Vol, veh/h		1162			1380			62				36
Approach Delay, s/veh		11.4			19.4			48.4				48.5
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	87.0		10.6	8.5	87.0		10.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	83.0		18.0	7.0	83.0		18.0				
Max Q Clear Time (g_c+I1), s	4.0	36.4		4.1	4.0	58.9		3.8				
Green Ext Time (p_c), s	0.0	11.9		0.1	0.0	13.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay											17.0	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary

1: Seaton Ave & Cajalco Rd

12/09/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1275	57	22	1142	5	23	7	24	2	1	20
Future Volume (veh/h)	15	1275	57	22	1142	5	23	7	24	2	1	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	1356	61	23	1215	5	24	7	26	2	1	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	1424	64	59	1507	6	162	117	99	42	9	87
Arrive On Green	0.02	0.79	0.79	0.03	0.80	0.80	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1810	1804	81	1810	1891	8	1412	1900	1610	60	143	1420
Grp Volume(v), veh/h	16	0	1417	23	0	1220	24	7	26	24	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1885	1810	0	1899	1412	1900	1610	1623	0	0
Q Serve(g_s), s	0.9	0.0	65.6	1.3	0.0	37.5	0.0	0.4	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	65.6	1.3	0.0	37.5	1.3	0.4	1.6	1.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.00	1.00		1.00	0.08		0.87
Lane Grp Cap(c), veh/h	45	0	1488	59	0	1513	162	117	99	137	0	0
V/C Ratio(X)	0.35	0.00	0.95	0.39	0.00	0.81	0.15	0.06	0.26	0.17	0.00	0.00
Avail Cap(c_a), veh/h	123	0	1488	123	0	1513	347	366	310	347	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.3	0.0	9.2	48.7	0.0	5.9	45.9	45.5	46.1	46.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	14.4	4.1	0.0	4.7	0.4	0.2	1.4	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	18.8	0.6	0.0	8.9	0.6	0.2	0.7	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	0.0	23.6	52.8	0.0	10.6	46.4	45.7	47.5	46.6	0.0	0.0
LnGrp LOS	D	A	C	D	A	B	D	D	D	D	A	A
Approach Vol, veh/h		1433			1243			57				24
Approach Delay, s/veh		24.0			11.4			46.8				46.6
Approach LOS		C			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	85.2		10.3	6.6	86.0		10.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.2		19.8	7.0	81.2		19.8				
Max Q Clear Time (g_c+I1), s	3.3	67.6		3.4	2.9	39.5		3.6				
Green Ext Time (p_c), s	0.0	9.9		0.1	0.0	14.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				19.0								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary

1: Seaton Ave & Cajalco Rd

12/09/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1069	50	37	1265	64	37	4	41	35	33	21
Future Volume (veh/h)	59	1069	50	37	1265	64	37	4	41	35	33	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	63	1137	53	39	1346	68	39	4	44	37	35	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	99	1386	65	80	1361	69	167	145	123	86	55	29
Arrive On Green	0.05	0.77	0.77	0.04	0.76	0.76	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1810	1801	84	1810	1793	91	1368	1900	1610	529	720	382
Grp Volume(v), veh/h	63	0	1190	39	0	1414	39	4	44	94	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1885	1810	0	1884	1368	1900	1610	1631	0	0
Q Serve(g_s), s	3.7	0.0	43.2	2.3	0.0	79.2	0.0	0.2	2.8	4.8	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	43.2	2.3	0.0	79.2	3.1	0.2	2.8	6.1	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.05	1.00		1.00	0.39		0.23
Lane Grp Cap(c), veh/h	99	0	1450	80	0	1430	167	145	123	171	0	0
V/C Ratio(X)	0.64	0.00	0.82	0.48	0.00	0.99	0.23	0.03	0.36	0.55	0.00	0.00
Avail Cap(c_a), veh/h	116	0	1450	116	0	1430	288	313	265	311	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.6	0.0	7.9	51.0	0.0	12.7	48.1	46.7	47.9	49.4	0.0	0.0
Incr Delay (d2), s/veh	8.7	0.0	5.3	4.5	0.0	21.3	0.7	0.1	1.7	2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	12.6	1.1	0.0	28.6	1.1	0.1	1.2	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	0.0	13.2	55.5	0.0	34.0	48.8	46.8	49.7	52.1	0.0	0.0
LnGrp LOS	E	A	B	E	A	C	D	D	D	D	A	A
Approach Vol, veh/h		1253			1453			87				94
Approach Delay, s/veh		15.5			34.6			49.1				52.1
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	88.1		12.4	10.0	87.0		12.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	83.0		18.0	7.0	83.0		18.0				
Max Q Clear Time (g_c+I1), s	4.3	45.2		8.1	5.7	81.2		5.1				
Green Ext Time (p_c), s	0.0	12.9		0.3	0.0	1.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay											27.3	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary

1: Seaton Ave & Cajalco Rd

12/09/2021



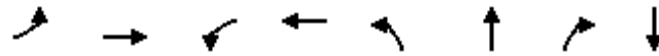
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1307	59	41	1213	28	35	12	31	43	10	29
Future Volume (veh/h)	34	1307	59	41	1213	28	35	12	31	43	10	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	1390	63	44	1290	30	37	13	33	46	11	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	1376	62	87	1419	33	175	146	123	105	22	42
Arrive On Green	0.04	0.76	0.76	0.05	0.77	0.77	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1810	1804	82	1810	1849	43	1386	1900	1610	704	292	542
Grp Volume(v), veh/h	36	0	1453	44	0	1320	37	13	33	88	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1885	1810	0	1892	1386	1900	1610	1538	0	0
Q Serve(g_s), s	2.1	0.0	81.2	2.5	0.0	57.1	0.0	0.7	2.1	5.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	81.2	2.5	0.0	57.1	2.6	0.7	2.1	5.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.52		0.35
Lane Grp Cap(c), veh/h	78	0	1438	87	0	1452	175	146	123	169	0	0
V/C Ratio(X)	0.46	0.00	1.01	0.51	0.00	0.91	0.21	0.09	0.27	0.52	0.00	0.00
Avail Cap(c_a), veh/h	119	0	1438	119	0	1452	327	353	300	334	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.7	0.0	12.6	49.5	0.0	9.5	46.6	45.7	46.3	48.1	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	26.3	4.5	0.0	9.9	0.6	0.3	1.1	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	30.2	1.2	0.0	17.5	1.0	0.3	0.9	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	38.9	54.0	0.0	19.4	47.2	46.0	47.5	50.5	0.0	0.0
LnGrp LOS	D	A	F	D	A	B	D	D	D	D	A	A
Approach Vol, veh/h		1489			1364			83				88
Approach Delay, s/veh		39.3			20.6			47.1				50.5
Approach LOS		D			C			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	85.2		12.2	8.6	85.7		12.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	81.2		19.8	7.0	81.2		19.8				
Max Q Clear Time (g_c+I1), s	4.5	83.2		7.9	4.1	59.1		4.6				
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	12.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				31.4								
HCM 6th LOS				C								

APPENDIX E: QUEUE WORKSHEETS

Queues

1: Seaton Ave & Cajalco Rd

12/09/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	35	1127	35	1345	32	3	27	36
v/c Ratio	0.30	0.73	0.30	0.86	0.25	0.02	0.17	0.26
Control Delay	57.3	10.6	57.3	17.7	53.1	47.0	8.6	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	10.6	57.3	17.7	53.1	47.0	8.6	31.6
Queue Length 50th (ft)	24	401	24	669	22	2	0	10
Queue Length 95th (ft)	59	675	59	#1239	54	11	16	43
Internal Link Dist (ft)		1215		458		265		455
Turn Bay Length (ft)	150		150		185		260	
Base Capacity (vph)	115	1552	115	1555	280	312	303	282
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.73	0.30	0.86	0.11	0.01	0.09	0.13

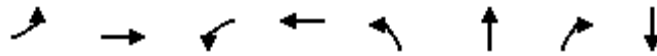
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

1: Seaton Ave & Cajalco Rd

12/09/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	16	1417	23	1220	24	7	26	24
v/c Ratio	0.13	0.86	0.19	0.74	0.21	0.05	0.16	0.17
Control Delay	50.7	16.2	52.0	10.2	51.1	47.0	8.0	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	16.2	52.0	10.2	51.1	47.0	8.0	23.8
Queue Length 50th (ft)	10	363	15	220	16	5	0	2
Queue Length 95th (ft)	34	#1327	43	837	43	19	15	28
Internal Link Dist (ft)		1215		458		265		455
Turn Bay Length (ft)	150		150		185		260	
Base Capacity (vph)	120	1641	120	1648	292	358	341	323
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.86	0.19	0.74	0.08	0.02	0.08	0.07

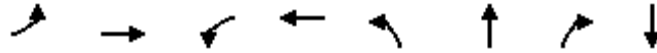
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

1: Seaton Ave & Cajalco Rd

12/09/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	63	1190	39	1414	39	4	44	94
v/c Ratio	0.57	0.81	0.35	0.99	0.36	0.02	0.22	0.56
Control Delay	73.4	16.1	61.5	38.6	56.6	45.2	15.6	55.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	16.1	61.5	38.6	56.6	45.2	15.6	55.8
Queue Length 50th (ft)	45	537	28	~1093	27	3	0	58
Queue Length 95th (ft)	#109	#1092	66	#1458	62	13	34	113
Internal Link Dist (ft)		1215		458		265		455
Turn Bay Length (ft)	150		150		185		260	
Base Capacity (vph)	110	1462	110	1424	175	299	292	262
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.81	0.35	0.99	0.22	0.01	0.15	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

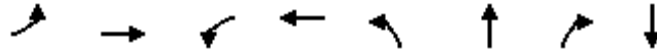
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Seaton Ave & Cajalco Rd

12/09/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	36	1453	44	1320	37	13	33	88
v/c Ratio	0.31	0.99	0.38	0.87	0.32	0.07	0.17	0.54
Control Delay	58.3	36.7	60.9	19.8	54.0	45.6	10.5	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	36.7	60.9	19.8	54.0	45.6	10.5	49.6
Queue Length 50th (ft)	25	~1124	31	705	25	9	0	47
Queue Length 95th (ft)	61	#1495	72	#1281	59	27	21	99
Internal Link Dist (ft)		1215		458		265		455
Turn Bay Length (ft)	150		150		185		260	
Base Capacity (vph)	115	1475	115	1518	217	344	329	288
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.99	0.38	0.87	0.17	0.04	0.10	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.